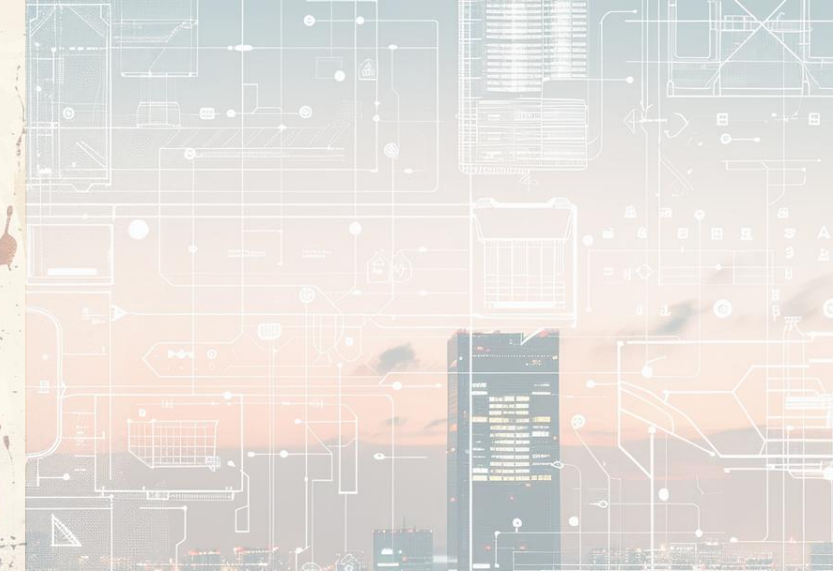
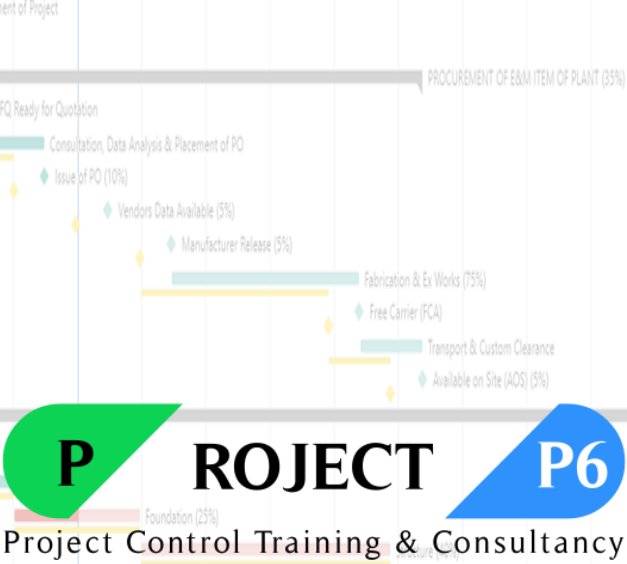
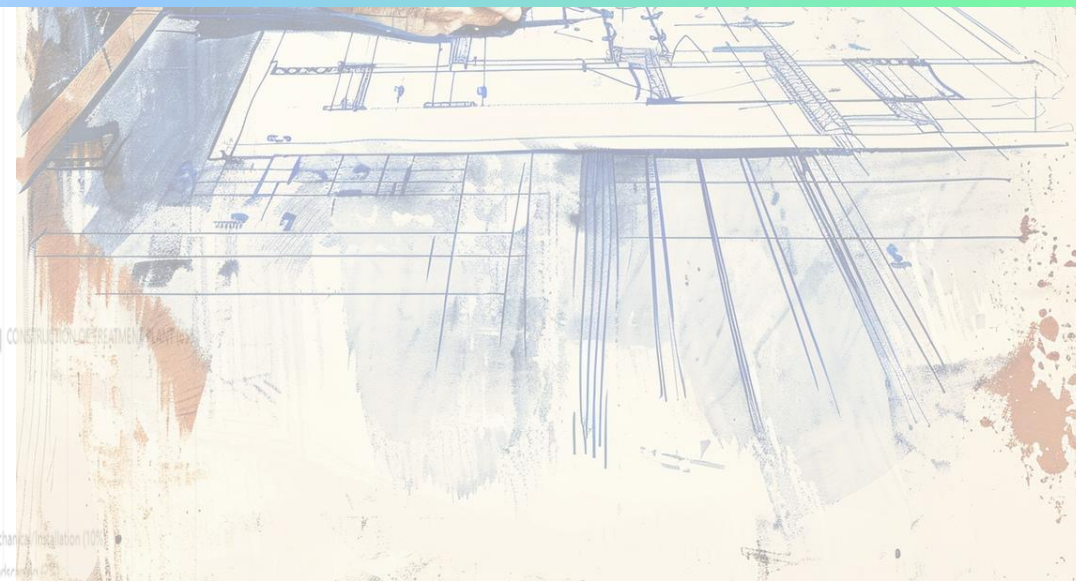
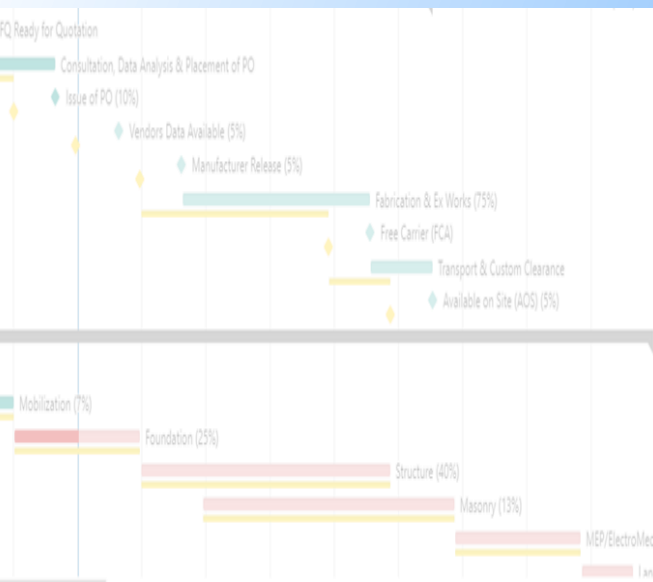




Managing Project with Primavera P6

DEVELOPED & INSTRUCTED BY ABDUL MATIN, PMP, PSP



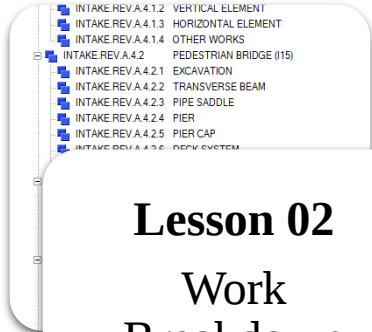
Managing Project with Primavera P6 Professional

► Overall Course Outline and Lesson Plan



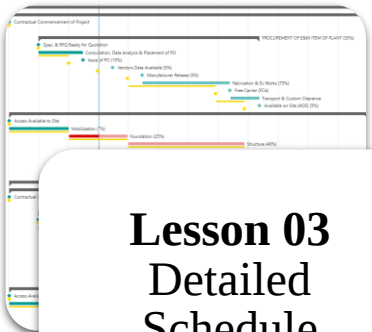
Lesson 01

Introduction To
Primavera P6
Professional



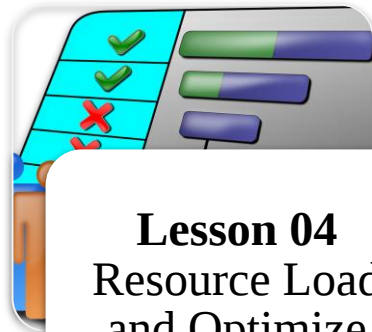
Lesson 02

Work
Breakdown
Structure (WBS)
of Your Project



Lesson 03

Detailed
Schedule
Development of
Your Project



Lesson 04

Resource Load
and Optimize
Your Detailed
Schedule



Lesson 05

Cost Load Your
Detailed
Schedule

Managing Project with Primavera P6 Professional

► Overall Course Outline and Lesson Plan



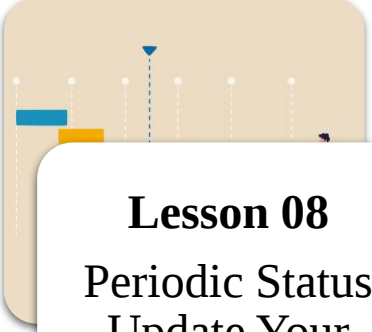
Lesson 06

Perform
Effective
Schedule
Review and
Baselining



Lesson 07

Earn Value
Management
Essentials and
Implementation



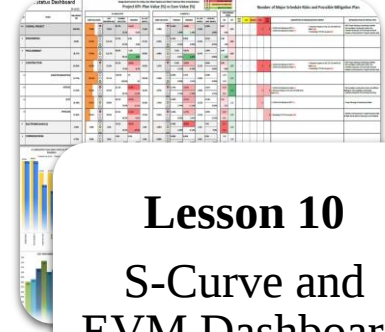
Lesson 08

Periodic Status
Update Your
Schedule and
Mitigate Impact



Lesson 09

Updated
Schedule and
Progress
Analysis Report
Preparation



Lesson 10

S-Curve and
EVM Dashboard
Preparation in
Excel

Login Name

admin

Password

► Advanced

Connect

Disconnect

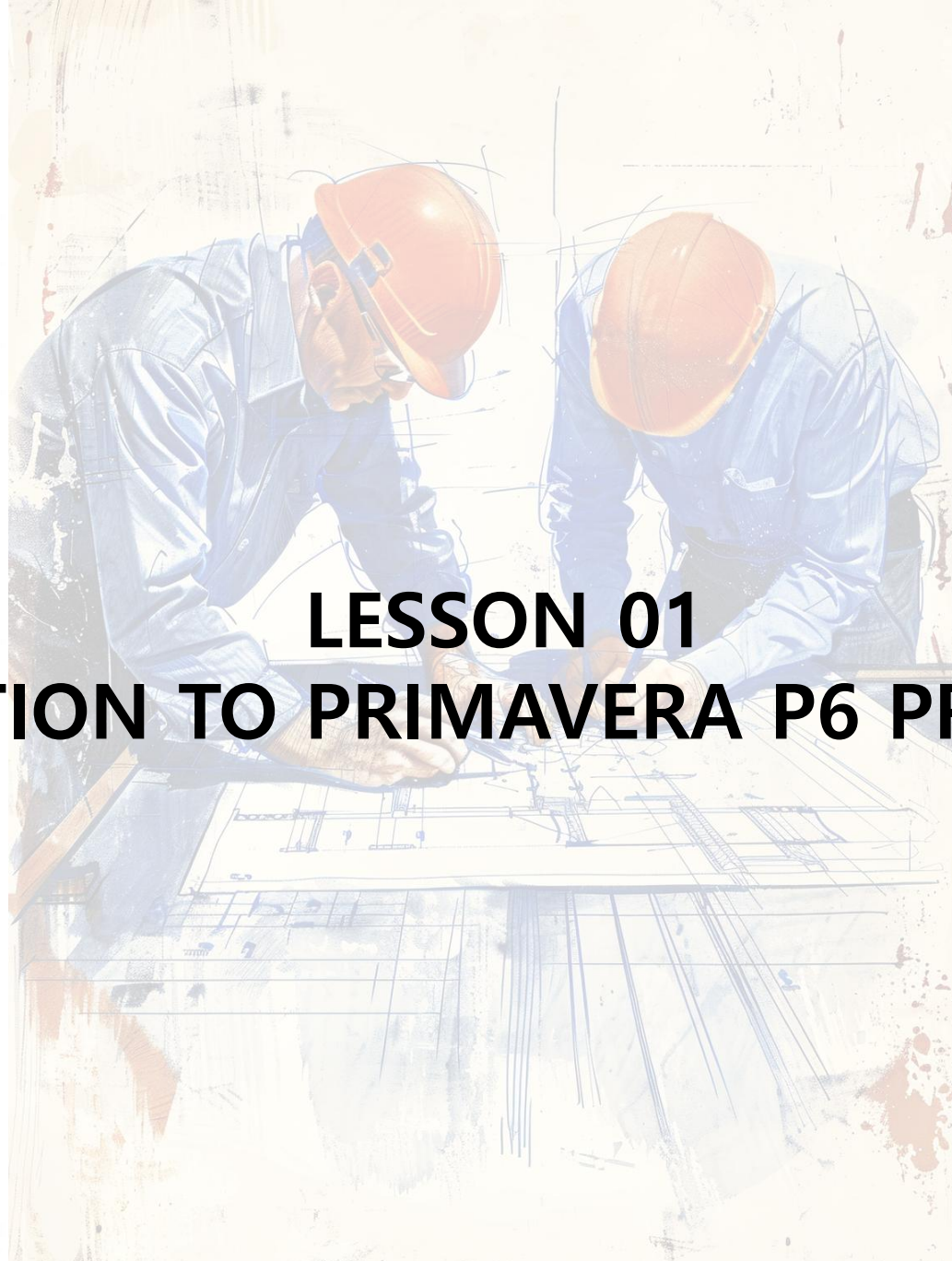
Edit database configuration

Release (22.12.0.45758)

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LESSON 01

INTRODUCTION TO PRIMAVERA P6 PROFESSIONAL



Introduction To Primavera P6 Professional

► Installation Procedure & Database Management

Installation P6 in Personal Computer

1
Configure
Google Drive

2
Create
Database
Folder in
Drive

3
Install
Primavera P6
Professional
in Personal
Computer

4
Configure P6
Professional
Standalone
(SQ Lite)
Database

5
Connect
Primavera P6
Professional
with Database

P6 Professional 22

Login Name
admin

Password
[Empty Field]

► Advanced

Connect Disconnect

Edit database configuration

P6 Database Configuration

Add

INTAKE

PIPELINE

PROJECT P6

PROJECT P6 EPPM

WTP

Driver Type

P6 Professional Standalone (SQLite)

Oracle

Microsoft SQL Server/SQL Server Express

P6 Professional Cloud Connect

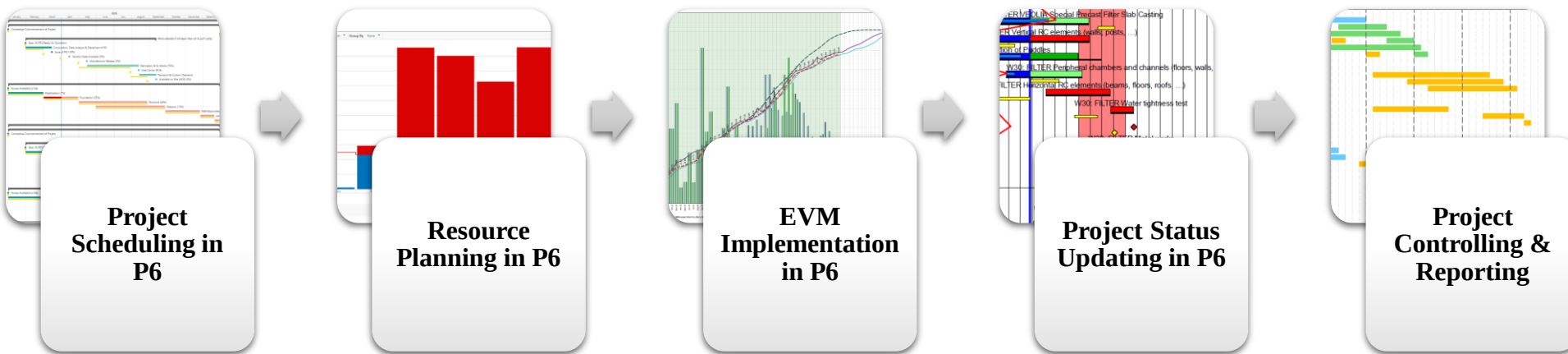
P6 Professional Standalone (SQLite)

☐ Add a connection to an existing standalone database

☒ Add a new standalone database and connection

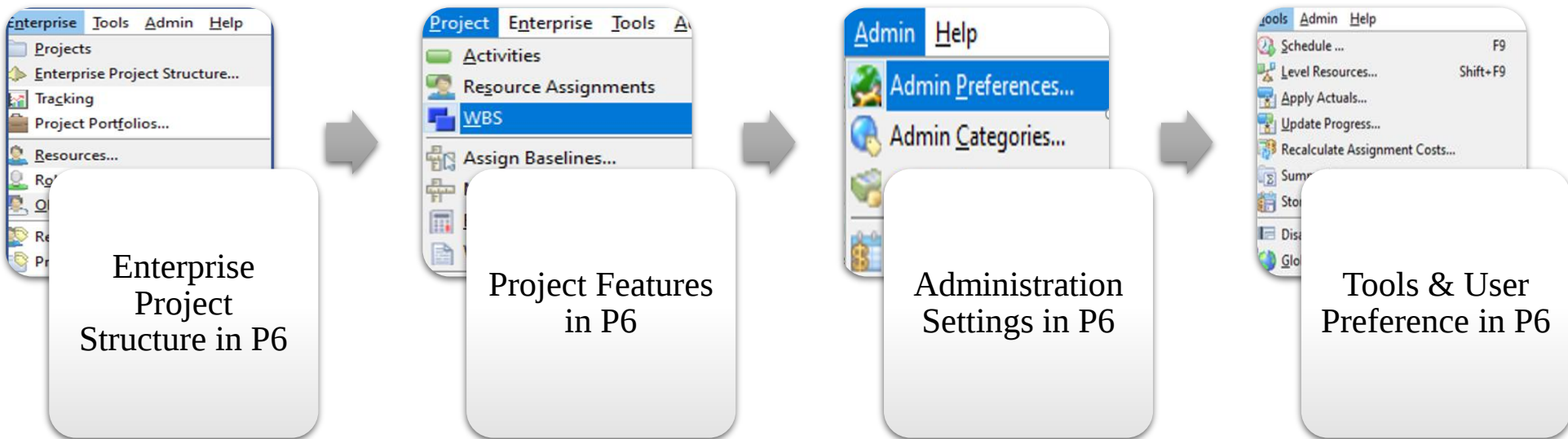
Introduction To Primavera P6 Professional

► Project Scheduling & Reporting – A Practical Approach



Introduction To Primavera P6 Professional

► Fundamental Features of Primavera P6 Professional



► Main Features of Enterprise Project Structure in P6 Professional



OBS, Company Organogram

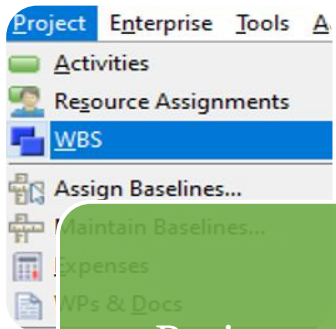
PROJECT, Company Projects

CODE, Oversight Structure

COST ACCOUNT, Cost Control / Management

Fundamental Features of Primavera P6 Professional

► Main Project Features in P6 Professional



Project
Features in P6

WBS, Breakdown of Project Scope

ACTIVITY, Lowest Level of Scope of Work

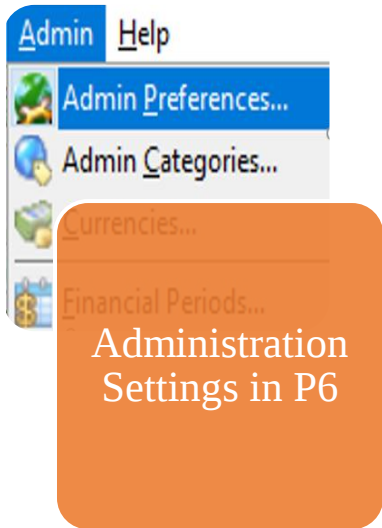
WPS & DOCS, Place for WBS/Activity Documents

MAINTAIN BASELINE, Baseline Creation and Management

ASSIGN BASELINE, Baseline Assignment

Fundamental Features of Primavera P6 Professional

► Main Settings of Admin in P6 Professional



GENERAL, Code Separator, Start Day of Week, Default Duration, Password Policy

DATA LIMIT, Levels, Codes, Baselines & Financial Period Calendars

ID LENGTHS, WBS, Activity, Resource, etc. ID limit

TIME PERIODS, Hour Per Day, Per Week, Per Month, Per Year

EARN VALUE, Methodology of Earn Value Calculation

UNIT, Unit of Measure for Material Resources

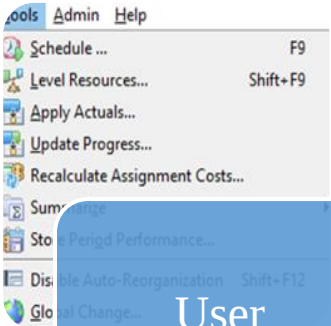
CURRENCIES, Currency Symbol, Conversion Rate.

FINANCIAL PERIOD CALENDAR, Storing Periodic Data

INDUSTRY SELECTION

Fundamental Features of Primavera P6 Professional

► Main Features of User Preference & Tools in P6 Professional



User
Preference &
Tools in P6

SCHEDULE, Periodic Schedule Update Options

GLOBAL CHANGE, One Click Modifier

RECALCULATE ASSIGNMENT COSTS, Cost Change Implementor

TOP-DOWN ESTIMATION, One Click Resource Unit Distributor

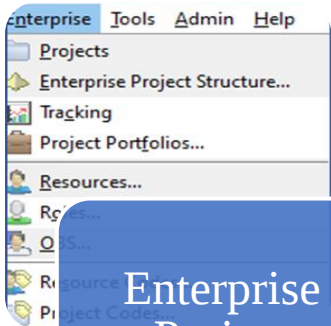
LEVEL RESOURCE, Resource Optimizer Tool

STORE PERIOD PERFORMANCE, Store Period Plan and Actuals.

REPORTS, Report Generation of Project, WBS and Activity Level

Detailed Discussion On Fundamental Features

► Main Features of Enterprise Project Structure



Enterprise
Project
Structure in
P6

EPS, Department / Sister Concerns

OBS, Company Organogram

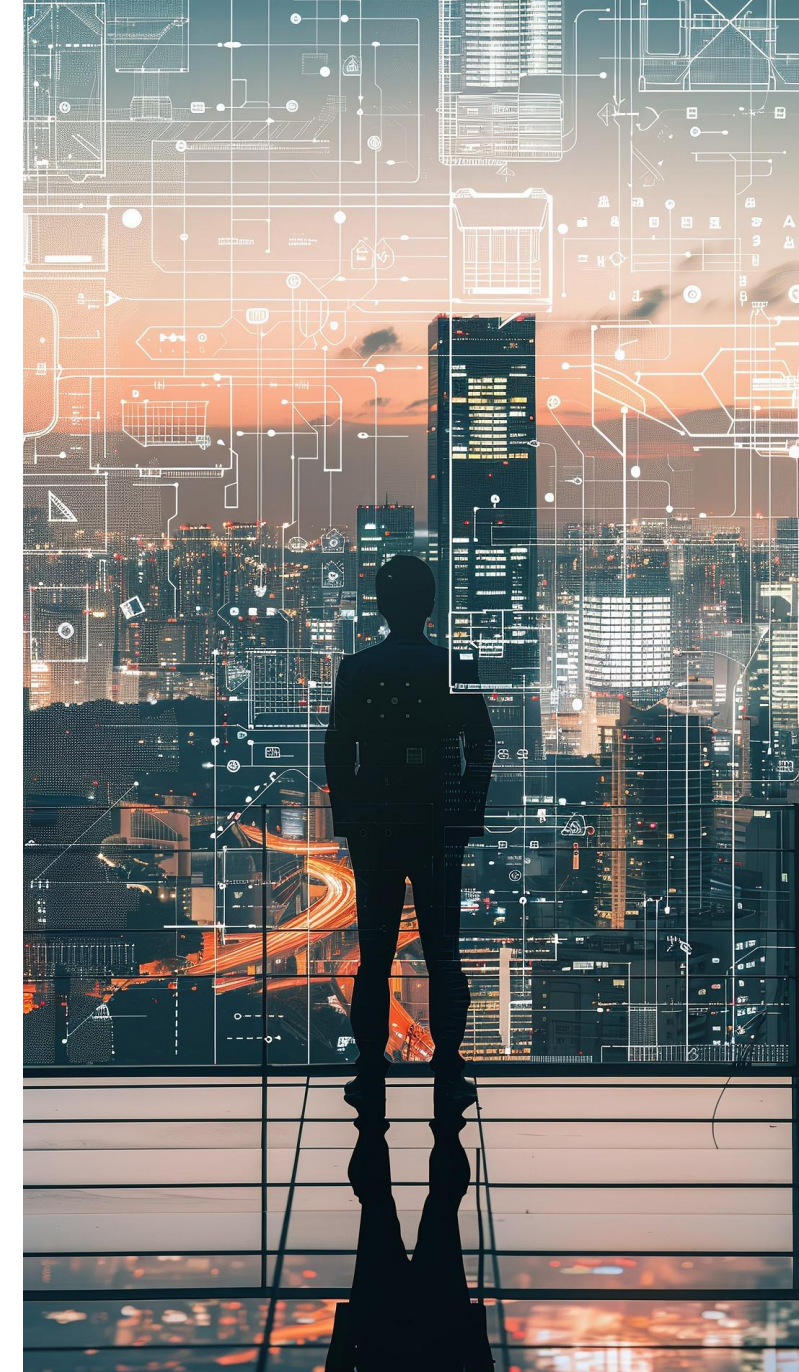
CALENDAR, Management of Working Hour

PROJECT, Company Projects

RESOURCE, Assignment in Activity Level

CODE, Oversight Structure

COST ACCOUNT, Cost Control / Management



Main Features of Enterprise Project Structure in P6 Professional

► Enterprise Project Structure (EPS)

The screenshot shows the P6 Enterprise Project Structure (EPS) window. The main pane displays a tree view of the project structure. The 'Add' button is highlighted with a green callout. The 'EPS ID' and 'EPS Name' fields are highlighted with a blue callout. The 'Responsible Manager' field is highlighted with a green callout. The 'Move' button is highlighted with a green callout. The 'Enterprise Project Structure...' menu item is highlighted with a blue callout.

1. Click add to create new EPS

2. Write the EPS ID and EPS Name

3. Click here to assign responsible manager

4. Use move option to up/down & indent/outdent.

This EPS is applicable for project configuration management of one project

Enterprise Project Structure (EPS)

EPS ID	EPS Name
PP6	PROJECT P6
BUILDING	BUILDING CONSTRUCTION LTD.
BRIDGE	BRIDGE CONSTRUCTION LTD.

Enterprise Project Structure (EPS)

EPS ID	EPS Name
RWP	RAW WATER PIPELINE
RWP.BL	BASELINE
RWP.REV	STORED REVISIONS
RWP.LIV	LIVE PROJECT

Enterprise Project Structure (EPS)

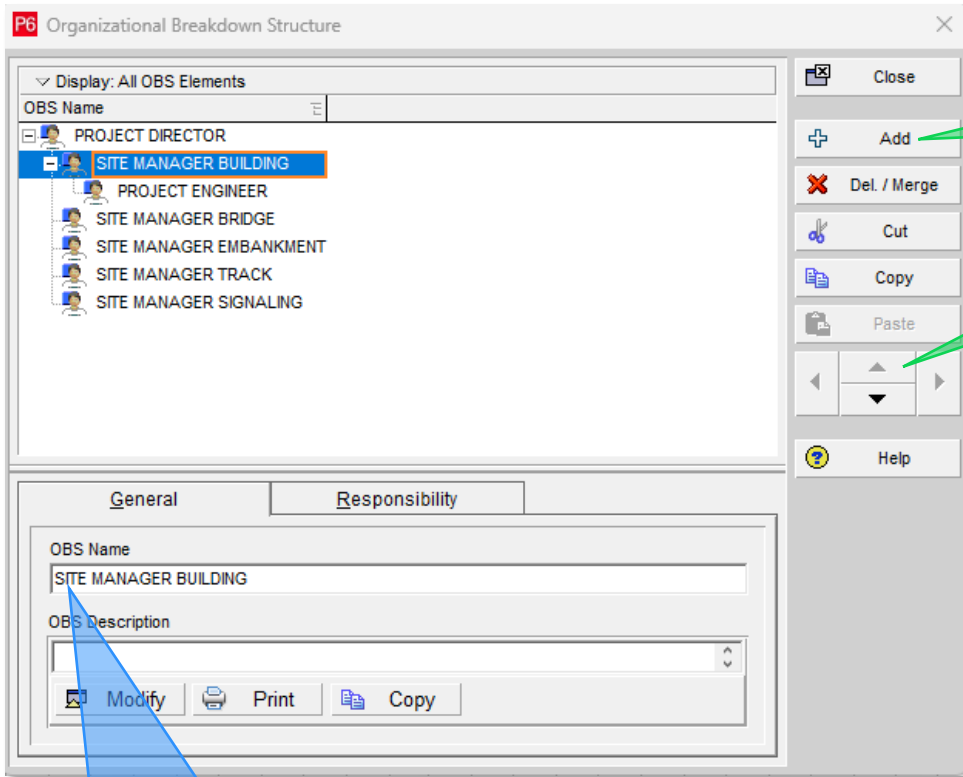
Project ID	Project Name
PP6	PROJECT P6
BUILDING	BUILDING PROJECTS
WATER	WATER TREATMENT PROJECTS
RAIL	RAILWAY PROJECTS

Enterprise Project Structure (EPS)

Project ID	Project Name
PP601Y2023N01	CONSTRUCTION OF 2 STOREYED BUILDING AT DHAKA
PP602Y2023N02	CONSTRUCTION OF 2 STOREYED BUILDING AT CHITTAGONG

Main Features of Enterprise Project Structure in P6 Professional

► Organizational Breakdown Structure (OBS)



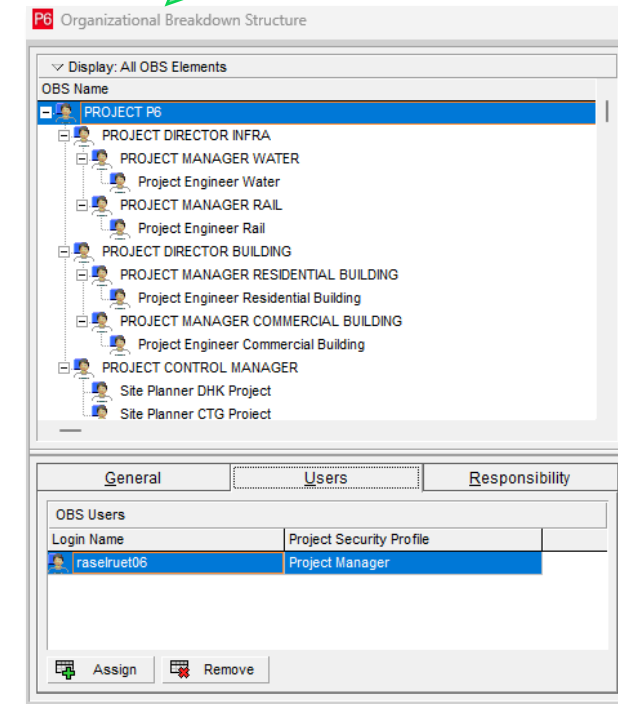
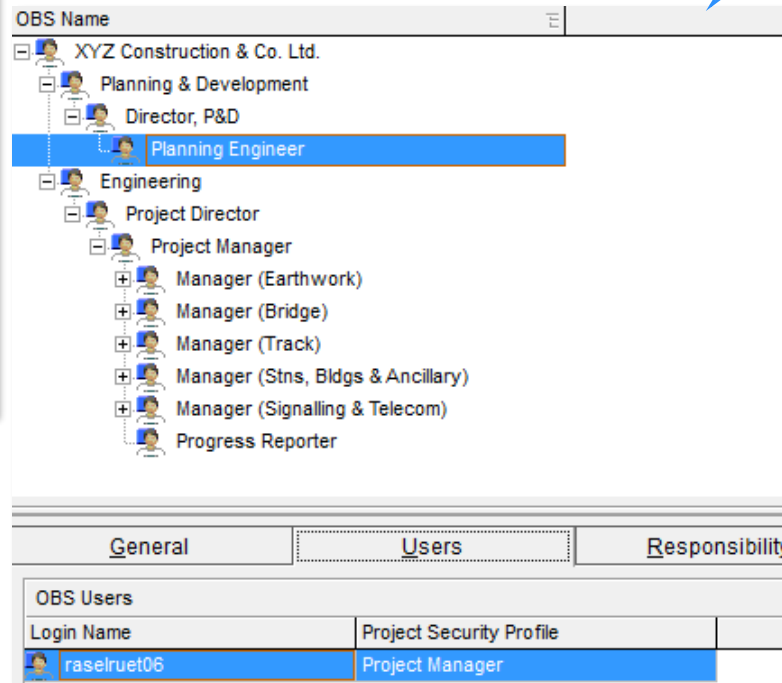
2. Write here the OBS Name

1. Click add to create new OBS element

3. Use move option to up/down & indent/outdent.

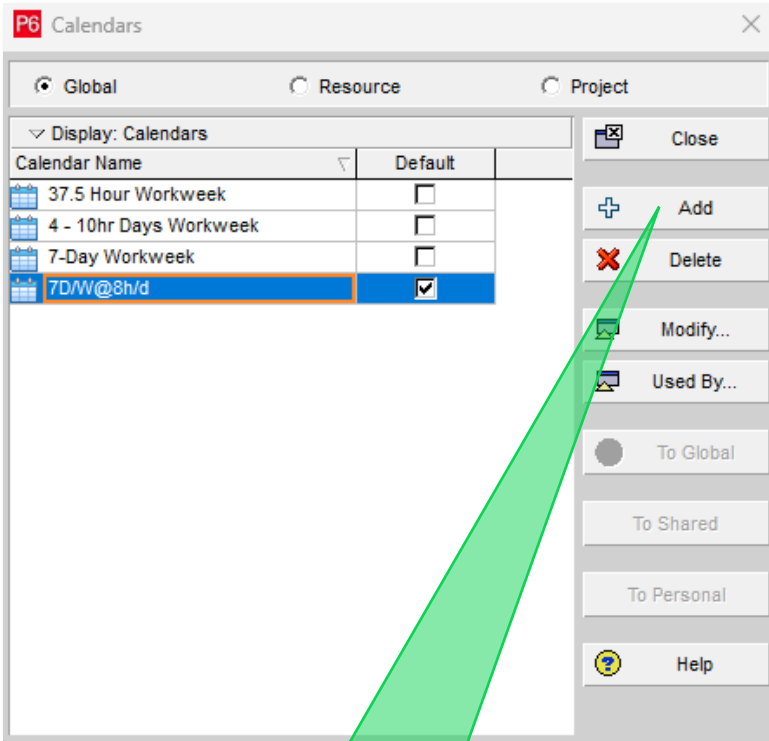
OBS of a Railway Construction Company

OBS of a Construction Company.

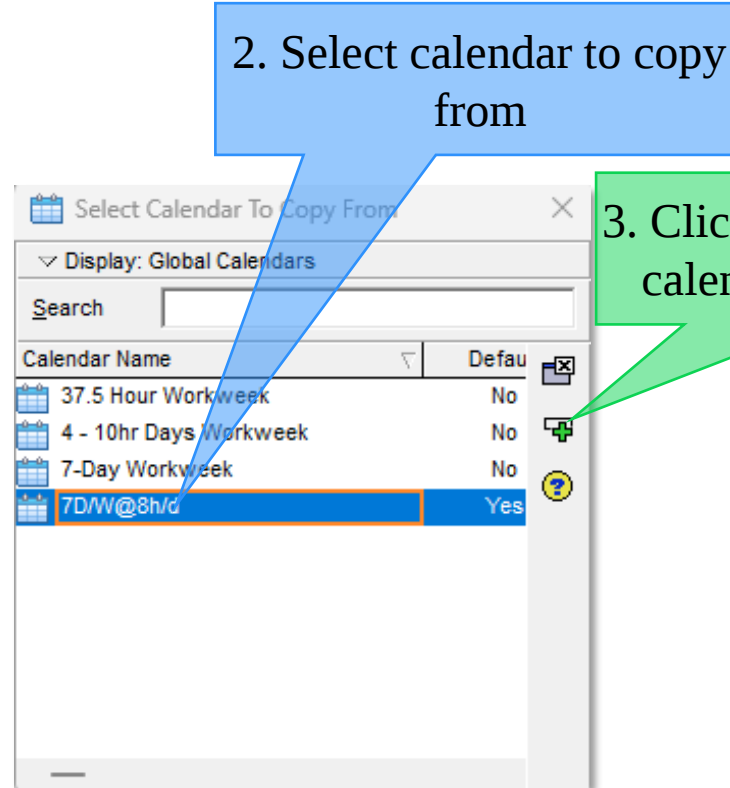


Main Features of Enterprise Project Structure in P6 Professional

► Calendar



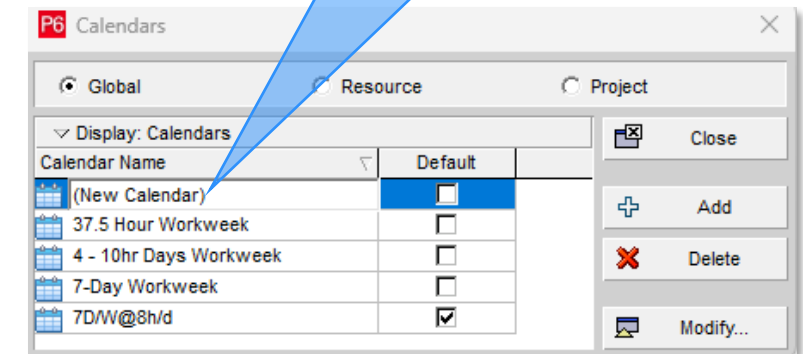
1. Click add to create new calendar



2. Select calendar to copy from

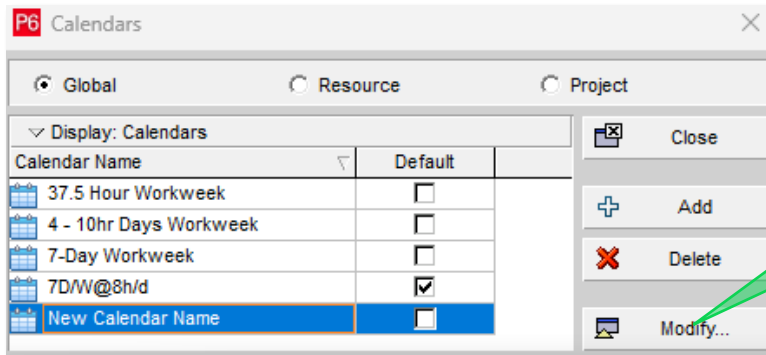
3. Click select to have new calendar for new name

4. Write the new calendar name for your project



Main Features of Enterprise Project Structure in P6 Professional

► Calendar



P6 Calendars

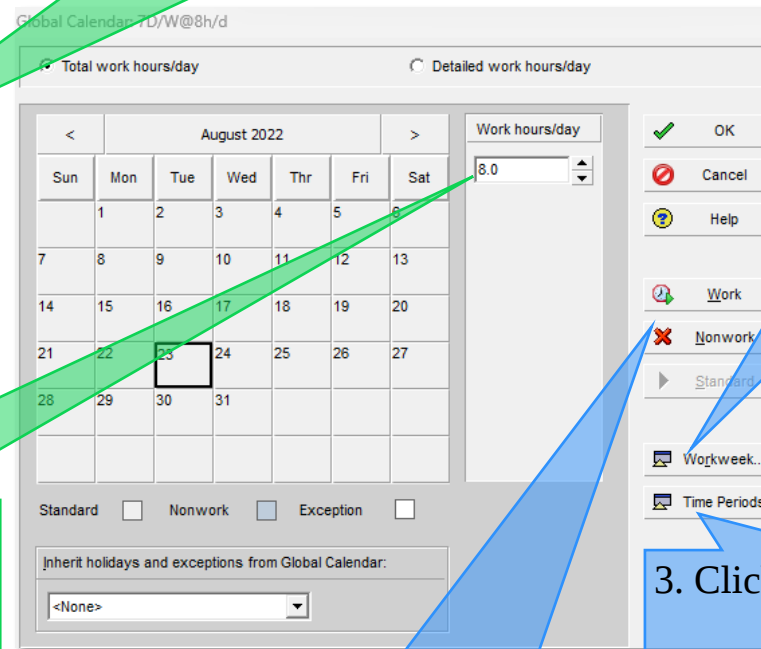
Global Resource Project

Display: Calendars

Calendar Name	Default
37.5 Hour Workweek	☐
4 - 10hr Days Workweek	☐
7-Day Workweek	☐
7D/W@8h/d	☒
New Calendar Name	☐

Close Add Delete Modify...

1. Click modify to set work hours



Global Calendar: 7D/W@8h/d

Total work hours/day Detailed work hours/day

Work hours/day: 8.0

August 2022

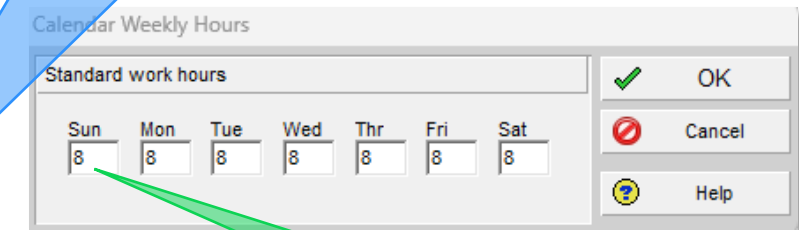
Sun	Mon	Tue	Wed	Thr	Fri	Sat
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

Standard ☐ Nonwork ☐ Exception ☐

Inherit holidays and exceptions from Global Calendar: <None>

OK Cancel Help Work Nonwork Standard Workweek... Time Periods

2. Click workweek to set standard work hours



Calendar Weekly Hours

Standard work hours

Sun	Mon	Tue	Wed	Thr	Fri	Sat
8	8	8	8	8	8	8

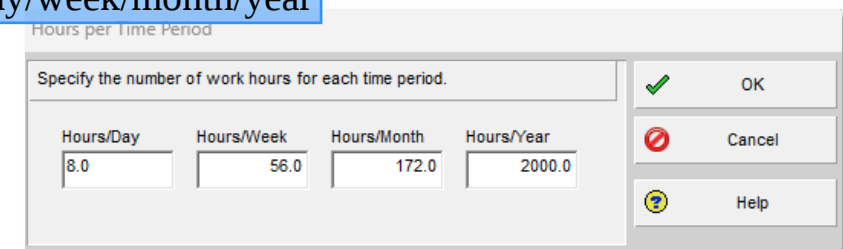
OK Cancel Help

6. Modify/Change work hours for specific date

5. Click work/nonwork to set specific day off or working

3. Click Time Periods to set work hours/day/week/month/year

4. Modify/Change work hours for specific day



Hours per Time Period

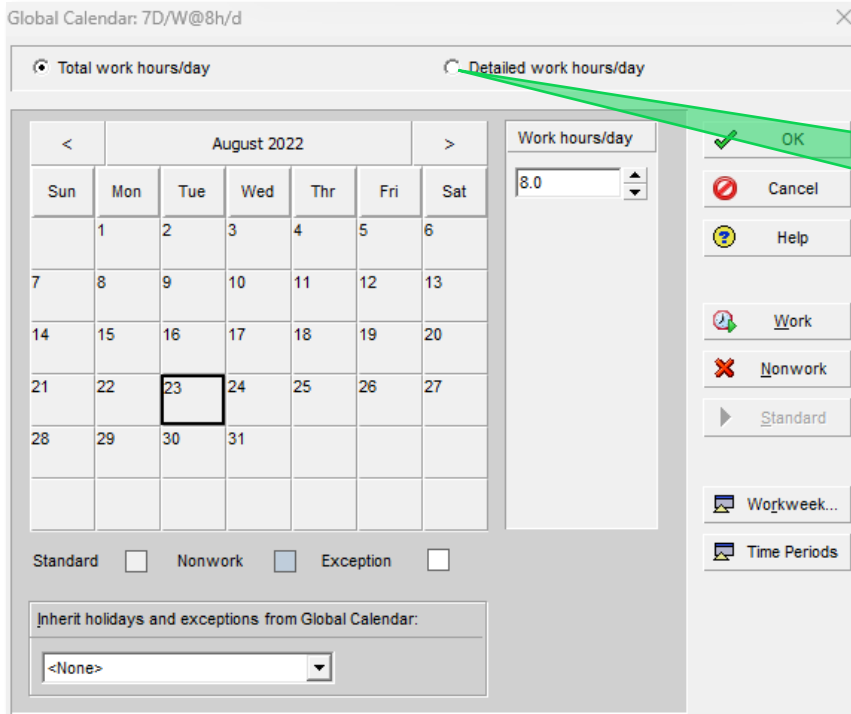
Specify the number of work hours for each time period.

Hours/Day	Hours/Week	Hours/Month	Hours/Year
8.0	56.0	172.0	2000.0

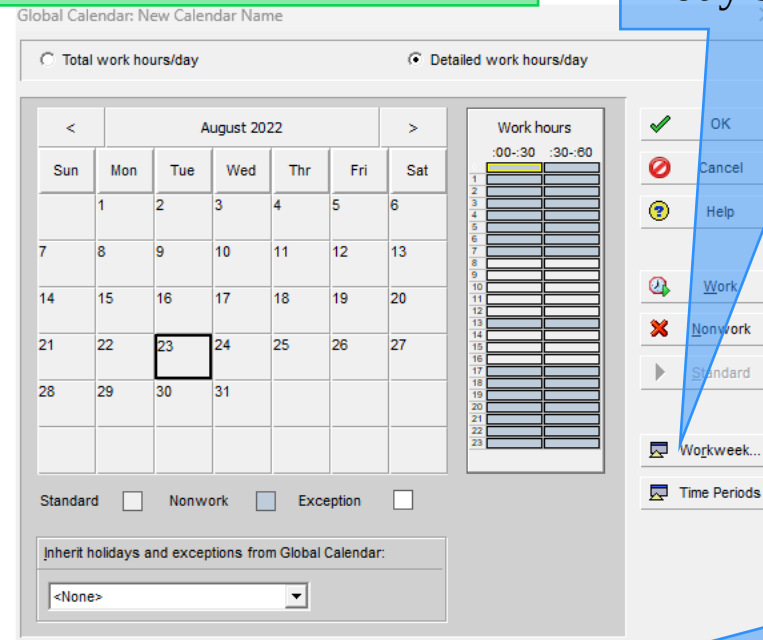
OK Cancel Help

Main Features of Enterprise Project Structure in P6 Professional

► Calendar

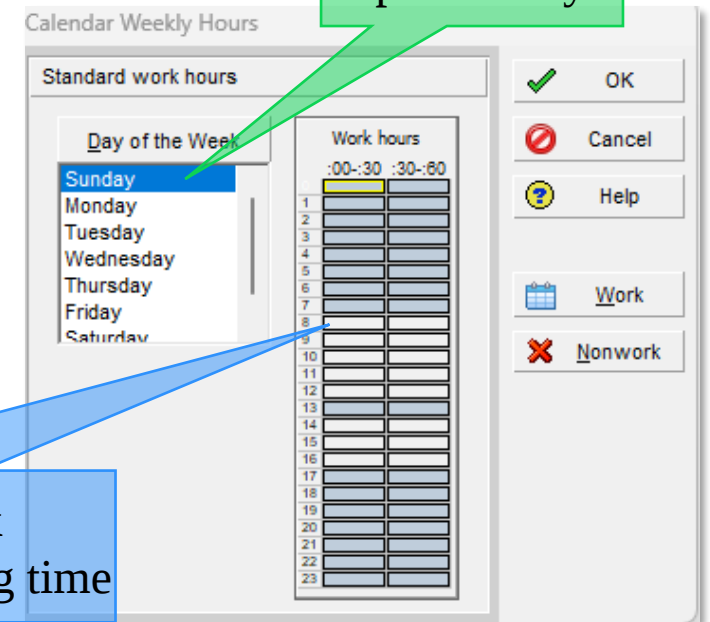


1. Click detailed work hours/day to set working time



2. Click workweek to set day start and end time

3. Click specific day



4. Select work hours and click work/nonwork button to set working time

Main Features of Enterprise Project Structure in P6 Professional

► Project

The screenshot displays the 'Enterprise Project Structure' window in Primavera P6 Professional. The interface is divided into several sections, with five numbered callouts highlighting key configuration areas:

- 1. Click defaults to set project control configurations:** Points to the 'Defaults' tab in the top navigation bar.
- 2. Click settings to set project basic settings:** Points to the 'Settings' tab in the top navigation bar.
- 3. Click calculations to set project update control properties:** Points to the 'Calculations' tab in the top navigation bar.
- 4. Default is checked. Keep it always unchecked:** Points to the 'Recalculate Actual Units and Cost when duration % complete changes' checkbox in the 'Resource Assignments' section.
- 5. Keep it always unchecked as default:** Points to the 'Link Budget and At Completion for not started activities' checkbox in the 'Activities' section.

The interface includes a top navigation bar with tabs: General, Notebook, Budget Log, Spending Plan, Budget Summary, Dates, Funding, Codes, Defaults, Resources, Settings, and Calculations. The main content area is divided into sections: Defaults for New Activities, Auto-numbering Defaults, Summarized Data, Project Settings, Activities, and Resource Assignments.

18 : PP6.BR.2020.01 (CONSTRUCTION)

Enterprise Tools Admin Help

Projects

Enterprise Project Structure...

Main Features of Enterprise Project Structure in P6 Professional

► Resource

Resource ID	Resource Name	Resource Type	Unit of Measure	Calendar	Default Units / Time	Auto Compute Actuals
EXC	EXCAVATOR	Nonlabor		7D/W@8h/d	1.0/d	☐
COST	BUDGETED COST	Labor		7D/W@8h/d	1.0/d	☐
BDZ	BULL DOZZER	Nonlabor		7D/W@8h/d	1.0/d	☐
DMT	DUMP TRUCK	Nonlabor		7D/W@8h/d	1.0/d	☐
RDCM	RDC MACHINE	Nonlabor		7D/W@8h/d	1.0/d	☐
MCR	MOBILE CRANE	Nonlabor		7D/W@8h/d	1.0/d	☐
PLDR	PAY LOADER	Nonlabor		7D/W@8h/d	1.0/d	☐
HCOM	HAND COMPACTOR	Nonlabor		7D/W@8h/d	1.0/d	☐
SCL	SITE CLEARING	Material	Meter	7D/W@8h/d	8.0/d	☐
RDC	ROLLING DYNAMIC COMPACTION	Material	Meter	7D/W@8h/d	8.0/d	☐
BED	BEDDING	Material	Meter	7D/W@8h/d	8.0/d	☐
DIP	DI PIPE	Material	Meter	7D/W@8h/d	8.0/d	☐
BFILL	BACKFILLING	Material	Meter	7D/W@8h/d	8.0/d	☐
EFILL BPT	EMBANKMENT FILL BPT	Material	Meter	7D/W@8h/d	8.0/d	☐
PT	PRESSURE TEST	Material	Meter	7D/W@8h/d	8.0/d	☐
EFILL APT	EMBANKMENT FILL APT	Material	Meter	7D/W@8h/d	8.0/d	☐
SBG	SUBGRADE	Material	Meter	7D/W@8h/d	8.0/d	☐
SISBG	SAND IMPROVED SUBBASE	Material	Meter	7D/W@8h/d	8.0/d	☐
ASSBG	AGGREGATE SAND SUBBASE	Material	Meter	7D/W@8h/d	8.0/d	☐
WBM	WBM	Material	Meter	7D/W@8h/d	8.0/d	☐
BTM	BITUMINOUS CARPETING	Material	Meter	7D/W@8h/d	8.0/d	☐
OFC	OPTICAL FIBRE CABLE	Material	Meter	7D/W@8h/d	8.0/d	☐

General Codes Details Units & Prices Roles Notes User Defined Fields

Shift Calendar: Shift: 1

Effective Date	Max Units / Time	Price / Unit	Price / Unit2	Price / Unit3	Price / Unit4	Price / Unit5
01-Jan-22	8.0/d	0.00				

General Codes Details Units & Prices Roles Notes User Defined Fields

Resource Type

☐ Labor ☐ Nonlabor ☒ Material

Unit of Measure: m

Currency and Overtime

Currency: US Dollar

☐ Overtime Allowed

Overtime Factor:

Profile

Calendar: 7D/W@8h/d [Create Personal Calendar](#)

Default Units / Time: 8.0/d

☐ Auto Compute Actuals

☒ Calculate costs from units

Enterprise Tools Admin Help

Projects

Enterprise Project Structure...

Tracking

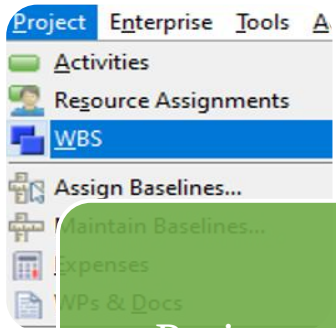
Project Portfolios...

Resources...

- Step 01 • Go to Enterprise
- Step 02 • Click Resource
- Step 03 • Click New
- Step 04 • Set ID and Name
- Step 05 • Set Resource Type
- Step 06 • Set Unit of Measure
- Step 07 • Set Price/Unit
- Step 08 • Set Calendar

Detailed Discussion On Fundamental Features

► Main Project Features in P6 Professional



Project
Features in P6

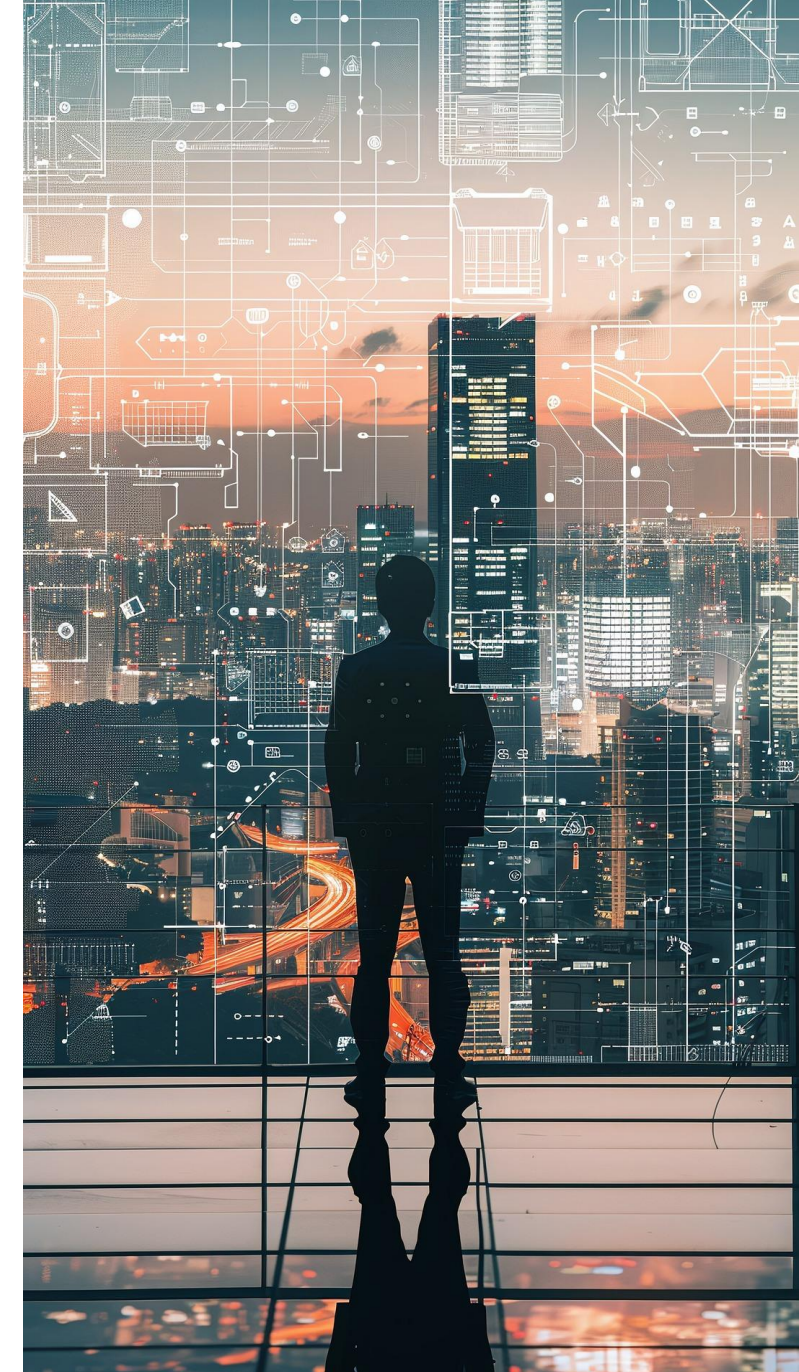
WBS, Breakdown of Project Scope

ACTIVITY, Lowest Level of Scope of Work

WPS & DOCS, Place for WBS/Activity Documents

MAINTAIN BASELINE, Baseline Creation and Management

ASSIGN BASELINE, Baseline Assignment



Main Project Features in Primavera P6

► Work Breakdown Structure (WBS)

Layout: WBS Est Weight with BAC

WBS Code	WBS Name	WBS Category
RWP.BL.REV.A	REV.A (34 M, CD: 01 MAR 21, DD: 01 MAR 21)	
RWP.BL.REV.A.1	CONTRACTUAL DATES	
RWP.BL.REV.A.2	CONTRACTUAL MILESTONES	
RWP.BL.REV.A.3	PRE-CONSTRUCTION	
RWP.BL.REV.A.3.1	MOBILIZATION	
RWP.BL.REV.A.3.2	DOCUMENTATION & TESTING	
RWP.BL.REV.A.4	CONSTRUCTION	
RWP.BL.REV.A.4.1	PIPELINE	
RWP.BL.REV.A.4.2	MAJOR ROAD CROSSING	
RWP.BL.REV.A.4.3	INTERCONNECTION CHAMBER	
RWP.BL.REV.A.4.4	RIVER CROSSING	
RWP.BL.REV.A.4.5	MAINTENANCE ROAD	
RWP.BL.REV.A.4.6	OPTICAL FIBER CABLING	
RWP.BL.REV.A.4.7	TESTING & COMMISSIONING	

Select WBS Categories

Display: WBS Categories

Search

Category Value

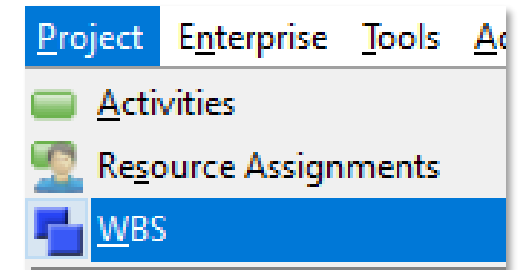
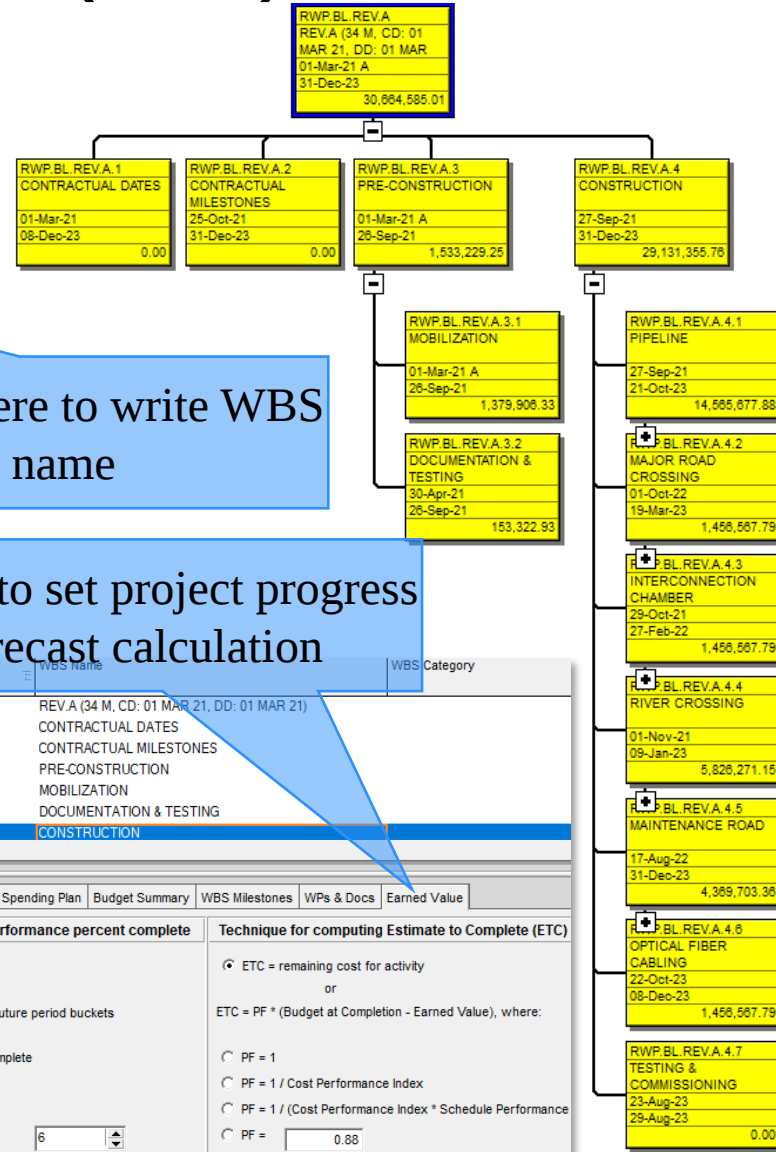
- Close-Out
- Commissioning / Delivery
- Design and Engineering
- Installation and Testing
- Implementation / Deployment
- Manufacturing / Production
- Needs Analysis / Requirements
- Procurement
- Project Management
- Project Planning
- Prototyping
- Quality Assurance
- Regulatory / Compliance
- Scope Definition
- Shutdown
- Startup

1. Click here to write WBS code value

3. Click here to assign WBS category (If needed)

2. Click here to write WBS name

4. Option to set project progress & forecast calculation



Main Project Features in Primavera P6

► Activity

Layout: Baseline Detailed Time Program Filter: All Activities

Activity ID	Activity Name	Activity Count	Est Weight	Budgeted Total Cost	Original Duration	Start	Finish	Total Float
RIVER CROSSING								
RIVER CROSSING 01: P4 (0+072.9) To P12 (0+220.2)								
CON-RIC-01-1000	RIC01 Site Preparation	1	10.0	83,957.13	7	01-Nov-21*	07-Nov-21	53
CON-RIC-01-1010	RIC01 River Diversion/Sheet Pile Installation	1	25.0	209,892.82	14	08-Nov-21	21-Nov-21	53
CON-RIC-01-1020	RIC01 Pipelaying	1	50.0	419,785.63	21	22-Nov-21	12-Dec-21	53
CON-RIC-01-1030	RIC01 Backfilling	1	5.0	41,978.56	7	13-Dec-21	19-Dec-21	53
CON-RIC-01-1040	RIC01 Sheet Pile Removal	1	5.0	41,978.56	14	20-Dec-21	02-Jan-22	53
CON-RIC-01-1050	RIC01 Pressure Test	1	5.0	41,978.56	14	03-Jan-22	16-Jan-22	137
RIVER CROSSING 02: P23 (1+054.9) To P31 (1+192.8)								
RIVER CROSSING 02: P23 (1+054.9) To P31 (1+192.8)								

General Status Resources Codes Relationships Notebook Steps Feedback WPs & Docs Risks Expenses Summary

Activity: CON-RIC-01-1020 RIC01 Pipelaying Project: RWPBL.REVA

Activity Type: Task Dependent Duration Type: Fixed Duration & Units % Complete Type: Physical Activity Calendar: 7D/W@8h/d

WBS: RWPBL.REVA.4.4.1 RIVER CROSSING 01: P4 (0+072.9) To P12 (0+220.2) Responsible Manager: PROJECT DIRECTOR Primary Resource: COST.BUDGETED COST

Layout: Baseline Detailed Time Program Filter: All Activities

Activity ID	Activity Name	Activity Count	Est Weight	Budgeted Total Cost	Original Duration	Start	Finish	Total Float
RIVER CROSSING								
RIVER CROSSING 01: P4 (0+072.9) To P12 (0+220.2)								
CON-RIC-01-1000	RIC01 Site Preparation	1	10.0	83,957.13	7	01-Nov-21*	07-Nov-21	53
CON-RIC-01-1010	RIC01 River Diversion/Sheet Pile Installation	1	25.0	209,892.82	14	08-Nov-21	21-Nov-21	53
CON-RIC-01-1020	RIC01 Pipelaying	1	50.0	419,785.63	21	22-Nov-21	12-Dec-21	53
CON-RIC-01-1030	RIC01 Backfilling	1	5.0	41,978.56	7	13-Dec-21	19-Dec-21	53
CON-RIC-01-1040	RIC01 Sheet Pile Removal	1	5.0	41,978.56	14	20-Dec-21	02-Jan-22	53
CON-RIC-01-1050	RIC01 Pressure Test	1	5.0	41,978.56	14	03-Jan-22	16-Jan-22	137
RIVER CROSSING 02: P23 (1+054.9) To P31 (1+192.8)								
RIVER CROSSING 02: P23 (1+054.9) To P31 (1+192.8)								

General Status Resources Codes Relationships Notebook Steps Feedback WPs & Docs Risks Expenses Summary

Activity: CON-RIC-01-1020 RIC01 Pipelaying Project: RWPBL.REVA

Predecessors:

Activity ID	Activity Name	Relations	Lag	Relationship Total Float	Activity Status	Comments
CON-RIC-01-1010	RIC01 River Diversion/Sheet Pile Installation	FS	0	53	Not Started	
PCON-DOC-1050	Sourcing, Testing & Approval	FS	0	109	Not Started	

Successors:

Activity ID	Activity Name	Relations	Lag
CON-RIC-01-1030	RIC01 Backfilling	FS	0

General Status Resources Codes Relationships Notebook Steps Feedback WPs & Docs Risks Expenses Summary

Activity: CON-RIC-01-1020 RIC01 Pipelaying Project: RWPBL.REVA

Resource ID Name	Price / Unit	Rate Type	Rate Source	Var Resou	Budgeted Units	Actual Units	Remaining Units	Remaining Units / Time	Budgeted Units / Time	Role	Cost Account	Drive Activity Dates	Curve
COST.BUDGETED COST	1.00	Price / Unit	Resource	☐	419785.6	0.0	419785.6	19989.8/d	19989.8/d		RWP	☒	
DIP.DI PIPE	0.00	Price / Unit	Resource	☐	147.3	0.0	147.3	7.0/d	7.0/d		RWP	☒	

Project Enterprise Tools Activities

Resource Assignments

WBS

- Step 01 • Go to Project
- Step 02 • Click Activities
- Step 03 • Click New
- Step 04 • Set ID and Name
- Step 05 • Set Duration
- Step 06 • Set Relationship
- Step 07 • Assign Resource
- Step 08 • Assign Budget

Main Project Features in Primavera P6

► WPs & Docs

▼ Display: All WPs & Docs

Title	Reference No.	Status	Document Category
General Layout	B-001464-GWT-GE-100-DL-0001	Approved	Drawings

General | Description | Files | Assignments | User Defined Fields

Title: General Layout
Version: 0
Revision Date: 25-Aug-22
Reference No.: B-001464-GWT-GE-100-DL-0001
Status: Approved
Document Category: Drawings
Author:
Deliverable: ☐

▼ Display: All WPs & Docs

Title	Reference No.	Status	Document Category
General Layout	B-001464-GWT-GE-100-DL-0001	Approved	Drawings

General | Description | Files | Assignments | User Defined Fields

Private Location: E:\OneDrive - SUEZ\GWT\10. GENERAL LAYOUT\INTAKE\B-001464-GWT-GE-100-DL-0001-PDF.pdf
Public Location:
Launch...
Launch...

▼ Display: All WPs & Docs

Title	Reference No.	Status	Document Category
General Layout	B-001464-GWT-GE-100-DL-0001	Approved	Drawings

General | Description | Files | Assignments | User Defined Fields

WBS Code	Activity ID	Activity Name	Work Product
RWP.BL.REV.A.3.1	PCON-MQB-1040	Site Establishment	☐
RWP.BL.REV.A.3			☒

Project | Enterprise | Tools

WBS

Assign Baselines...

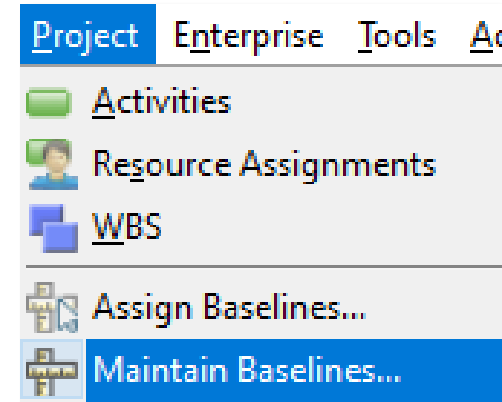
Maintain Baselines...

Expenses

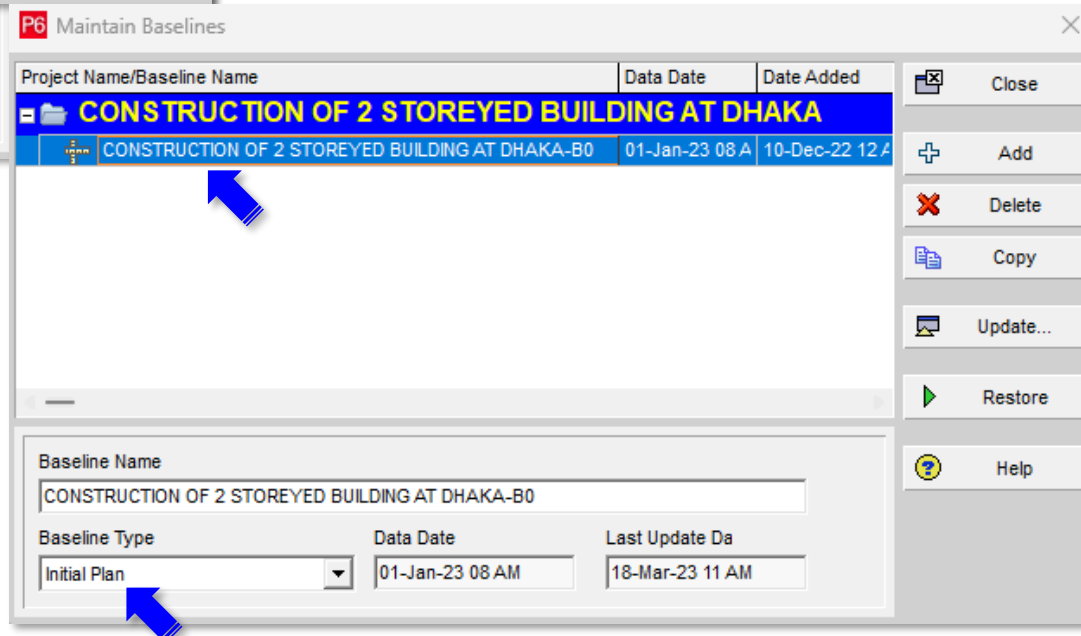
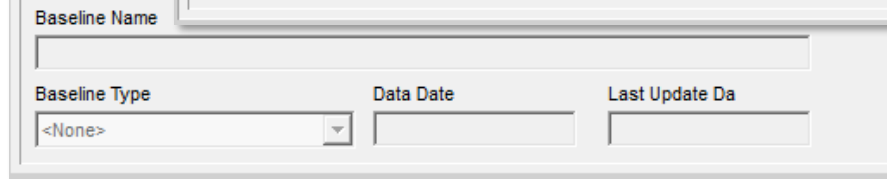
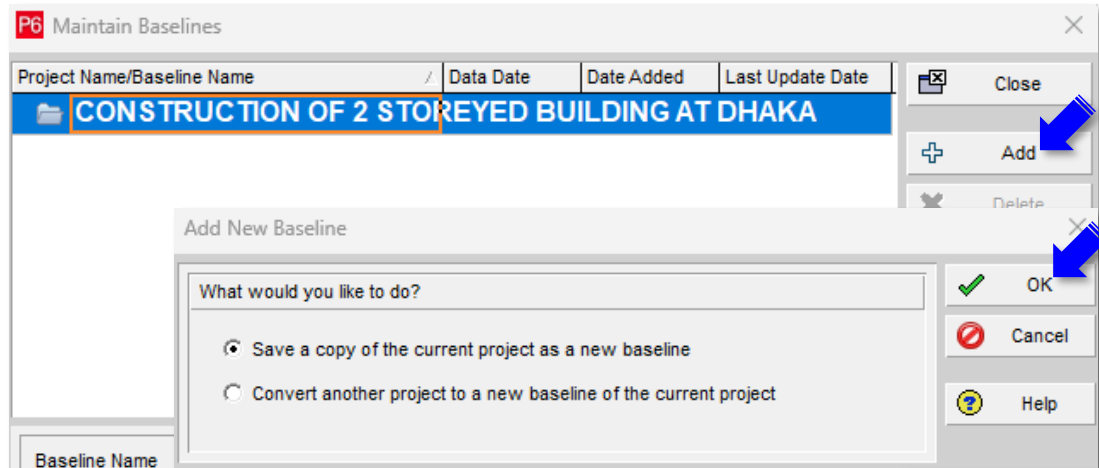
WPs & Docs

Main Project Features in Primavera P6

► Maintain Baseline

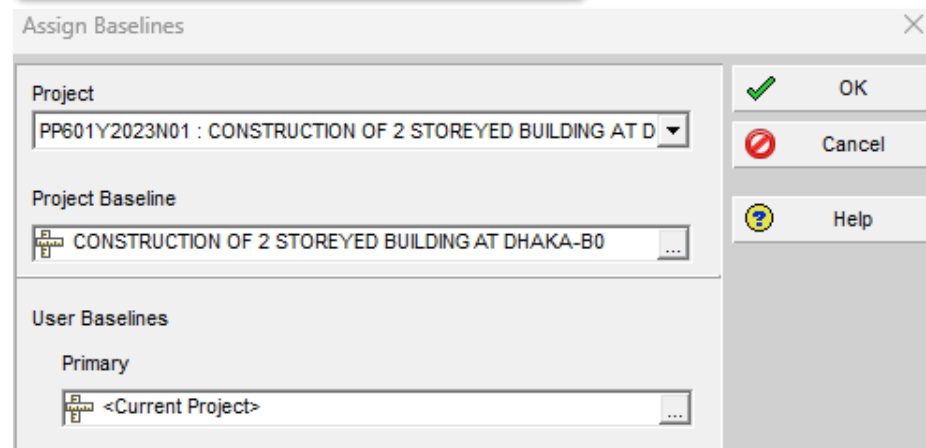
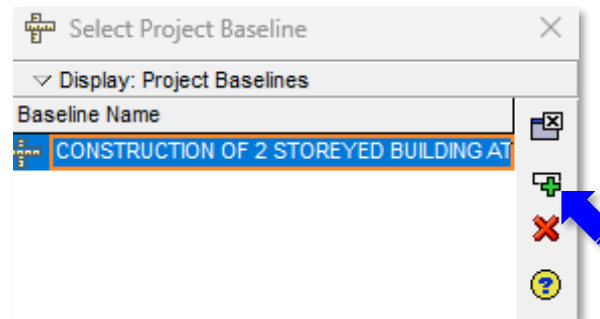
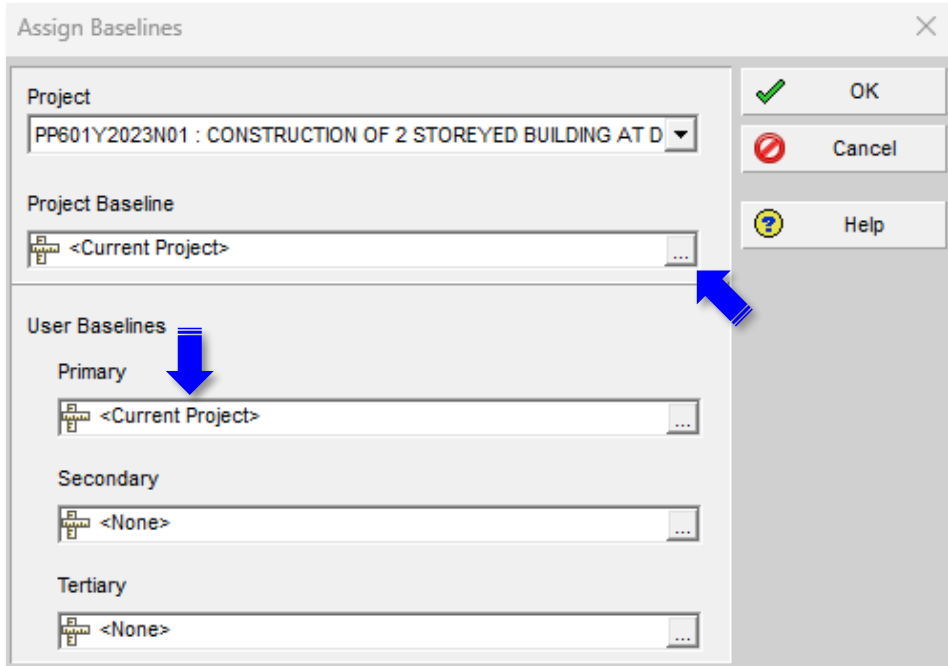
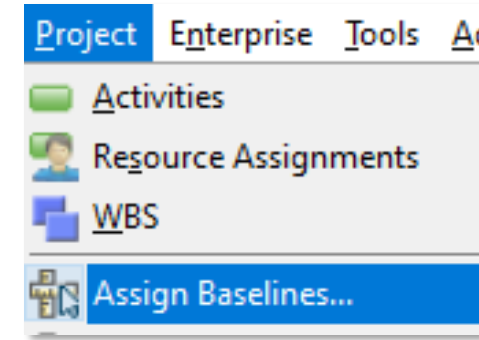


- ✓ Add Baseline
- ✓ Copy Current Project
- ✓ Convert Stored Project
- ✓ Set Baseline Name
- ✓ Set Baseline Type



Main Project Features in Primavera P6 Professional

► Assign Baseline



You will see your assigned Project Baseline at the status bar of P6

But the User Baselines will not be visible at the status bar of P6

► Project Baseline

► User Baselines

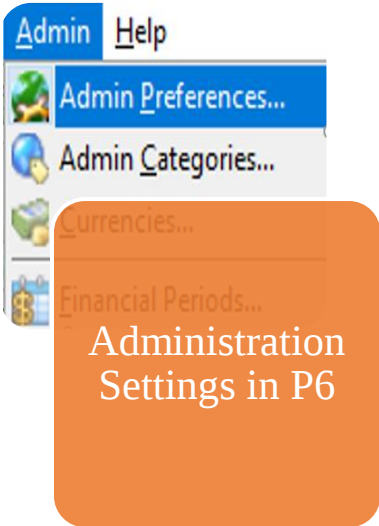
✓ Primary Baseline

✓ Secondary Baseline

✓ Tertiary Baseline

Detailed Discussion On Fundamental Features

► Main Settings of Admin in P6 Professional



GENERAL, Code Separator, Start Day of Week, Default Duration, Password Policy

DATA LIMIT, Levels, Codes, Baselines & Financial Period Calendars

ID LENGTHS, WBS, Activity, Resource, etc. ID limit

TIME PERIODS, Hour Per Day, Per Week, Per Month, Per Year

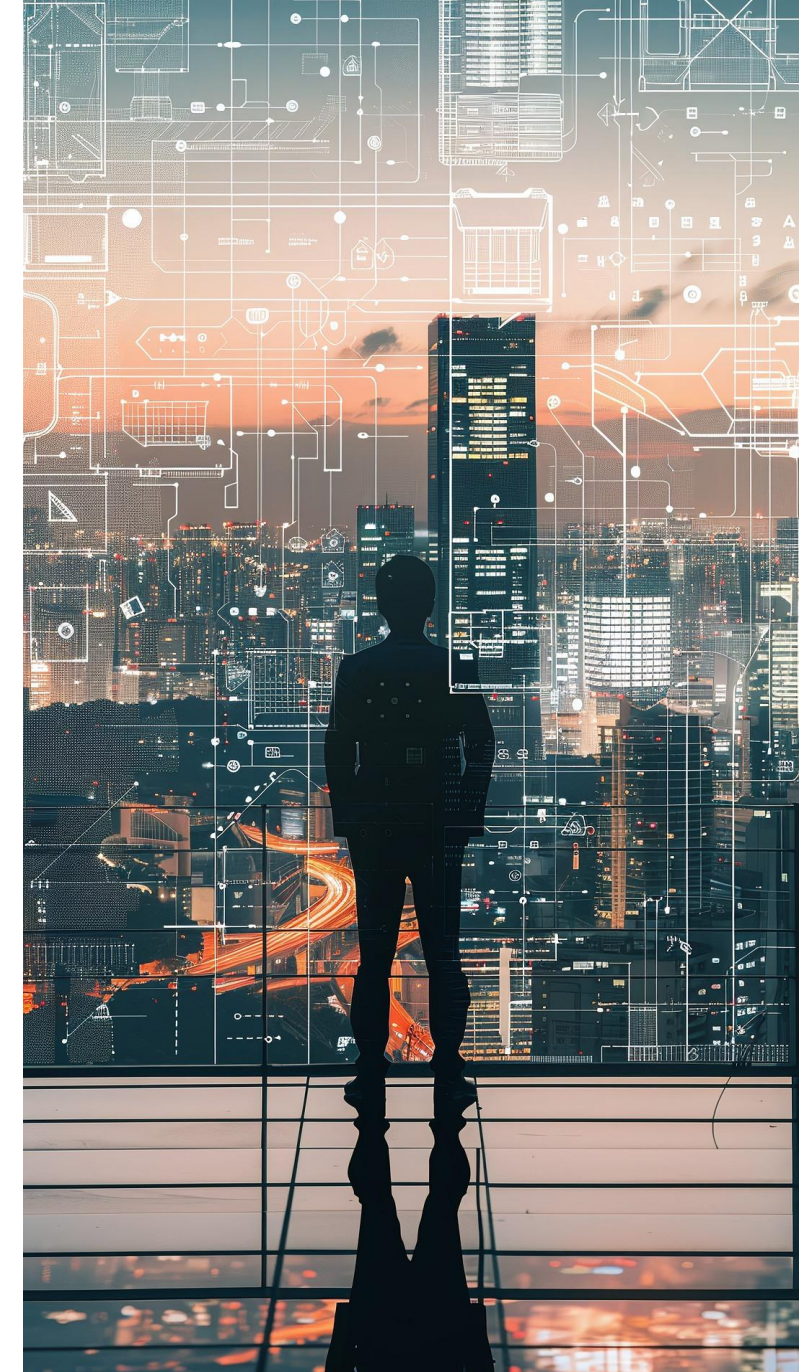
EARN VALUE, Methodology of Earn Value Calculation

UNIT, Unit of Measure for Material Resources

CURRENCIES, Currency Symbol, Conversion Rate.

FINANCIAL PERIOD CALENDAR, Storing Periodic Data

INDUSTRY SELECTION



Main Settings of Admin in P6 Professional

► Admin Preference in P6 Professional

Admin Preferences

General

Code Separator

Specify the character for separating concatenated codes. It is also the default WBS code separator for new projects.

Code Separator

Starting Day of Week

Specify the starting day of the week for calendars.

First day of week

Activity Duration

Specify the default duration for new activities.

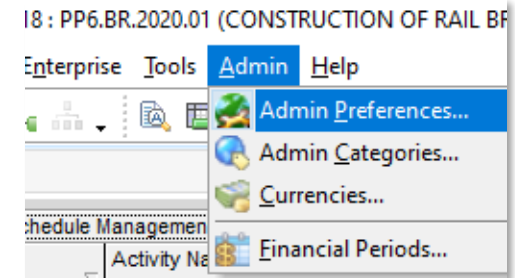
Default Duration

Password Policy

The Password Policy requires a minimum length of 8 characters and at least one number and one letter in a user's password.

☐ Enable password policy

Help Close



Admin Preference in P6 Professional

► General

Admin Preferences

General

Code Separator

Specify the character for separating concatenated codes. It is also the default WBS code separator for new projects.

Code Separator

Starting Day of Week

Specify the starting day of the week for calendars.

First day of week

Activity Duration

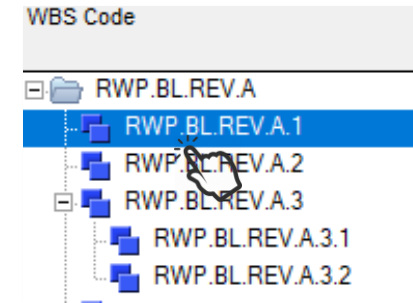
Specify the default duration for new activities.

Default Duration

Password Policy

The Password Policy requires a minimum length of 8 characters and at least one number and one letter in a user's password.

☐ Enable password policy



Activity ID	Activity Name	Feb 27					Mar 06								
		T	W	T	Fri	S	S	M	T	W	T	Fri	S	S	M
RAW WATER INTAKE															
Contractual Dates															
A1550	Notice To Proceed														
A1560	Project Commencement														
A1570	Project Completion														
Subsection Milestones															
+ Intake Offshore (i10)															
+ Pedestrian Bridge (i15)															
+ Inlet & Distribution Chamber (i20)															
+ Raw Water Pumping Station (i20)															
+ Water Hammer Wall (i20)															
+ Generator & Electrical Building (i80)															
+ Storage & Workshop Building (i92)															

Admin Preference in P6 Professional

► Data Limit

Admin Preferences

General		
Data Limits	Data Limits	
ID Lengths	Specify the maximum number of levels for trees.	
Time Periods	EPS/WBS tree maximum levels	10
Earned Value	OBS tree maximum levels	10
Reports	Resources tree maximum levels	10
Options	Role tree maximum levels	20
Rate Types	Cost Account tree maximum levels	10
Industry	Activity Code tree maximum levels	10
	Resource Code tree maximum levels	20
	Project Code tree maximum levels	10
	Maximum activity codes per project	10
	Maximum baselines per project	10
	Maximum baselines copied with project	3



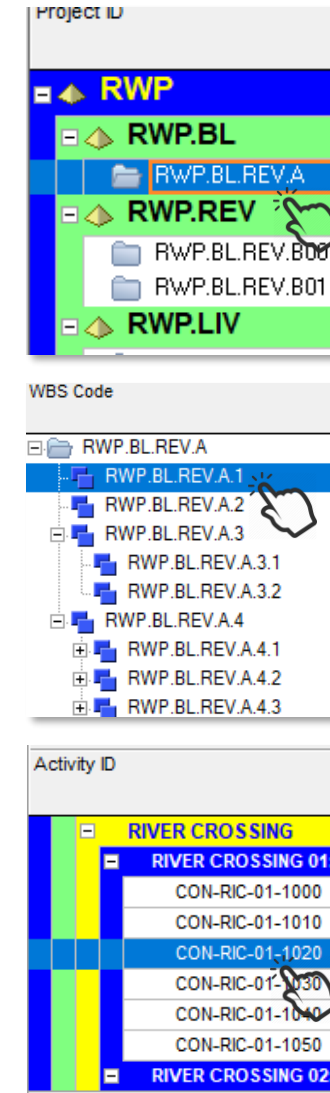
WBS Code	WBS Name
TCEL.D006	REV.C (14M, CD 15 JAN 22, DD 25 JULY 22)
TCEL.D006.1	PROJECT START AND FINISH DATE
TCEL.D006.2	SECTION MILESTONES.
TCEL.D006.3	MAIN CIVIL WORKS (10;15;20;80)
TCEL.D006.3.1	INTAKE OFFSHORE (10)
TCEL.D006.3.1.5	FOUNDATION
TCEL.D006.3.1.2	VERTICAL ELEMENTS
TCEL.D006.3.1.3	HORIZONTAL ELEMENTS
TCEL.D006.3.1.4	OTHER WORKS
TCEL.D006.3.2	PEDESTRAIN BRIDGE (15)
TCEL.D006.3.2.7	EXCAVATION INCLUDING STRUTS
TCEL.D006.3.2.1	PILE CAP
TCEL.D006.3.2.2	PIPE SADDLE
TCEL.D006.3.2.3	PIER
TCEL.D006.3.2.4	PIER CAP
TCEL.D006.3.2.5	DECK SYSTEM
TCEL.D006.3.2.6	OTHER WORKS
TCEL.D006.3.3	INLET CHAMBER (20)
TCEL.D006.3.3.1	FOUNDATION
TCEL.D006.3.3.2	VERTICAL ELEMENTS
TCEL.D006.3.3.3	HORIZONTAL ELEMENTS
TCEL.D006.3.3.4	OTHER WORKS
TCEL.D006.3.4	PUMPING STATION (20)
TCEL.D006.3.4.1	FOUNDATION
TCEL.D006.3.4.2	VERTICAL ELEMENTS
TCEL.D006.3.4.2.1	PUMPING STATION
TCEL.D006.3.4.3	HORIZONTAL ELEMENTS
TCEL.D006.3.4.4	OTHER WORKS
TCEL.D006.3.5	WATER HAMMER WALL (20)
TCEL.D006.3.5.1	VERTICAL ELEMENTS
TCEL.D006.3.5.2	OTHER WORKS
TCEL.D006.3.6	MAIN ELECTRICAL BUILDING (80)
TCEL.D006.3.6.1	FOUNDATION
TCEL.D006.3.6.2	VERTICAL ELEMENTS
TCEL.D006.3.6.3	HORIZONTAL ELEMENTS
TCEL.D006.3.6.4	MASONRY WORK
TCEL.D006.3.6.5	ARCHITECTURAL WORK
TCEL.D006.3.6.6	OTHER WORKS
TCEL.D006.3.7	ANCILLIARY WORK

Admin Preference in P6 Professional

► ID Lengths

Admin Preferences

General	ID Lengths	
Data Limits	Specify the maximum number of characters to allow for ID fields at each tree level.	
ID Lengths		
Time Periods		
Earned Value		
Reports		
Options		
Rate Types		
Industry		
	Project ID maximum characters	20
	WBS Code maximum characters	20
	Resource ID maximum characters	20
	Activity ID maximum characters	20
	Cost Account ID maximum characters	20
	Role ID maximum characters	20



Admin Preference in P6 Professional

► Time Period

Admin Preferences

General	Hours per Time Period												
Data Limits	Specify the number of work hours for each time period.												
ID Lengths													
Time Periods	<table><tr><td>Hours/Day</td><td>Hours/Week</td><td>Hours/Month</td><td>Hours/Year</td></tr><tr><td> 8.0 </td><td> 56.0 </td><td> 240.0 </td><td> 2920.0 </td></tr></table>	Hours/Day	Hours/Week	Hours/Month	Hours/Year	8.0	56.0	240.0	2920.0				
Hours/Day	Hours/Week	Hours/Month	Hours/Year										
8.0	56.0	240.0	2920.0										
Earned Value	☒ Use assigned calendar to specify the number of work hours for each time period												
Reports	Time Period Abbreviations												
Options	Specify the abbreviation for each time period.												
Rate Types	<table><tr><td>Minutes</td><td>Hours</td><td>Days</td></tr><tr><td> n </td><td> h </td><td> d </td></tr><tr><td>Weeks</td><td>Months</td><td>Years</td></tr><tr><td> w </td><td> m </td><td> y </td></tr></table>	Minutes	Hours	Days	n	h	d	Weeks	Months	Years	w	m	y
Minutes	Hours	Days											
n	h	d											
Weeks	Months	Years											
w	m	y											
Industry													

- **Hours/Day:** Working time in hour set for one day.
- **Hours/Week:** Product of Hours/Day and general number of working days in a week. Do not put false working days of a week if you will really work for 7 days.
- **Hours/Month:** Product of Hours/Day and general number of working days (out of 30 days) in a month. Do not put value based on 4 weeks/month consideration.
- **Hours/Year:** Product of Hours/Day and general number of working days (out of 365 days) in a year. You may put value based on 12 months/year (12 times of Hour/Month) consideration.
- **Tick Mark:** Recommended to set check normally.

Admin Preference in P6 Professional

► Earned Value

Admin Preferences

General

Technique for computing performance percent complete

☒ Activity % Complete ☐ 50/50 % Complete

☐ Use WBS Milestones ☐ Custom % Complete

☐ 0/100 % Complete

Technique for computing Estimate to Complete (ETC)

☒ ETC = remaining cost for activity

or

ETC = PF * (Budget at Completion - Earned Value), where:

☐ PF = 1

☐ PF = 1 / Cost Performance Index

☐ PF = 1 / (Cost Performance Index * Schedule Performance Index)

☐ PF = 0.88

Earned value calculation

When calculating earned value from a baseline use

Budgeted values with planned dates

- **Activity % Complete:** This is the default and most used option. Performance % complete is equal to the Activity % complete.
- **Use WBS Milestones:** Calculate performance percent complete by defining milestones at the WBS level and assigning a level of significance or weight to each of them.
- **0/100 % Complete:** Performance Percent Complete is 0 until the activity is complete. Once the activity is complete, Performance Percent Complete is 100.
- **50/50 % Complete:** Once an activity is started, Performance Percent Complete is 50. Performance Percent Complete remains at 50% until the activity finishes, at which time the percent is 100.
- **Custom % Complete:** Manually enter a Performance Percent Complete at any WBS level. This percentage applies to all activities within the WBS level once an Actual Start is applied to the activity. After the activity is completed, the activity's Performance Percent Complete is 100 percent.
- Performance Percent Complete is used to calculate Earned Value (Earned Value Cost = Budget At Completion x Performance percent complete). Earn value is one of the main KPI of a project

Admin Preference in P6 Professional

► Industry

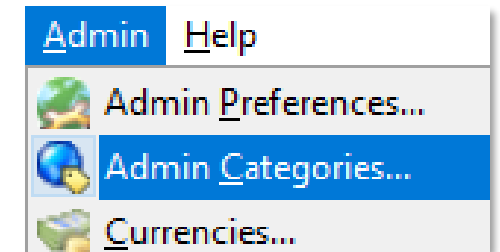
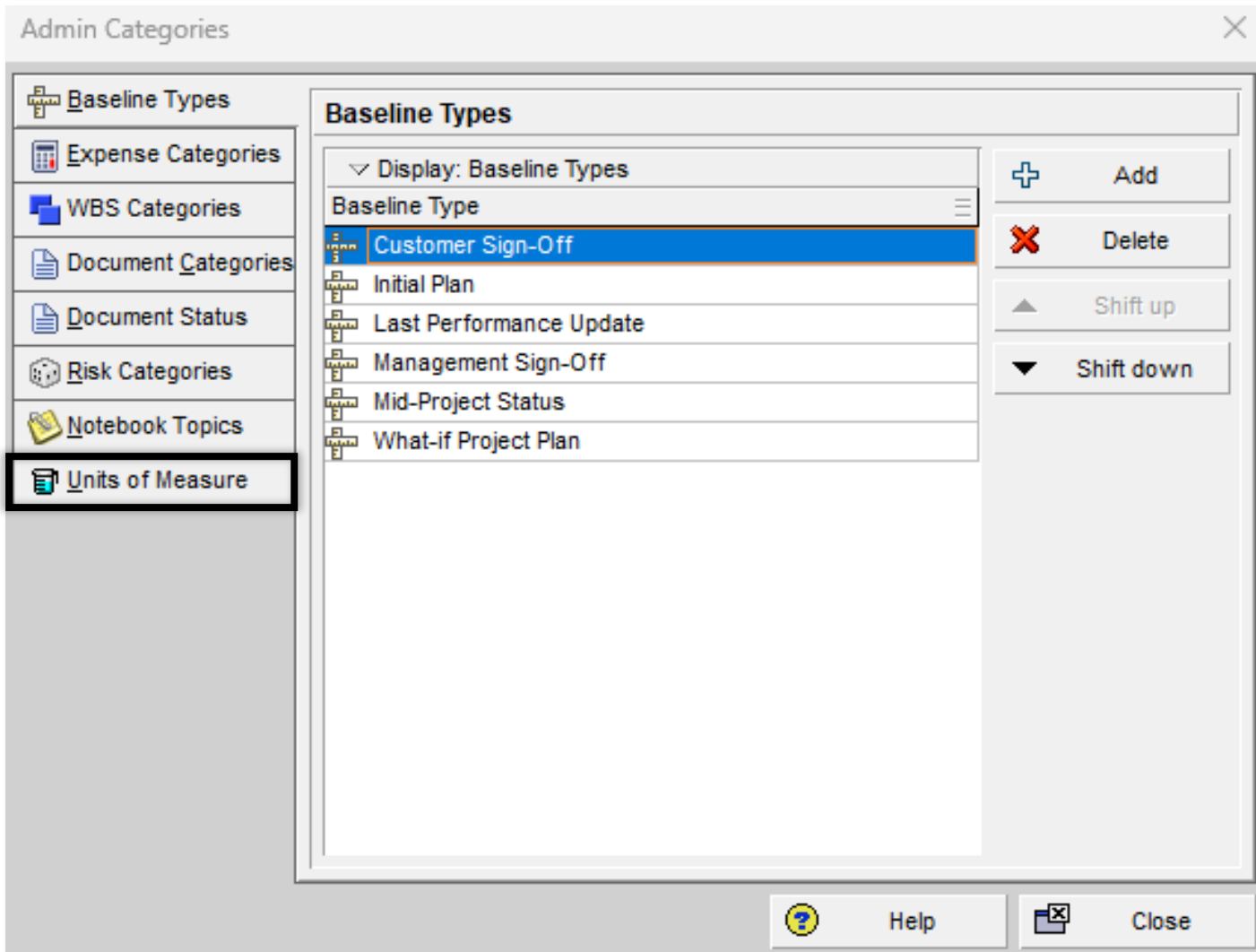
Admin Preferences

General	
Data Limits	
ID Lengths	
Time Periods	
Earned Value	
Reports	
Options	
Rate Types	
Industry	Industry Selection Select the industry to use for terminology and default calculation settings in P6 Professional. ☒ Engineering and Construction ☐ Government, Aerospace and Defense ☐ High-Technology, Manufacturing and Others ☐ Utilities, Oil and Gas

- **Engineering & Construction**
 - Budgeted Units
 - Budgeted Cost
 - Original Duration
 - Default startup window is Activity window
- **Government, Aerospace and Defense**
 - Planned Units
 - Planned Cost
 - Original Duration
 - Default startup window is Project window
- **High-Technology, Manufacturing**
 - Planned Units
 - Planned Cost
 - Original Duration
 - Default startup window is Project window
- **Utilities, Oil, and Gas**
 - Budgeted Units
 - Budgeted Cost
 - Original Duration
 - Default startup window is Project window

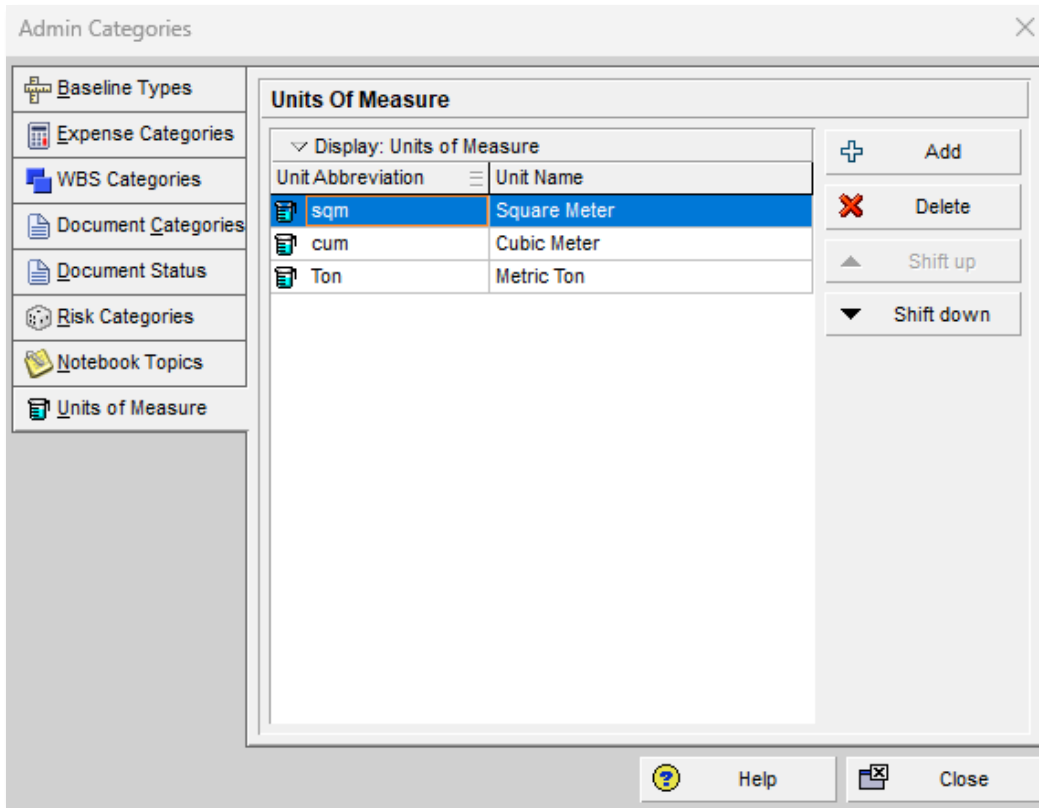
Admin Categories in P6 Professional

► Unit of Measure



Admin Categories in P6 Professional

► Unit of Measure



Resource ID	Resource Name	Unit of Measure	Resource Type
PROJECT P6	PROJECT P6		Material
SCFLD	SCAFFOLDING	Square Meter	Material
FRM	FORMWORK	Square Meter	Material
MSBAR	REBAR	Metric Ton	Material
CON	CONCRETE	Cubic Meter	Material

Main Settings of Admin in P6 Professional

► Currencies

Currencies

▼ Display: Currencies

Base	Currency ID	Currency Name	Currency Symbol	Exchange Rate
☒	BDT	BDT	Tk	1.000000
☐	ARS	Argentine Peso	\$	3.077000
☐	AUST	Australian Dollar	A\$	1.208000
☐	BRL	Brazilian Real	R\$	2.014000
☐	U.K.	British Pound	£	0.501762
☐	CAD	Canadian Dollar	CA\$	1.105730
☐	CNY	Chinese Yuan	Y	7.694000

Close

+

 Add

×

 Delete

?

 Help

General Appearance

Currency ID: BDT Currency name: BDT

Currency symbol: Tk Exchange rate: 1.000000

Currencies

▼ Display: Currencies

Base	Currency ID	Currency Name	Currency Symbol	Exchange Rate
☒	BDT	BDT	Tk	1.000000
☐	ARS	Argentine Peso	\$	3.077000
☐	AUST	Australian Dollar	A\$	1.208000
☐	BRL	Brazilian Real	R\$	2.014000
☐	U.K.	British Pound	£	0.501762
☐	CAD	Canadian Dollar	CA\$	1.105730
☐	CNY	Chinese Yuan	Y	7.694000

Close

+

 Add

×

 Delete

?

 Help

General Appearance

Decimal symbol: . Number of decimal places: 2

Digit grouping symbol: ,

\$ = Sample currency symbol

Positive currency format: \$1.1 Negative currency format: (\$1.1)

Admin Help

Admin Preferences...

Admin Categories...

Currencies...

Main Settings of Admin in P6 Professional

► Financial Period Calendars

P6 Financial Period Calendars [X]

▼ Display: Financial Period Calendars

Financial Period Calendar	Default
 MONTHLY	☒
 QUARTERLY	☐
 YEARLY	☐

Close

Add

Delete

Copy

Paste

Modify...

Used By...

Help

Admin Help

 Admin Preferences...

 Admin Categories...

 Currencies...

 Financial Period Calendars...

Main Settings of Admin in P6 Professional

► Financial Periods

Financial Periods
For Monthly
Status Storing

Financial Periods
For Quarterly
Status Storing

Financial Periods for: MONTHLY

Batch Create Financial Periods

Last Period End Date
30-Sep-21

Batch Start Date
01-Oct-21 ... Friday

Batch End Date
28-Oct-21 ... Thursday

Financial Period
☒ Every 4 Weeks
☐ Every 3 Months
☐ Every Year
Period Ends On
Saturday

Batch Create

▼ Display: Financial Periods

Period Name	Start Date	End Date
202107_JUL 21	01-Jul-21	31-Jul-21
202108_AUG 21	01-Aug-21	31-Aug-21
202109_SEP 21	01-Sep-21	30-Sep-21

Close

Add

Delete

Help

Financial Periods for: QUARTERLY

Batch Create Financial Periods

Last Period End Date
31-Dec-21

Batch Start Date
01-Jan-22 ... Saturday

Batch End Date
28-Jan-22 ... Friday

Financial Period
☐ Every 4 Weeks
☒ Every 3 Months
☐ Every Year
Period Ends On
Saturday

Batch Create

▼ Display: Financial Periods

Period Name	Start Date	End Date
2021 Q3	01-Jul-21	30-Sep-21
2021 Q4	01-Oct-21	31-Dec-21

Close

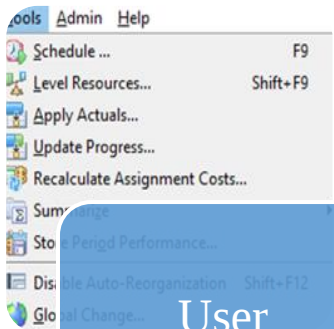
Add

Delete

Help

Detailed Discussion On Fundamental Features

► Main Features of User Preference & Tools



User
Preference &
Tools in P6

SCHEDULE, Periodic Schedule Update Options

GLOBAL CHANGE, One Click Modifier

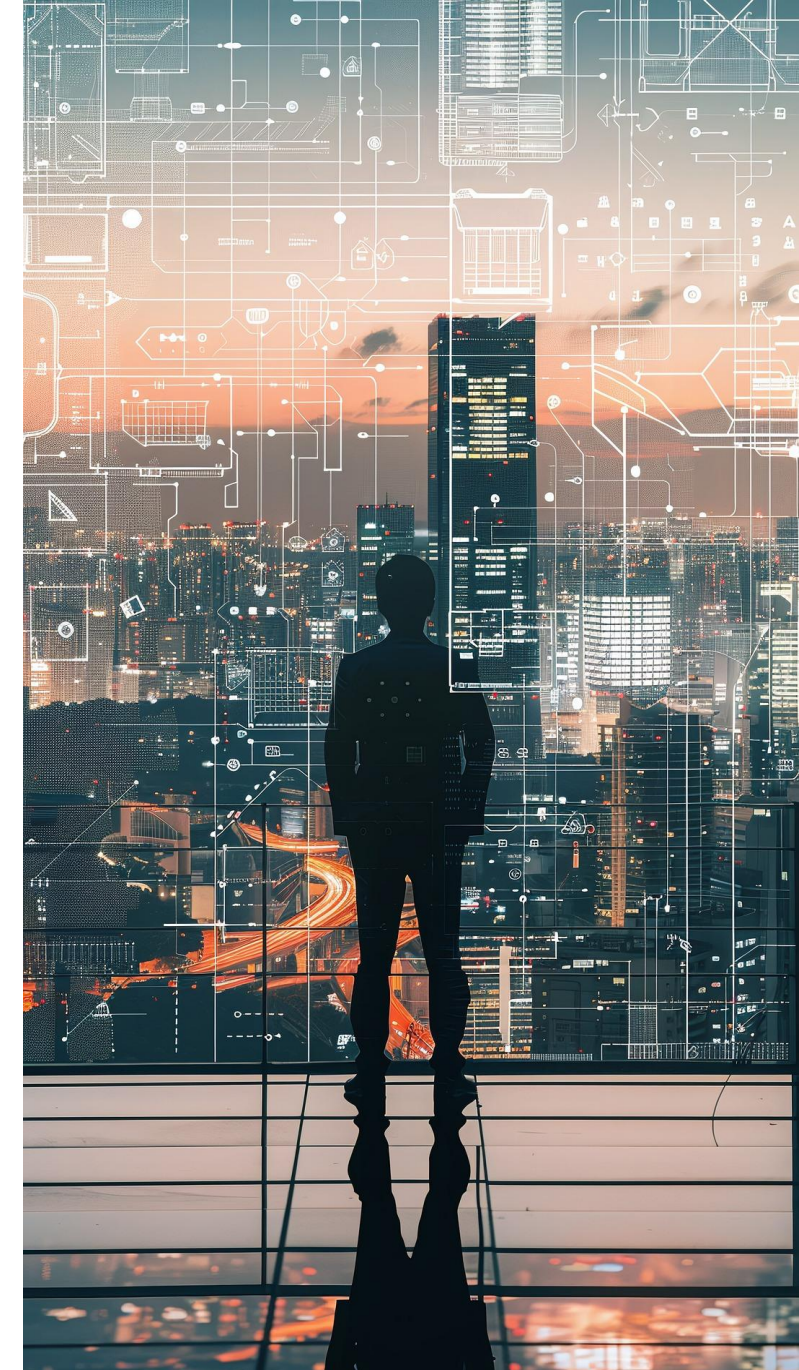
RECALCULATE ASSIGNMENT COSTS, Cost Change Implementor

TOP-DOWN ESTIMATION, One Click Resource Unit Distributor

LEVEL RESOURCE, Resource Optimizer Tool

STORE PERIOD PERFORMANCE, Store Period Plan and Actuals.

REPORTS, Report Generation of Project, WBS and Activity Level



Main Features of User Preference & Tools

► User Preference in P6

User Preferences

Time Units

Dates

Currency

Assistance

Application

Password

Resource Analysis

Calculations

Startup Filters

Units Format

Unit of Time: Day Sub-unit: ☐ Hours Decimals: 2

☒ Show Unit label Example: 5.06d

Durations Format

Unit of Time: Day Sub-unit: ☐ Hours Decimals: 0

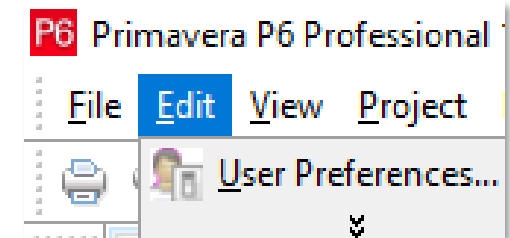
☒ Show Duration label Example: 10d

Units/Time Format

Resource Units/Time can be shown as a percentage or as units per duration

☐ Show as a percentage (50%)

☒ Show as units/duration (4h/d)



Main Features of User Preference & Tools

► User Preference - Time, Unit, Date & Currency

User Preferences

Time Units

Dates

Currency

Assistance

Application

Password

Resource Analysis

Calculations

Startup Filters

Units Format

Unit of Time: Day Sub-unit: ☐ Hours Decimals: 2

☒ Show Unit label Example: 5.06d

Durations Format

Unit of Time: Day Sub-unit: ☐ Hours Decimals: 0

☒ Show Duration label Example: 10d

Units/Time Format

Resource Units/Time can be shown as a percentage or as units per duration

☐ Show as a percentage (50%)

☒ Show as units/duration (4h/d)

User Preferences

Time Units

Dates

Currency

Assistance

Application

Password

Resource Analysis

Calculations

Startup Filters

Date Format

☐ Month, Day, Year

☒ Day, Month, Year

☐ Year, Month, Day

Options

4-digit year ☐

Month name ☒

Leading zeroes ☒

Separator: -

Time

☒ 12 hour (1:30 PM)

☐ 24 hour (13:30)

☐ Do not show time

☐ Show minutes

Sample

10-Mar-23 12 AM

User Preferences

Time Units

Dates

Currency

Assistance

Application

Password

Resource Analysis

Calculations

Startup Filters

Currency Options

Select a currency for viewing monetary values

BDT

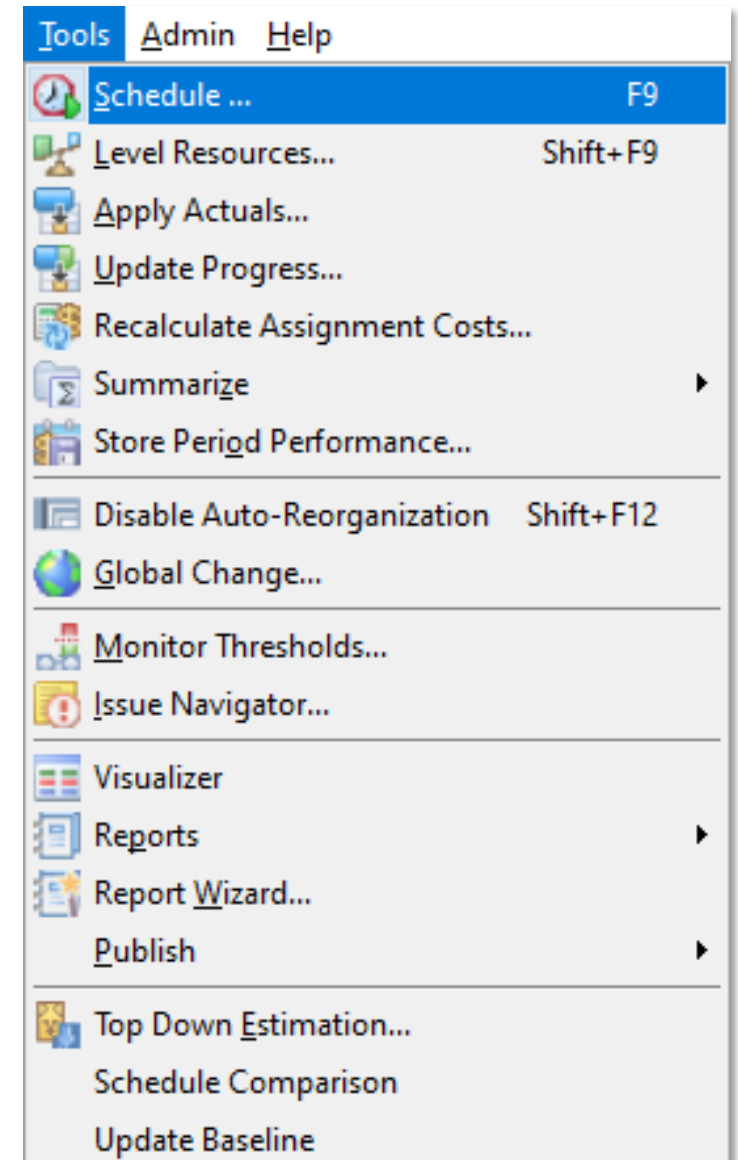
☒ Show currency symbol Tk

☒ Show decimal digits 0.00

Main Features of User Preference & Tools

► Tools

- **Top-Down Estimation:** Used to distribute resource/cost according to the weight.
- **Level Resource:** Used to optimize the resource allocation.
- **Recalculate Assignment Cost:** Used to recalculate the change in the resource assignment to the task.
- **Schedule:** Used to update the schedule after inserting new data.
- **Global Change:** Used to apply changes to the project by inserting formula/logic command.
- **Store Period Performance:** Used to store status of each financial period.



Main Features of User Preference & Tools

► Top-Down Estimation

WBS Code	WBS Name	Est Weight	At Completion Total Cost
RWP.BL.REV.A	REV.A (34 M, CD: 01 MAR 21, DD: 01 MAR 21)	1.0	30,664,585.01
RWP.BL.REV.A.1	CONTRACTUAL DATES	0.0	0.00
RWP.BL.REV.A.2	CONTRACTUAL MILESTONES	0.0	0.00
RWP.BL.REV.A.3	PRE-CONSTRUCTION	5.0	1,533,229.25
RWP.BL.REV.A.3.1	MOBILIZATION	90.0	1,379,906.33
RWP.BL.REV.A.3.2	DOCUMENTATION & TESTING	10.0	153,322.93
RWP.BL.REV.A.4	CONSTRUCTION	95.0	29,131,355.76
RWP.BL.REV.A.4.1	PIPELINE	50.0	14,565,677.88
RWP.BL.REV.A.4.2	MAJOR ROAD CROSSING	5.0	1,456,567.79
RWP.BL.REV.A.4.3	INTERCONNECTION CHAMBER	5.0	1,456,567.79
RWP.BL.REV.A.4.4	RIVER CROSSING	20.0	5,826,271.15
RWP.BL.REV.A.4.5	MAINTENANCE ROAD	15.0	4,369,703.36
RWP.BL.REV.A.4.6	OPTICAL FIBER CABLING	5.0	1,456,567.79
RWP.BL.REV.A.4.7	TESTING & COMMISSIONING	0.0	0.00

Top Down Estimation

Resource Units To Estimate

☒ Estimate Labor ☐ Estimate Nonlabor

Activities To Estimate

WBS: M, CD: 01 MAR 21, DD: 01 MAR 21) ... Total Activities: 223

Resource: COST BUDGETED COST ... Current Units: 30664585.01

Estimation Method

☒ Prior Experience Estimated Units: 0.00

☐ Function Point Function Points: 0

Estimated Units: 0.00

☐ Apply adjustment 0 % Adjusted Units: 0.00

Tools Admin Help

Schedule ... F9

Level Resources... Shift+F9

Apply Actuals...

Update Progress...

Recalculate Assignment Costs...

Summarize

Store Perigd Performance...

Disable Auto-Reorganization Shift+F12

Global Change...

Monitor Thresholds...

Issue Navigator...

Visualizer

Reports

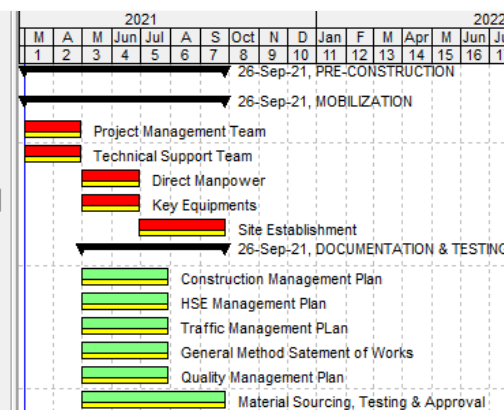
Report Wizard...

Publish

Top Down Estimation...

Schedule Comparison

Activity ID	Activity Name	Activity Count	Est Weight	Budgeted Total Cost	Original Duration	Start	Finish	Total Float
PRE-CONSTRUCTION		11		1,533,229.25	210	01-Mar-21 A	26-Sep-21	14
MOBILIZATION		5		1,379,906.33	210	01-Mar-21 A	26-Sep-21	0
PCON-MOB-1000	Project Management Team	1	1.0	197,129.48	60	01-Mar-21 A	29-Apr-21	0
PCON-MOB-1010	Technical Support Team	1	1.0	197,129.48	60	01-Mar-21	29-Apr-21	0
PCON-MOB-1020	Direct Manpower	1	1.0	197,129.48	60	30-Apr-21	28-Jun-21	0
PCON-MOB-1030	Key Equipments	1	1.0	197,129.48	60	30-Apr-21	28-Jun-21	0
PCON-MOB-1040	Site Establishment	1	3.0	591,388.43	90	29-Jun-21	26-Sep-21	0
DOCUMENTATION & TESTING		6		153,322.93	150	30-Apr-21	26-Sep-21	14
PCON-DOC-1000	Construction Management Plan	1	1.0	19,165.37	90	30-Apr-21	28-Jul-21	60
PCON-DOC-1010	HSE Management Plan	1	1.0	19,165.37	90	30-Apr-21	28-Jul-21	60
PCON-DOC-1020	Traffic Management Plan	1	1.0	19,165.37	90	30-Apr-21	28-Jul-21	60
PCON-DOC-1030	General Method Statement of Works	1	1.0	19,165.37	90	30-Apr-21	28-Jul-21	60
PCON-DOC-1040	Quality Management Plan	1	1.0	19,165.37	90	30-Apr-21	28-Jul-21	60
PCON-DOC-1050	Material Sourcing, Testing & Approval	1	3.0	57,496.10	150	30-Apr-21	26-Sep-21	14



- Step 01: Go to Tools in Menu Bar
- Step 02: Click Top-Down Estimation
- Step 03: Select WBS/Project in WBS
- Step 04: Select Resource
- Step 05: Add Estimated Units
- Step 06: Click Apply

Main Features of User Preference & Tools

► Level Resource

The image shows two overlapping dialog boxes from Primavera P6. The 'Level Resources' dialog box is in the background, titled 'PP601Y2023N01 - CONSTRUCTION OF 2 STOREYED BUILDING AT DHAKA'. It has several options: 'Automatically level resources when scheduling' (unchecked), 'Consider assignments in other projects with priority equal/higher than' (set to 5), 'Preserve scheduled early and late dates' (checked), 'Recalculate assignment costs after leveling' (unchecked), and 'Level all resources' (checked). There is a 'Select Resources...' button. Below these are 'Level resources only within activity Total Float' (unchecked), 'Preserve minimum float when leveling' (set to 0h), and 'Max percent to over-allocate resources' (set to 25). At the bottom is a 'Leveling priorities' table with one entry: 'Activity Leveling Priority' with 'Sort Order' 'Ascending'. The 'Select Resources' dialog box is in the foreground, showing a table with columns 'Level', 'Resource Code', and 'Max Units/Time'. It contains one entry: 'MSN.MASON' with '10.00d/d'. A blue arrow points to the 'Level' button in the 'Select Resources' dialog box.

Tools Admin Help

Schedule ... F9

Level Resources... Shift+F9

Apply Act

Update P

Recalcula

Summari

Store Peri

PP601Y2023N01 - CONSTRUCTION OF 2 STOREYED BUILDING AT DHAKA

☐ Automatically level resources when scheduling

☐ Consider assignments in other projects with priority equal/higher than 5

☒ Preserve scheduled early and late dates

☐ Recalculate assignment costs after leveling

☒ Level all resources

Select Resources...

☐ Level resources only within activity Total Float

Preserve minimum float when leveling 0h

Max percent to over-allocate resources 25

Leveling priorities

Field Name	Sort Order
Activity Leveling Priority	Ascending

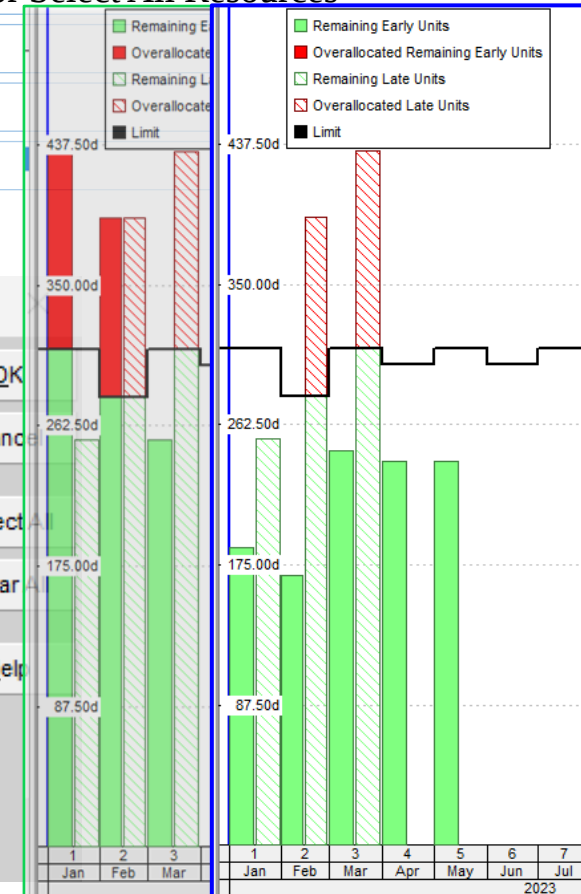
+ Add - Remove

P6 Select Resources

Display: Resources on Current Projects

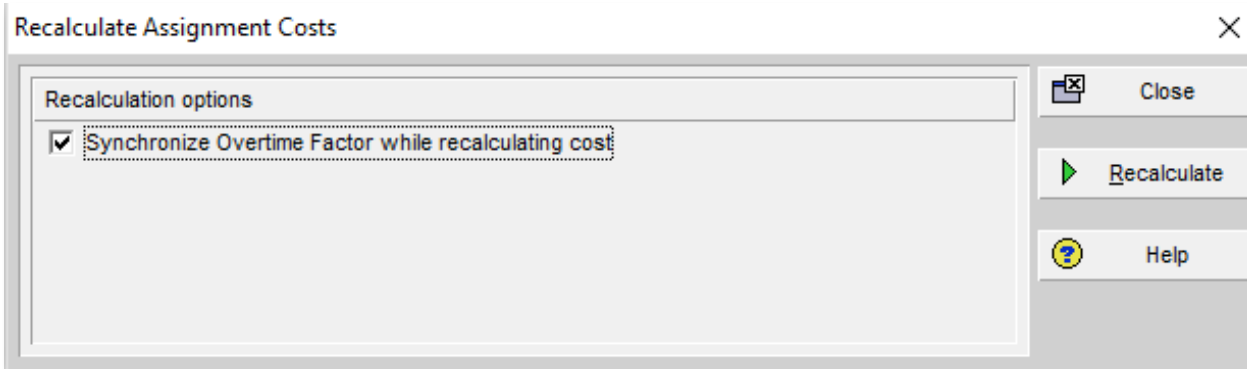
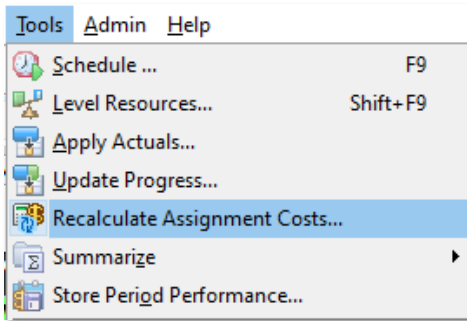
Level	Resource Code	Max Units/Time
	MSN.MASON	10.00d/d

- Step 01 • Go to Tools in Menu Bar
- Step 02 • Click Level Resource
- Step 03 • Select Preserve Schedule Early and Late Dates
- Step 04 • Select Resource To Level or Select All Resources
- Step 05 • Add Levelling Priorities
- Step 06 • Select Sort Order
- Step 07 • Click Level



Main Features of User Preference & Tools

► Recalculate Assignment Cost



Step 01

- Go to Tools in Menu Bar

Step 02

- Click Recalculate Assignment Costs

Step 03

- Check/Uncheck Synchronize Overtime

Step 04

- Click Recalculate

Main Features of User Preference & Tools

► Schedule Option

Schedule

Project(s) to schedule: 1

☒ All Projects use their own data date
☐ Apply selected data date to all open projects: 01-Jan-23

Project Forecast Start Date:

☐ Set Data Date and Planned Start to Project Forecast Start during scheduling

☐ Log to file: ☐ As HTML
C:\Users\rasel_m3j1ye5\OneDrive\MY IMPORTANT DOCUMENT\DOC...

☒ Overwrite existing ☐ Append to existing

Buttons: Cancel, Schedule, View Log, Help, Options...

Schedule Options

Use scheduling options from: PP601Y2023N01 - CONSTRUCTION OF 2 STOREYED BUILDING AT DHAKA

Buttons: Close, Cancel, Default, Help

General | Advanced

☐ Ignore relationships to and from other projects
☐ Make open-ended activities critical
☒ Use Expected Finish Dates
☐ Schedule automatically when a change affects dates
☐ Level resources during scheduling
☐ Recalculate assignment costs after scheduling

When scheduling progressed activities use:
☒ Retained Logic ☐ Progress Override ☐ Actual Dates

Calculate start-to-start lag from:
☒ Early Start ☐ Actual Start

Define critical activities as:
☒ Total Float less than or equal to: 0h
☐ Longest Path

Calculate float based on finish date of:
☒ Each project ☐ Opened projects

Compute Total Float as:
Finish Float = Late Finish - Early Finish

Calendar for scheduling Relationship Lag:
Predecessor Activity Calendar

Tools | Admin | Help

Schedule ... F9

Level Resources... Shift+F9

Apply Actuals...

Update Progress...

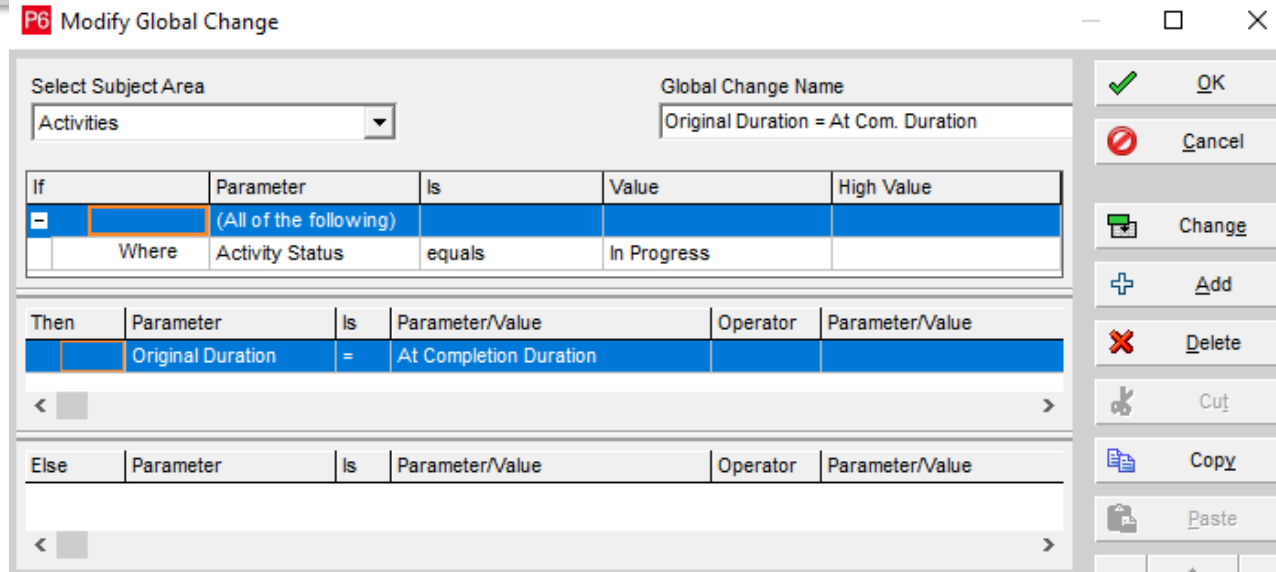
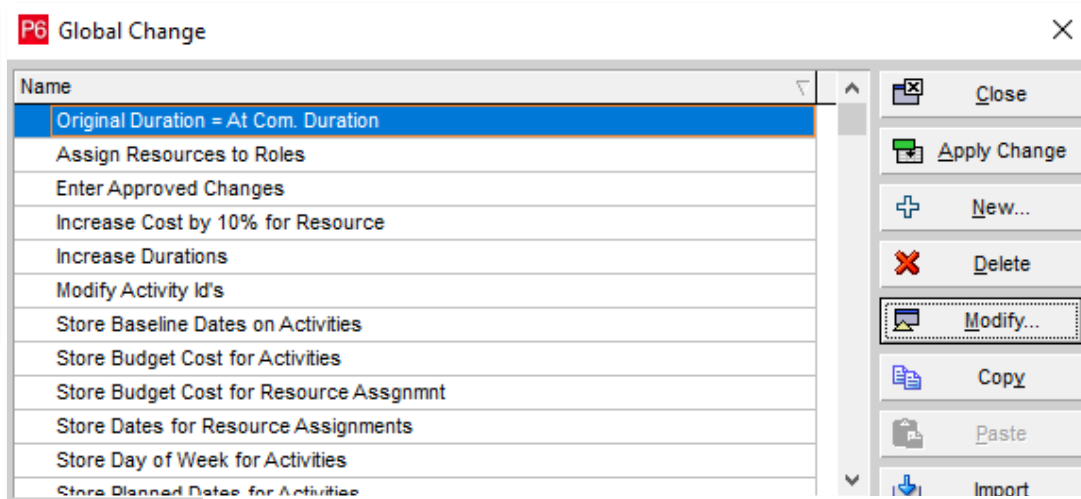
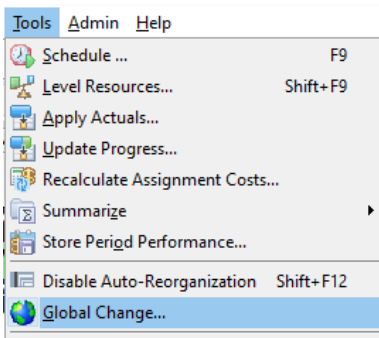
Recalculate Assignment Costs...

Summarize

Store Period Performance...

Main Features of User Preference & Tools

► Global Change



- Step 01 • Go to Tools in Menu Bar
- Step 02 • Click Global Change
- Step 03 • Click New
- Step 04 • Set Name
- Step 05 • Set If Condition
- Step 06 • Set Then Condition
- Step 07 • Click Change
- Step 08 • Click Commit Changes

Main Features of User Preference & Tools

► Store Period Performance

Tools Admin Help

Schedule ... F9

Level Resources... Shift+F9

Apply Actuals...

Update Progress...

Recalculate Assignment Costs...

Summarize

Store Period Performance...

Disable Auto-Reorganization Shift+F12

Global Change...

Step 01 • Go to Tools in Menu Bar

Step 02 • Click Store Period Performance

Step 03 • Select Financial Period Calendar

Step 04 • Select Financial Period

Step 05 • Click Store Now

P6 Store Period Performance

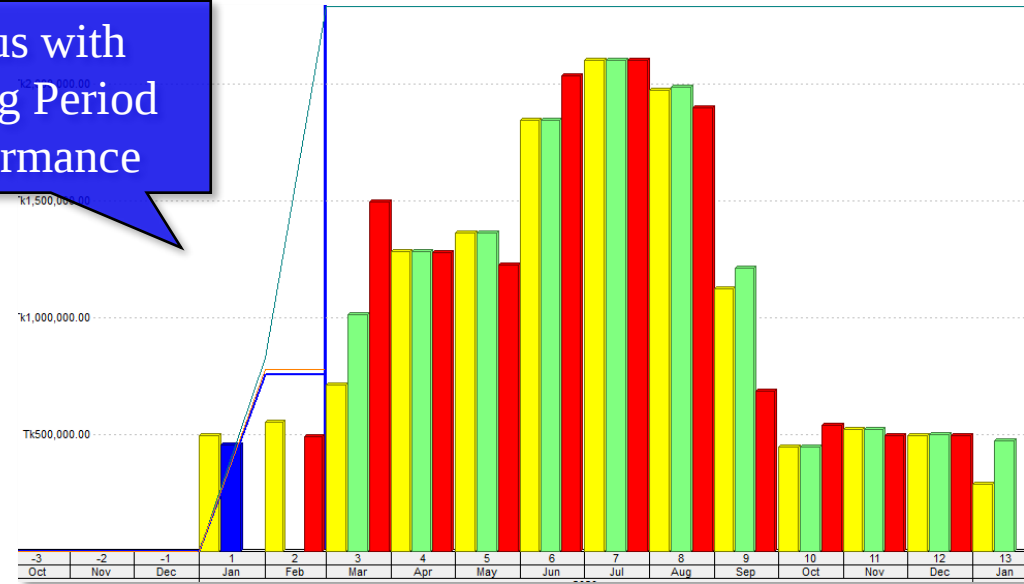
Project ID	Project Name	Selected	Financial Period Calendar	Financial Period	Data Date
G01	G01 (48M + 348 DAYS)	☒	MONTHLY	202107_JUL 21	25-Apr-21

Store Now

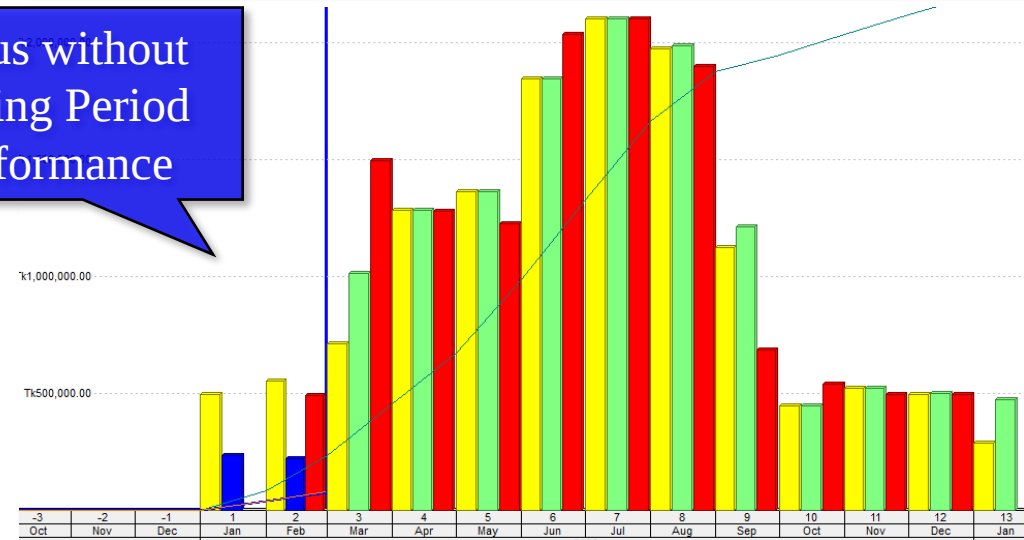
Cancel

Help

Status with
Storing Period
Performance

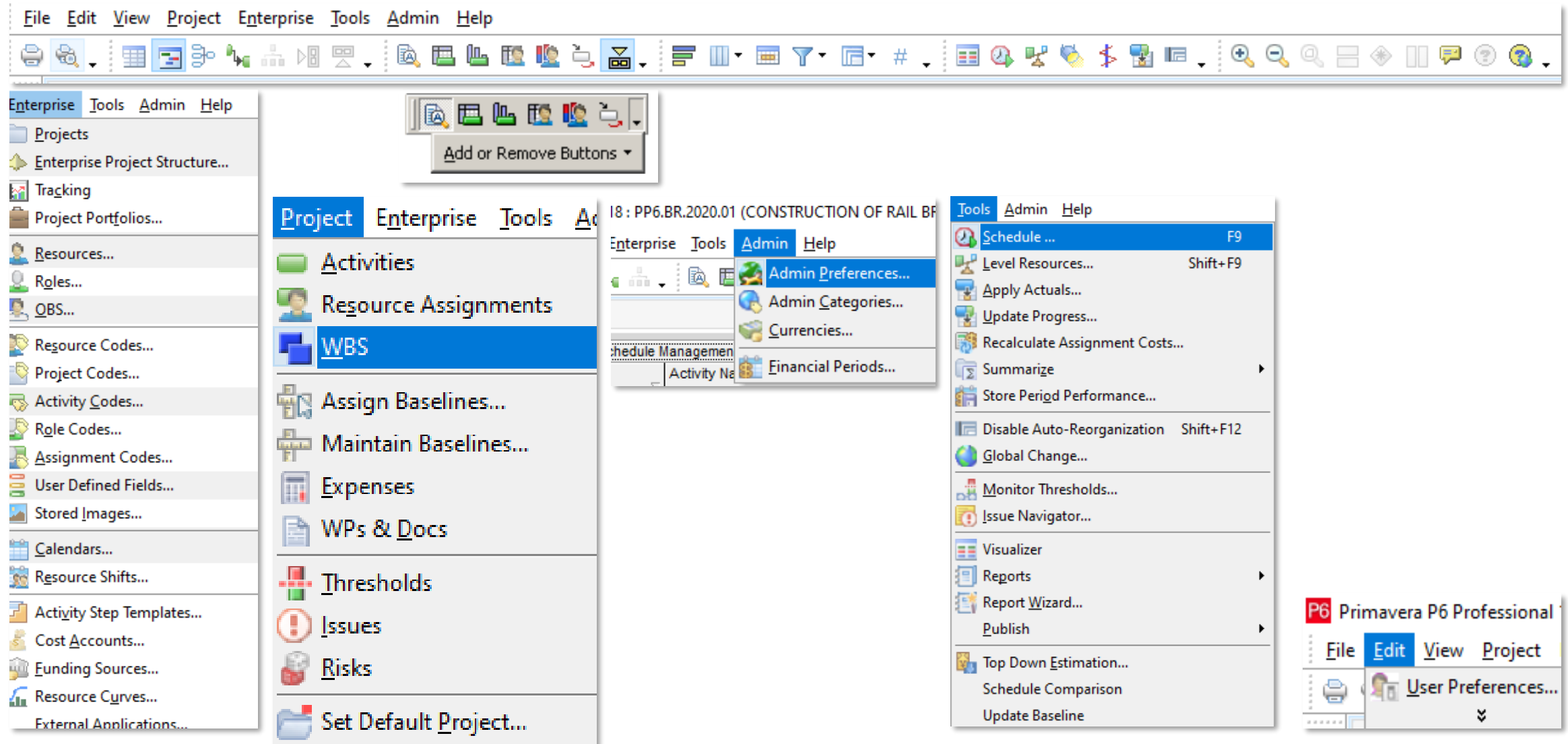


Status without
Storing Period
Performance



Detailed Discussion On Fundamental Features

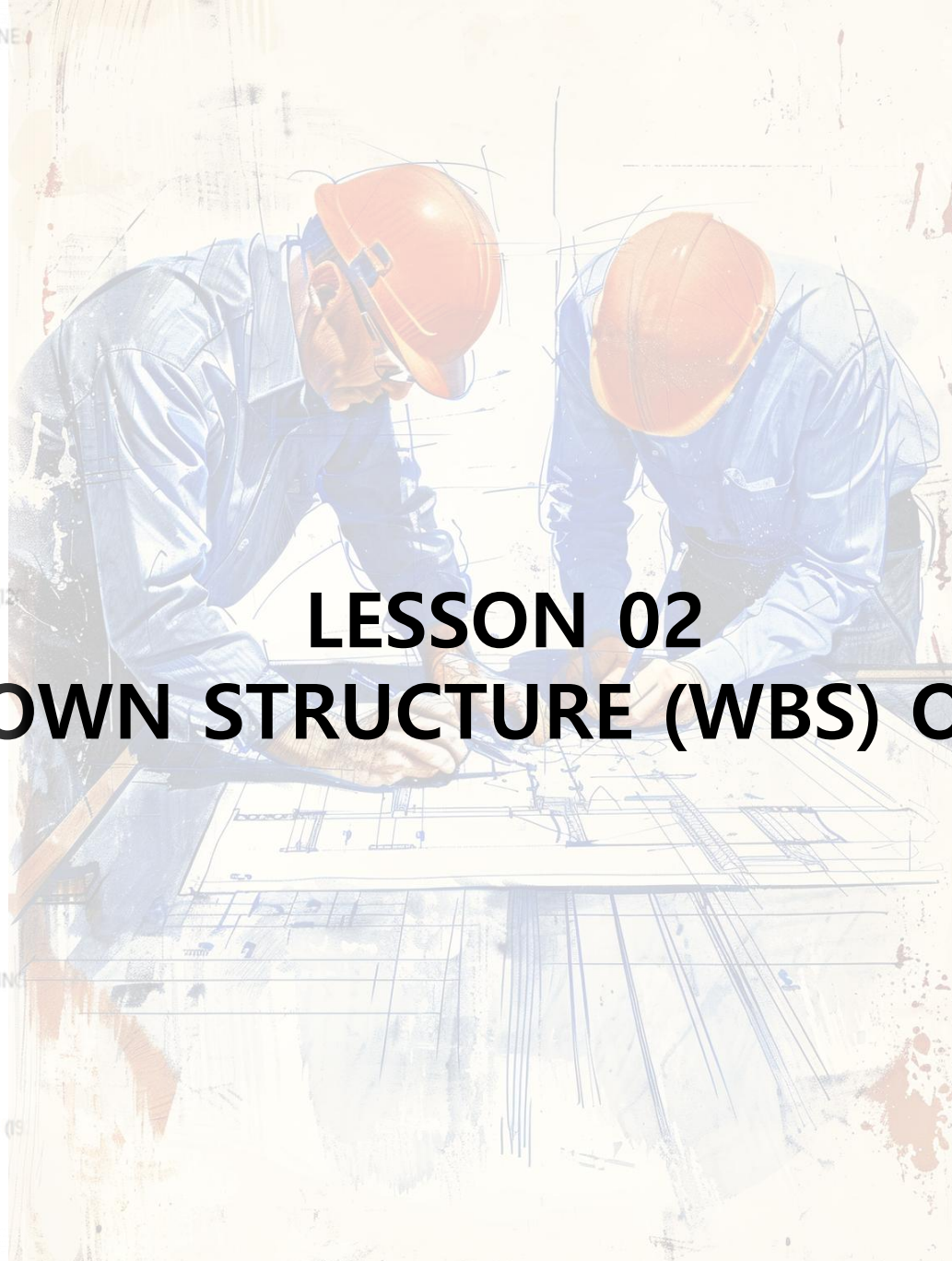
► Primavera P6 Features At A Glance - This is Your P6!



INTAKE.REV.A.2	CONTRACTUAL SECTION MILESTONE
INTAKE.REV.A.3	PRE-CONSTRUCTION
INTAKE.REV.A.3.1	MOBILIZATION
INTAKE.REV.A.3.2	DOCUMENTATION
INTAKE.REV.A.3.3	MATERIAL TESTING & APPROVAL
INTAKE.REV.A.4	CONSTRUCTION
INTAKE.REV.A.4.1	INTAKE OFFSHORE (110)
INTAKE.REV.A.4.1.1	BASE SLAB
INTAKE.REV.A.4.1.2	VERTICAL ELEMENT
INTAKE.REV.A.4.1.3	HORIZONTAL ELEMENT
INTAKE.REV.A.4.1.4	OTHER WORKS
INTAKE.REV.A.4.2	PEDESTRIAN BRIDGE (115)
INTAKE.REV.A.4.2.1	EXCAVATION
INTAKE.REV.A.4.2.2	TRANSVERSE BEAM
INTAKE.REV.A.4.2.3	PIPE SADDLE
INTAKE.REV.A.4.2.4	PIER
INTAKE.REV.A.4.2.5	PIER CAP
INTAKE.REV.A.4.2.6	DECK SYSTEM
INTAKE.REV.A.4.2.7	OTHER WORKS
INTAKE.REV.A.4.3	INLET & DISTRIBUTION CHAMBER (120)
INTAKE.REV.A.4.3.1	BASE SLAB
INTAKE.REV.A.4.3.2	VERTICAL ELEMENT
INTAKE.REV.A.4.3.3	HORIZONTAL ELEMENT
INTAKE.REV.A.4.4	PUMPING STATION (120)
INTAKE.REV.A.4.4.1	BASE SLAB
INTAKE.REV.A.4.4.2	VERTICAL ELEMENT
INTAKE.REV.A.4.4.3	HORIZONTAL ELEMENT
INTAKE.REV.A.4.4.4	OTHER WORKS
INTAKE.REV.A.4.5	WATER HAMMER WALL (120)
INTAKE.REV.A.4.5.1	VERTICAL ELEMENT
INTAKE.REV.A.4.5.2	OTHER WORKS
INTAKE.REV.A.4.6	GENERATOR & ELECTRICAL BUILDING (120)
INTAKE.REV.A.4.6.1	BASE SLAB
INTAKE.REV.A.4.6.2	VERTICAL ELEMENT
INTAKE.REV.A.4.6.3	HORIZONTAL ELEMENT
INTAKE.REV.A.4.6.4	OTHER WORKS
INTAKE.REV.A.4.7	STORAGE & WORKSHOP BUILDING (120)
INTAKE.REV.A.4.7.2	VERTICAL ELEMENT
INTAKE.REV.A.4.7.3	HORIZONTAL ELEMENT
INTAKE.REV.A.4.7.4	OTHER WORKS
INTAKE.REV.A.4.8	ANCILLARY WORK (100)

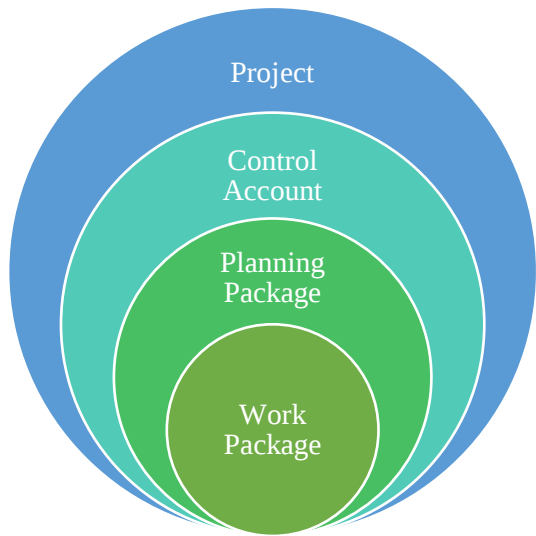
LESSON 02

WORK BREAKDOWN STRUCTURE (WBS) OF YOUR PROJECT



Work Breakdown Structure (WBS) Of Your Project

► Important Terms To Know For Planning



- **Scope Baseline.** The approved version of a scope statement, work breakdown structure (WBS), and its associated WBS dictionary that can be changed using formal change control procedures and is used as a basis for comparison to actual results.
- **Control Account.** A management control point where scope, budget, actual cost, and schedule are integrated and compared to earned value for performance measurement.
- **Planning Package.** A control account may include one or more planning packages. A planning package is a work breakdown structure component below the control account and above the work package with known work content but without detailed schedule activities.
- **Work Package.** The work defined at the lowest level of the work breakdown structure for which cost, and duration are estimated and managed.
- **WBS Dictionary.** A document that provides deliverable, activity, scheduling, and estimating information for each element in the work breakdown structure.

Work Breakdown Structure (WBS) Of Your Project

► Phase and Deliverables in WBS Level

WBS with Phase
at 2nd Level

WBS with
Deliverables at
2nd Level

Level
2

Level
3

WBS Code	WBS Name
PP602Y2023N02	WATER TREATMENT PROJECT PHASE 03
PP602Y2023N02.1	Contractual Dates
PP602Y2023N02.2	Contractual Milestones
PP602Y2023N02.3	Project Management
PP602Y2023N02.3.1	Intake
PP602Y2023N02.3.2	Pipeline
PP602Y2023N02.3.3	Treatment Plant
PP602Y2023N02.4	Engineering
PP602Y2023N02.4.1	Intake
PP602Y2023N02.4.2	Pipeline
PP602Y2023N02.4.3	Treatment Plant
PP602Y2023N02.5	Procurement
PP602Y2023N02.6	Construction
PP602Y2023N02.6.1	Intake
PP602Y2023N02.6.2	Pipeline
PP602Y2023N02.6.3	Treatment Plant
PP602Y2023N02.7	Commissioning
PP602Y2023N02.7.1	Intake
PP602Y2023N02.7.2	Pipeline
PP602Y2023N02.7.3	Treatment Plant

WBS Code	WBS Name
PP601Y2023N01	CONSTRUCTION OF 2 STOREYED BUILDING AT DHAKA
PP601Y2023N01.1	Foundation
PP601Y2023N01.1.1	Pile
PP601Y2023N01.1.2	Pile Cap
PP601Y2023N01.2	Structure
PP601Y2023N01.2.1	Sub-Structure
PP601Y2023N01.2.2	Super Structure
PP601Y2023N01.3	Brick Work
PP601Y2023N01.3.1	Internal Brick Work
PP601Y2023N01.3.2	External Brick Work
PP601Y2023N01.4	MEP Services
PP601Y2023N01.4.1	Mechanical
PP601Y2023N01.4.2	Plumbing
PP601Y2023N01.4.3	Electrical
PP601Y2023N01.5	Finishes
PP601Y2023N01.5.1	Carpentry
PP601Y2023N01.5.2	Metal Work
PP601Y2023N01.5.4	Plastering
PP601Y2023N01.5.5	Painting

Work Breakdown Structure (WBS) Of Your Project

► When is a WBS Created/Updated? (Source: PMI)

When is a WBS Created?

- Planning process of every type of project.
- WBS process occurs in the very early stages of the project following scope management planning, collection and documentation of requirements, and preparation of the scope statement.
- Subsequently, the creation of the WBS commences based on available scope.

When is a WBS Updated?

- Additional scope information surfaces.
- Combined information discovered from project planning, project execution, and monitoring and control.

Work Breakdown Structure (WBS) Of Your Project

► Purpose of WBS (Source: PMI)



Visual Representation



Minimize Uncertainties



Integration Management



Communication

Visual Representation

- Provides the foundation for a visual representation of the scope of work as WBS relates to the project objectives and deliverables.
- Provides the project management team and project stakeholders with a visual framework for project planning and control.

Minimize Uncertainties

- Aids in converting an uncertain challenge into a series of challenges with lesser uncertainties.
- Assists the project planning team in overcoming large uncertainties.

Integration Management

- Foundation for clear responsibility and cost assignment in later stages of the planning process.
- Basis for the project's scope, schedule, budget, risk, and performance tracking.

Communication

- Serves as a critical project communication mechanism that helps convey the scope of the project through its graphical representation.
- Provides the project management team and project stakeholders with a visual framework for project planning and control.
- Serves as a mechanism that balances management's need for control of the work through representation of various levels of detail.

Project Development Approach – WBS Level

○ Level 1

- This level comprises the full scope of work.
- It includes all direct and indirect work.
- This level is the overall project which is always a single WBS element.

○ Level 2

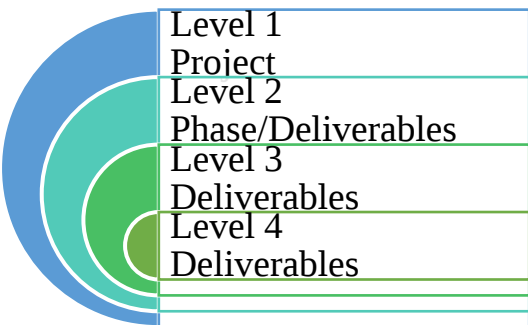
- This is the first level of decomposition.
- This level is the high-level breakdown of the major areas in the scope of work.
- Project phases, major deliverables typically exist in this level.
- This level often contains integration and project management work.

○ Level 3

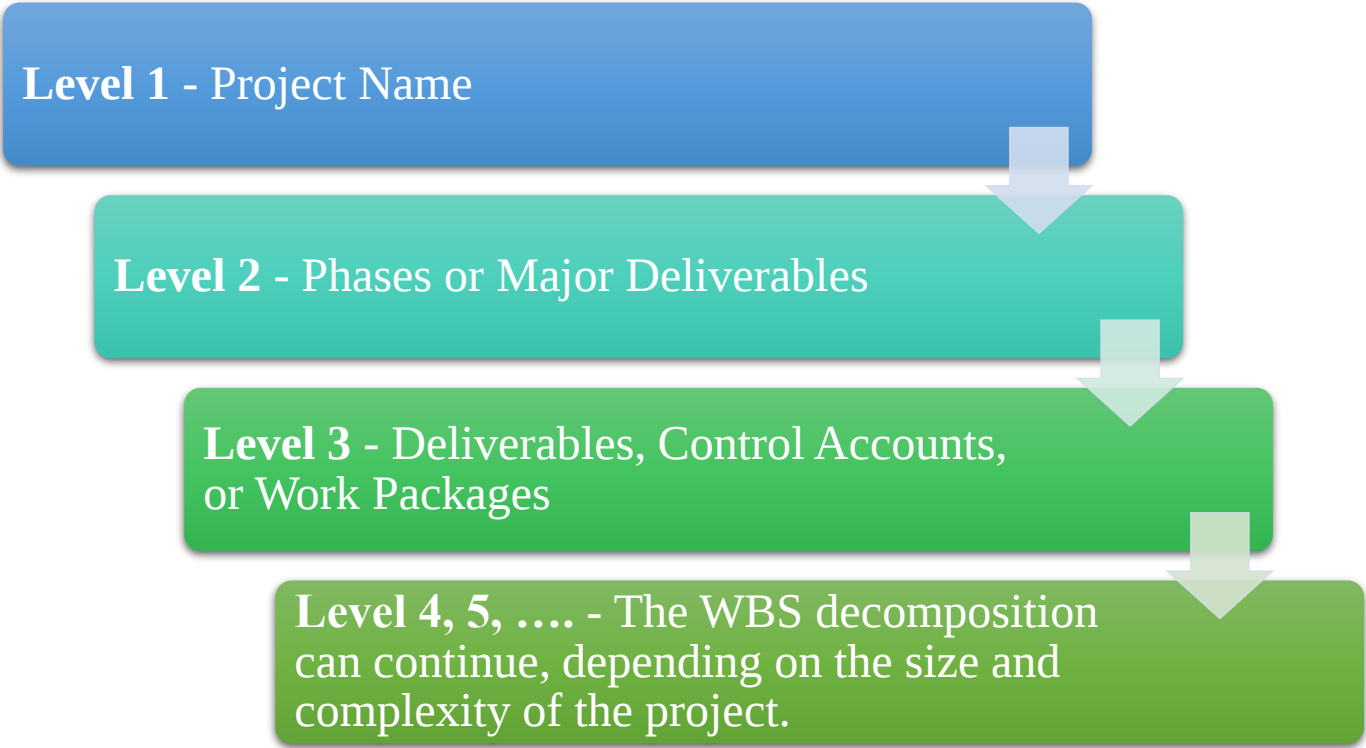
- This level decomposes each level 2 WBS element as required.
- It is important to note that the WBS development adheres to the 100 percent rule.
- This level often focuses on specific, tangible deliverables of the project effort.

○ Level 4

- In the same manner, each level 3 WBS element decomposes as required.
- The complexity of the work drives the depth and number of levels of the WBS decomposition.

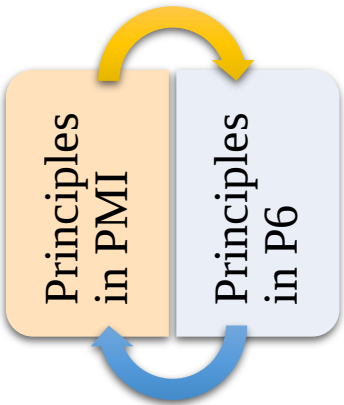


Conventions in WBS of Predictive Life Cycle



WBS Code	WBS Name
INTAKE.REV.A	RAW WATER INTAKE
INTAKE.REV.A.1	CONTRACTUAL DATES
INTAKE.REV.A.2	CONTRACTUAL SECTION MILESTONES
INTAKE.REV.A.3	PRE-CONSTRUCTION
INTAKE.REV.A.3.1	MOBILIZATION
INTAKE.REV.A.3.2	DOCUMENTATION
INTAKE.REV.A.3.3	MATERIAL TESTING & APPROVAL
INTAKE.REV.A.4	CONSTRUCTION
INTAKE.REV.A.4.1	INTAKE OFFSHORE (110)
INTAKE.REV.A.4.1.1	BASE SLAB
INTAKE.REV.A.4.1.2	VERTICAL ELEMENT
INTAKE.REV.A.4.1.3	HORIZONTAL ELEMENT
INTAKE.REV.A.4.1.4	OTHER WORKS
INTAKE.REV.A.4.2	PEDESTRIAN BRIDGE (115)
INTAKE.REV.A.4.2.1	EXCAVATION
INTAKE.REV.A.4.2.2	TRANSVERSE BEAM
INTAKE.REV.A.4.2.3	PIPE SADDLE
INTAKE.REV.A.4.2.4	PIER
INTAKE.REV.A.4.2.5	PIER CAP
INTAKE.REV.A.4.2.6	DECK SYSTEM
INTAKE.REV.A.4.2.7	OTHER WORKS
INTAKE.REV.A.4.3	INLET & DISTRIBUTION CHAMBER (120)
INTAKE.REV.A.4.3.1	BASE SLAB
INTAKE.REV.A.4.3.2	VERTICAL ELEMENT
INTAKE.REV.A.4.3.3	HORIZONTAL ELEMENT
INTAKE.REV.A.4.3.4	OTHER WORKS
INTAKE.REV.A.4.4	PUMPING STATION (120)
INTAKE.REV.A.4.4.1	BASE SLAB
INTAKE.REV.A.4.4.2	VERTICAL ELEMENT
INTAKE.REV.A.4.4.3	HORIZONTAL ELEMENT
INTAKE.REV.A.4.4.4	OTHER WORKS
INTAKE.REV.A.4.5	WATER HAMMER WALL (120)
INTAKE.REV.A.4.5.1	VERTICAL ELEMENT
INTAKE.REV.A.4.5.2	OTHER WORKS
INTAKE.REV.A.4.6	GENERATOR & ELECTRICAL BUILDING (180)
INTAKE.REV.A.4.6.1	BASE SLAB
INTAKE.REV.A.4.6.2	VERTICAL ELEMENT
INTAKE.REV.A.4.6.3	HORIZONTAL ELEMENT
INTAKE.REV.A.4.6.4	OTHER WORKS
INTAKE.REV.A.4.7	STORAGE & WORKSHOP BUILDING (192)
INTAKE.REV.A.4.7.2	VERTICAL ELEMENT
INTAKE.REV.A.4.7.3	HORIZONTAL ELEMENT
INTAKE.REV.A.4.7.4	OTHER WORKS
INTAKE.REV.A.4.8	ANCILLARY WORK (100)

Principles of Using WBS (Source: PMI)



- The Hundred Percent (100%) Rule**
 - The total of the work at the lowest levels of a WBS rolls up to the higher levels.
 - The 100 percent rule ensures that a WBS captures all known scope and project deliverables. *P6 calculates the non hundred percent weight based on 100 percent rule.*
 - This 100 percent principle applies to all levels of a WBS. The sum of the work at the child level totals the work at the parent level.

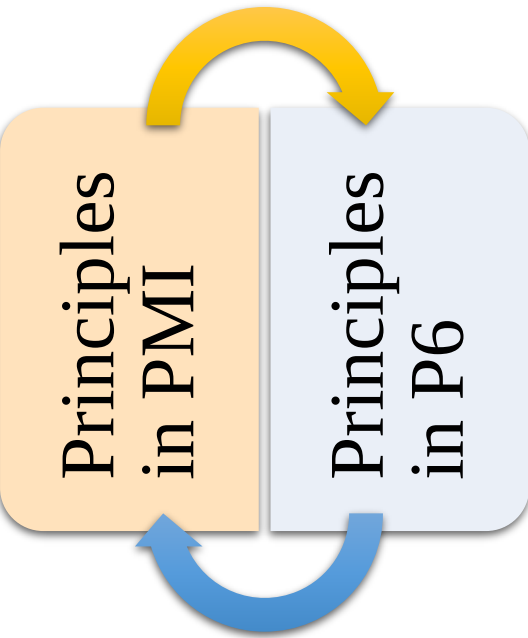
WBS Code	WBS Name	Est Weight	At Completion Total Cost
RWP.BL.REV.A	REV.A (34 M, CD: 01 MAR 21, DD: 01 MAR 21)	1.0	30,664,585.01
RWP.BL.REV.A.1	CONTRACTUAL DATES	0.0	0.00
RWP.BL.REV.A.2	CONTRACTUAL MILESTONES	0.0	0.00
RWP.BL.REV.A.3	PRE-CONSTRUCTION	5.0	1,533,229.25
RWP.BL.REV.A.3.1	MOBILIZATION	90.0	1,379,906.33
RWP.BL.REV.A.3.2	DOCUMENTATION & TESTING	10.0	153,322.93
RWP.BL.REV.A.4	CONSTRUCTION	95.0	29,131,355.76
RWP.BL.REV.A.4.1	PIPELINE	50.0	14,565,677.88
RWP.BL.REV.A.4.2	MAJOR ROAD CROSSING	5.0	1,456,567.79
RWP.BL.REV.A.4.3	INTERCONNECTION CHAMBER	5.0	1,456,567.79
RWP.BL.REV.A.4.4	RIVER CROSSING	20.0	5,826,271.15
RWP.BL.REV.A.4.5	MAINTENANCE ROAD	15.0	4,369,703.36
RWP.BL.REV.A.4.6	OPTICAL FIBER CABLING	5.0	1,456,567.79
RWP.BL.REV.A.4.7	TESTING & COMMISSIONING	0.0	0.00

RWP.BL.REV.A.4	CONSTRUCTION	95.0	29,131,355.76
RWP.BL.REV.A.4.1	PIPELINE	50.0	14,565,677.88
RWP.BL.REV.A.4.1.1	SECTION 01: P1 (0+000, INTAKE) To P4 (0+072.9)	729.0	51,170.69
RWP.BL.REV.A.4.1.2	SECTION 02: P12 (0+220.2) To P23 (1+054.9)	8347.0	585,900.92
RWP.BL.REV.A.4.1.3	SECTION 03: P31(1+192.8) To P48 (1+962.3)	7695.0	540,135.09
RWP.BL.REV.A.4.1.4	SECTION 04: P57 (2+113.4) To P90 (3+578.4)	14650.0	1,028,327.35
RWP.BL.REV.A.4.1.5	SECTION 05: P100 (3+698) To P123 (4+661.4)	9634.0	676,239.30
RWP.BL.REV.A.4.1.6	SECTION 06: P132 (4+867.8) To P239 (9+526.7)	46589.0	3,270,221.37
RWP.BL.REV.A.4.1.7	SECTION 07: P247 (9+663.5) To P337 (14+121.4)	44579.0	3,129,133.46
RWP.BL.REV.A.4.1.8	SECTION 08: P345 (14+244.5) To ROC02 (15+385)	11405.0	800,551.09
RWP.BL.REV.A.4.1.9	SECTION 09: ROC02 (15+386) To ROC03 (17+400)	20150.0	1,414,388.82
RWP.BL.REV.A.4.1.10	SECTION 10: ROC03 (17+401) To P563 (21+773.1,WTP)	43731.0	3,069,609.80
RWP.BL.REV.A.4.2	MAJOR ROAD CROSSING	5.0	1,456,567.79
RWP.BL.REV.A.4.3	INTERCONNECTION CHAMBER	5.0	1,456,567.79
RWP.BL.REV.A.4.4	RIVER CROSSING	20.0	5,826,271.15
RWP.BL.REV.A.4.5	MAINTENANCE ROAD	15.0	4,369,703.36
RWP.BL.REV.A.4.6	OPTICAL FIBER CABLING	5.0	1,456,567.79
RWP.BL.REV.A.4.7	TESTING & COMMISSIONING	0.0	0.00

The sum under Pipeline is not equal to 100, but P6 calculates based on 100

Non 100%

Principles of Using WBS (Source: PMI)



- **Cost:** WBS elements do not contain costs.
 - P6 doesn't allow to assign cost in WBS level.
 - Cost can be assigned only in activity level, WBS calculates cost from activity level in P6
- **Level of Decomposition:** The WBS has no limits on the levels of decomposition. When a parent results in only one child, that parent should not be decomposed further.
- **Mutually Exclusive Elements:** WBS elements do not overlap in order to increase clarity and avoid duplicate work and miscommunication.
 - P6 doesn't allow to create WBS with same name in same level
- **Relationships:** WBS elements do not imply or show relationships.
 - P6 doesn't allow to assign predecessor or successor in WBS.
 - Predecessor and successor can be assigned only in activity level in P6.
- **Resources:** WBS elements do not assign resources.
 - P6 doesn't allow to assign resource in WBS.
 - Resource can be assigned only in activity level in P6.
- **Time:** WBS elements do not account for time or sequence.
 - P6 doesn't allow to set duration in WBS.
 - Duration can be set only in activity level, WBS calculates duration from activity level

Work Breakdown Structure (WBS) Of Your Project

► Methods of Creating WBS (Source: PMI)

Top-Down

Bottom-Up

WBS Standards

WBS Templates

Work Breakdown Structure (WBS) Of Your Project

► Top-Down Method of Creating WBS (Source: PMI)

Advantages

- Structures projects conveniently for status reporting.
- Structures projects logically.
- Valuable when brainstorming or discovering project deliverables.
- Accommodate additional deliverables as they are uncovered.
- Focus on big picture and creates the product road map.

Challenges

- Requires constant attention to avoid work package missing.
- Elaborate WBS sufficiently to permit management and control.

Work Breakdown Structure (WBS) Of Your Project

► Bottom-Up Method of Creating WBS (Source: PMI)

Advantages

- Starts with all deliverables and works backwards into project.
- Confirms inclusion of all packages.

Challenges

- Identify all deliverables or work packages before creating WBS.
- Group work packages logically.
- Focus on big picture.

Work Breakdown Structure (WBS) Of Your Project

► WBS Standards (Source: PMI)

Advantages

- Leverage Predefined Formats.
- Enhance Cross-Project WBS Consistency.
- Facilitates Implementation of Principles and Good Practices.

Challenges

- Requires a project fit the standard.
- Can lead to inclusion of unnecessary deliverables or failure to include project deliverables.
- All projects may not fit into highly structured set of WBS standards.

Work Breakdown Structure (WBS) Of Your Project

► WBS Templates (Source: PMI)

Advantages

- Provides a starting point for WBS creation.
- Helps determine appropriate level of detail required.
- Leverage predefined formats.

Challenges

- Requires a project fit the standard.
- Can lead to inclusion of unnecessary deliverables or failure to include project deliverables.
- All projects may not fit into highly structured set of WBS standards.

Work Breakdown Structure (WBS) Of Your Project

► Top-Down Approach (Source: PMI)

Step 01: Identify the scope of the project what shall be delivered to achieve project success.

A thorough review of high-level project scope documents (such as scope statement, technical specifications,) helps ensure consistency between the WBS and the project requirements.

Step 02: Define the project's phase, major or interim deliverables.

Step 03: Decompose major deliverables to a level of detail appropriate for management and integrated control.

These WBS elements typically tie in with clear and discrete identification of stand-alone deliverable. The sum of the elements at each level represents 100 percent of the work in the element above it, as noted in the 100 percent rule. Each work package of the WBS contains one or more unique deliverables.

Step 04: Review and refine the WBS until project stakeholders agree that project planning can be successfully completed and produce the desired deliverables and results.

Work Breakdown Structure (WBS) Of Your Project

► Common Schedule Level Descriptions (Source: AACE & PMI)

Level 1 – Executive Summary

- ▶ Milestone / Executive Master Summary Schedule
- ▶ One Page, Time Scaled Bar Chart
- ▶ Major Contractual Milestones and Summary Level Activities.

Level 2 – Management Summary

- ▶ Contract Master / Detailed Integrated Schedule
- ▶ CPM to Plan, Implement and Control Overall Project
- ▶ Four to Five Pages, Time Scaled Bar Chart
- ▶ More Extensive Summary Level Schedule by Area or Capital Equipment

Level 3 – Publication Schedule

- ▶ Area Master / Contract Schedules
- ▶ Subcontract / Phased / Element CPM Schedules
- ▶ Level of Detail to Support Monthly Progress Report
- ▶ Major Milestones and Major Elements of EPC.

Management Level Schedule

Level 4 – Execution Planning

- ▶ Control / 2-3 Weeks Look Ahead Schedules
- ▶ Spreadsheets / Bar Chart Field Plans
- ▶ Supports Construction & Commissioning Teams in Overall Planning
- ▶ Activities Duration From 1 Week To 1 Month

Level 5 – Detailed Planning

- ▶ Daily / Hourly Work Schedules
- ▶ Field Supervision Planning and Execution Listings
- ▶ Supports Short-Term Planning For The Field
- ▶ Activities Less Than One Week Duration

Control Level Schedule

Work Breakdown Structure (WBS) Of Your Project

► A Quick Look on Schedule Level Comparison (Source: PMI)

Level 1

Granularity Level: Key Milestones And Summary Activities By Major Phase, Stage, Or Project.

Integration: Supported by a Schedule that Contains Integrated Work Evolutions over the Project Life Cycle

Presentation: Bar Chart Format and May Originate in a Table of Key Elements or a Graphic.

Decision Making: Go/No-go Prioritization and Criticality of Projects.

Audiences: Mainly Customers, Senior Executives, and General Managers.

Level 2

Granularity Level: Communicable To Integration of Work.

Integration: Reflect Interfaces Between Key Deliverables & Project Participants (Contractors, Consultants, Architects, Engineers, Etc.).

Presentation: Bar Chart Format.

Decision Making: Reprioritization and Criticality of Project Deliverables.

Audiences: Mainly Customers, General Managers, Sponsors, and Program or Project Managers.

Level 3

Granularity Level: Communicable to the Execution of Deliverables for Each of the Contracting Parties.

Integration: Reflect Interfaces Between Key Workgroups, Disciplines or Crafts.

Presentation: Bar Chart Format or Critical Path Method Network Format.

Decision Making: Allow for Mitigation and Course Correction while Allowing for Complete Reporting Period Reports. MPR, Curves, Histograms.

Audiences: Mainly Program or Project Managers, and Supervisors.

Level 4

Granularity Level: Communicable To The Production Of Work At The Deliverable Level.

Integration: Reflect Interfaces Between Key Elements and Provide Detail to Plan & Coordinate Multidiscipline/Craft Activities.

Presentation: Bar Chart Format or Critical Path Method Network Format. Period Covered by a Report is Usually 1W to 1M Supporting the Milestone & Duration in a L3/L4 Schedule

Decision Making: Detailed Steps, Deliverables, Actions can be Communicated to Forecast & Decide that the Next is What.

Audiences: Mainly Project Managers and Supervisors Responsible for Accomplishing the Activities.

Level 5

Granularity Level: Communicable to Task Requirements for Completing Activities Identified in a Detailed Schedule.

Integration: Working Schedule that Reflects Hourly, Daily, or Weekly Work Requirements. Usually, Prepared 1D or 1W in Advance.

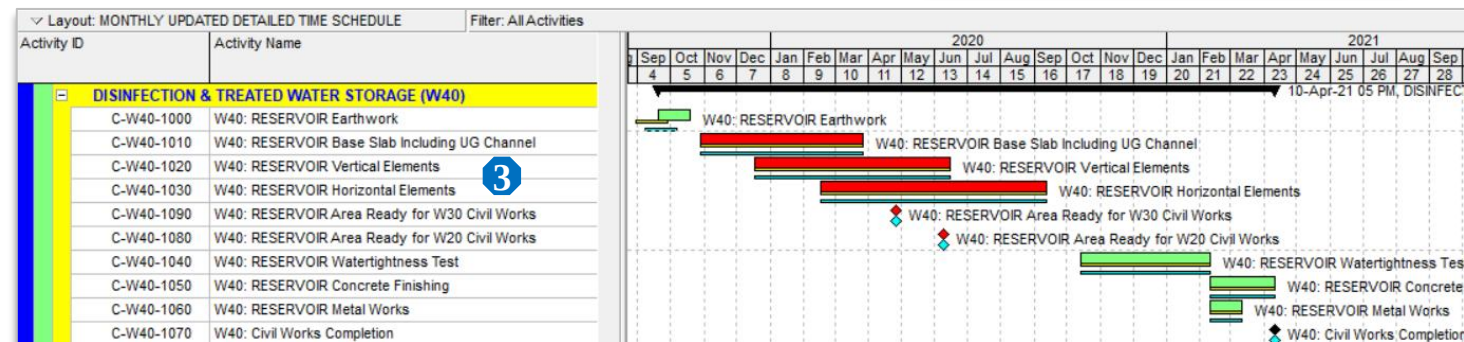
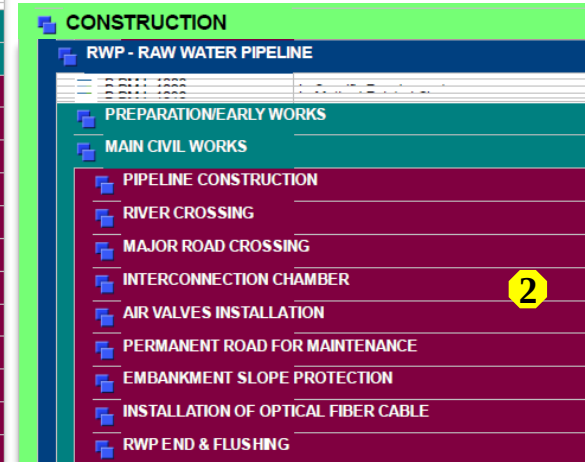
Presentation: Activity Listing Format without Time Scaled Logic Diagram. Period Covered 1D to 1W Supporting the Milestone & Duration in a L3/L4 Schedule

Decision Making: Used to Plan and Schedule Allocation of Resources (Labor, Equipment and Materials) for Each Activity.

Audiences: Mainly Supervisors and Team Members Responsible for Performing the Work.

Work Breakdown Structure (WBS) Of Your Project

► Schedule Level Of A Real Project



Work Breakdown Structure (WBS) Of Your Project

► Documents Required To Define Scope & Create WBS

4.2 Subcontract Section Milestone:

Milestone Name	Achievement Date
Intake Offshore (i10)	
1. Water Tightness Test	20-Oct-2022
2. Ready for Erection	05-Nov-2022
Pedestrian Bridge (i15)	
3. Deck System installation and Ready for Erection	07-Dec-2022
4. Ready for Erection including installation of 3 Big Pipes from intake Offshore to Pumping Station.	06-Jan-2023
Inlet Chamber (i20)	
5. Water tightness Test	24-Sep-2022
6. Ready for Erection	31-Oct-2022
Pumping Station & Water Hammer (i20)	
7. Civil work completion and Ready for Erection	24-Sep-2022
8. Water Hammer Wall – Water tightness	25-Oct-2022
Generator & Transformer Buildings (i80)	
9. Completion of all works including Secondary Concrete (Grouting) after installation of Equipment.	28-Oct-2022

4.3 Subcontract Final Milestone:

Completion of all Subcontract Section Milestones and Milestones to the satisfaction of the Contractor	07/03/2023
---	------------

Here are contractual milestones

Here is the description of detailed scope of work

5.1 Scope of Work Description

All scope of work initially is scheduled with some major task. All subtask mentioning phase, segment, gridline whatever is required for visualization will be addressed in 3 weeks look ahead schedule. Summary tasks of i10, i15, i20, i80 are described below.

Excavation: Soil excavation up to the required level and disposal of excavated soil are included in this task.

Foundation Bed Preparation and Blinding Concrete: Debris cleaning, leveling, dressing and pouring of plain cement concrete are included in this summary task.

Base Slab: Rebar Installation, Formwork, and Concreting work of raft are included in this task. Same scope description is applicable for pile cap of i15.

Vertical Elements: Rebar Installation, Formwork, and Concreting work of wall, column, pier or another vertical component of the structure including embedded part installation are included in this summary task.

Horizontal Elements: Rebar Installation, Formwork, and Concreting work of slab, beam or another horizontal component of the structure including embedded part installation are included in this summary task.

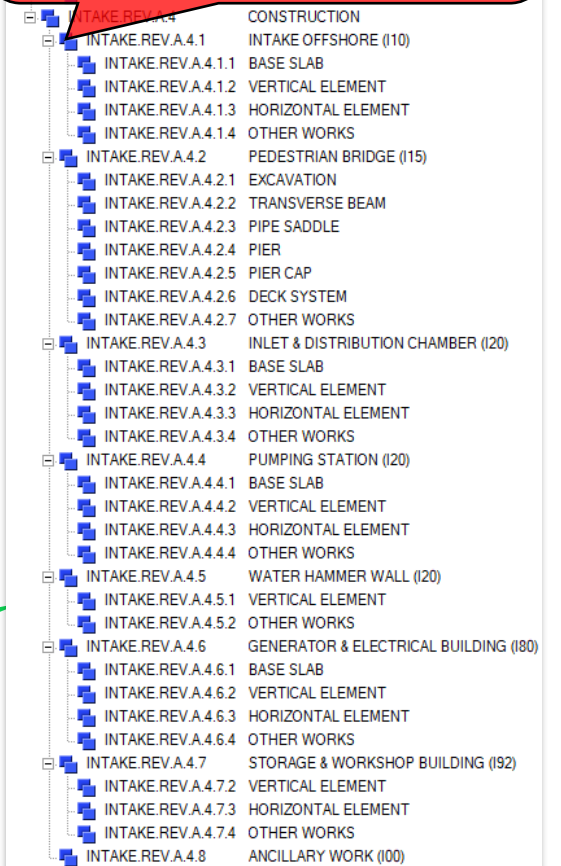
Water Tightness Test: Filling with water, stabilization, hook gauge measurement as per technical specification 3A clause 6.4 are included in this task.

Metal Work: Fixing of all post, railing, guard rail, or other metalwork after concreting including paint and finishing of metalwork are included in this summary task.

Finishing and Coating: All vertical or horizontal element external and internal finishing, painting, finishing of floor, roof etc are included in this summary task.

Backfilling: Transportation of stacked earth, layer-wise backfilling with proper compaction are included in this summary task.

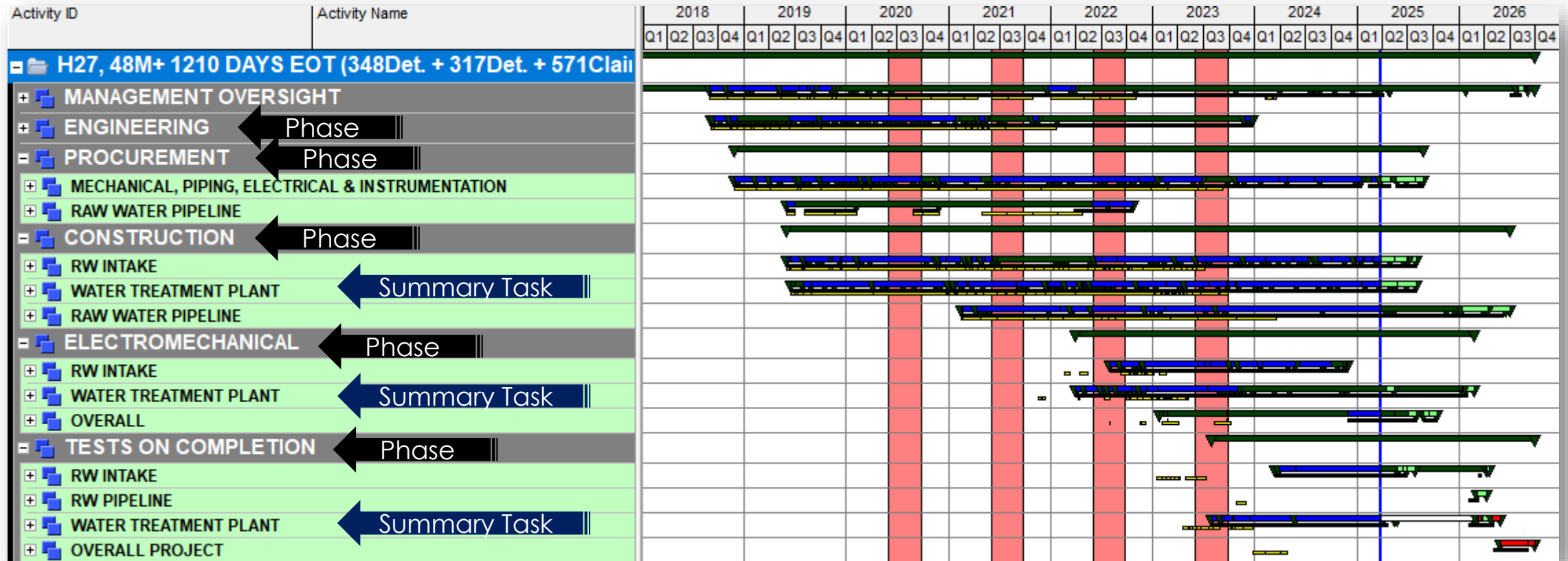
But Be Careful about WBS & Schedule Level
“WBS Level is one step before Schedule Level”



Drawing & BOQ needed to create this WBS

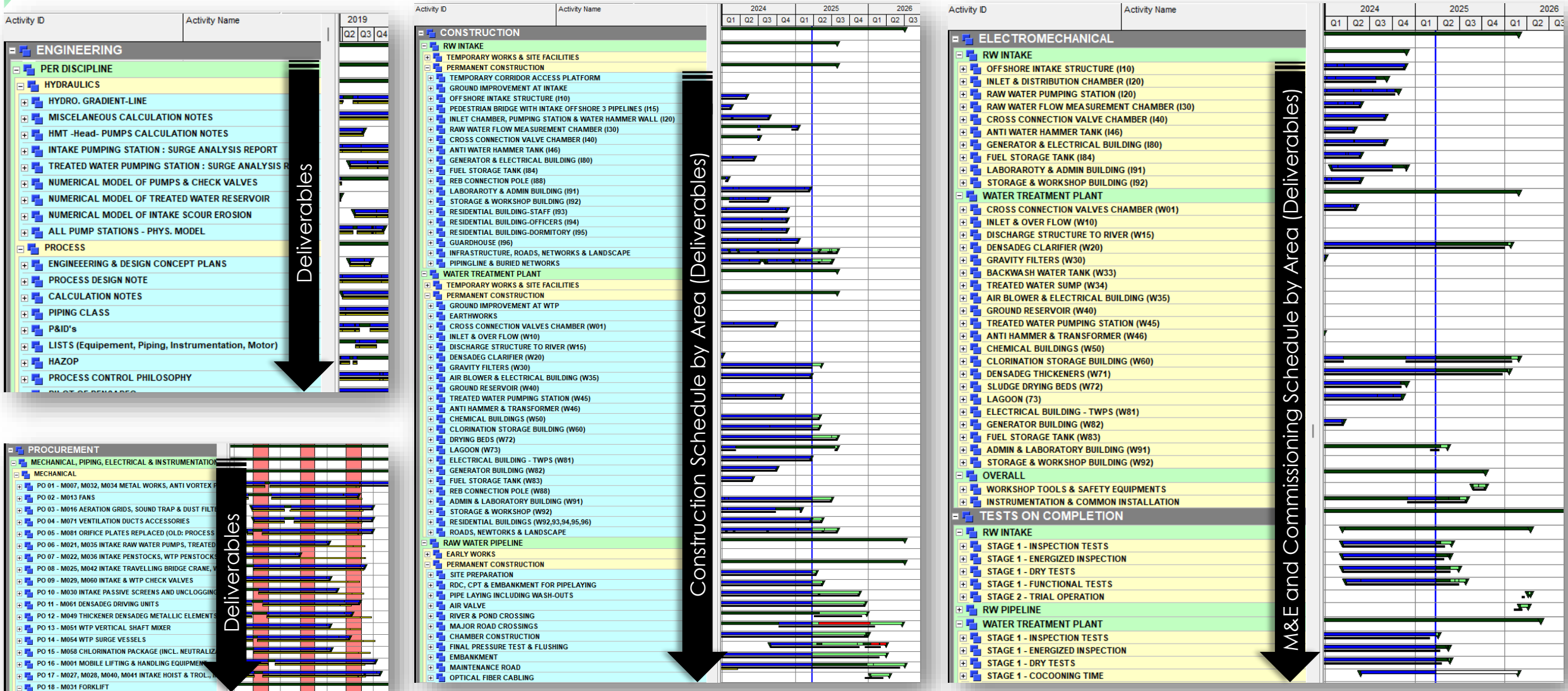
A Quick Look on Different Schedule Level

► Level 1 Schedule



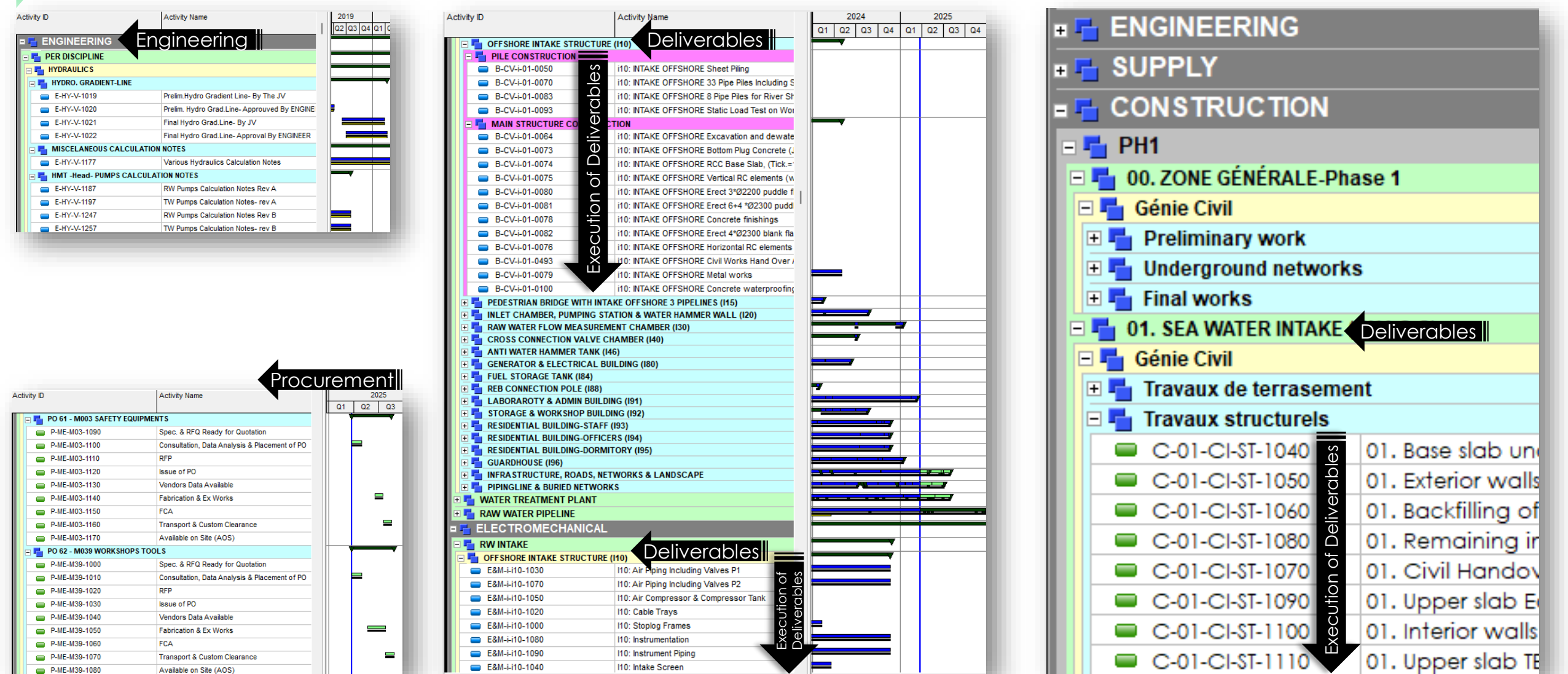
A Quick Look on Different Schedule Level

► Level 2 Schedule



A Quick Look on Different Schedule Level

► Level 3 Schedule



A Quick Look on Different Schedule Level

► Level 4 Schedule

Schedule L4 Base Slab
Schedule → Broken Down to Individual Type Task Level

I91 - Administration Building (Incl. Laboratory)

RCC Base Slab

ITK-I91-CON-1000	Levelling, Dressing & Blinding Concrete
ITK-I91-CON-1010	Rebar Installation
ITK-I91-CON-1020	Formwork Placement
ITK-I91-CON-1030	Concrete Pouring

Earthwork

ITK-I91-CON-1070	Backfilling to FGL
------------------	--------------------

Vertical IRC Elements

Vertical IRC upto +7.65

ITK-I91-CON-1040	Rebar Installation upto +7.65
ITK-I91-CON-1050	Formwork upto +7.65
ITK-I91-CON-1060	Concrete Pouring upto +7.65

Vertical IRC-1 upto +11.7

ITK-I91-CON-1110	Rebar Installation upto +11.7
ITK-I91-CON-1120	Formwork upto +11.7
ITK-I91-CON-1130	Concrete Pouring upto +11.7

Vertical IRC-2 upto +15.75

ITK-I91-CON-1200	Rebar Installation upto +15.75
ITK-I91-CON-1210	Formwork upto +15.75
ITK-I91-CON-1220	Concrete Pouring upto +15.75

Horizontal RC Elements

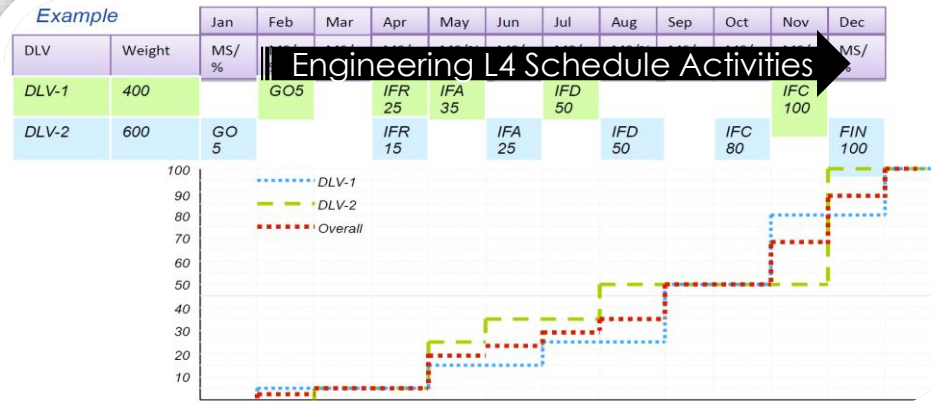
Horizontal RC at +7.65

ITK-I91-CON-1080	Formwork at +7.65 Grade Beam
ITK-I91-CON-1090	Rebar Installation at +7.65 Grade Beam
ITK-I91-CON-1100	Concrete Pouring +7.65 Grade Beam
ITK-I91-CON-1250	Formwork at +7.65 Ground Floor
ITK-I91-CON-1270	Rebar Installation at +7.65 Ground Floor
ITK-I91-CON-1290	Concrete Pouring +7.65 Ground Floor

Schedule L4 Vertical Wall
Schedule → Broken Down to Individual Type Task Level

Schedule L4 Slab/Floor
Schedule → Broken Down to Individual Type Task Level

Example



Mechanical Work

Mechanical Equipment (Name should be specified, and single equipment in one WBS, I am considering pump for example)

- Place Pump
- Install Support
- Anchor Base
- Pour Grout

Stop-Log

- Prepare Platform
- Install Frame
- Position the Stop-Log
- Pour Grout
- Leak Test

Piping Work

Piping

- Install Rack
- Install Support
- Install Pipe
- Pressure Test

Level 4 MEPI
Schedule Sample

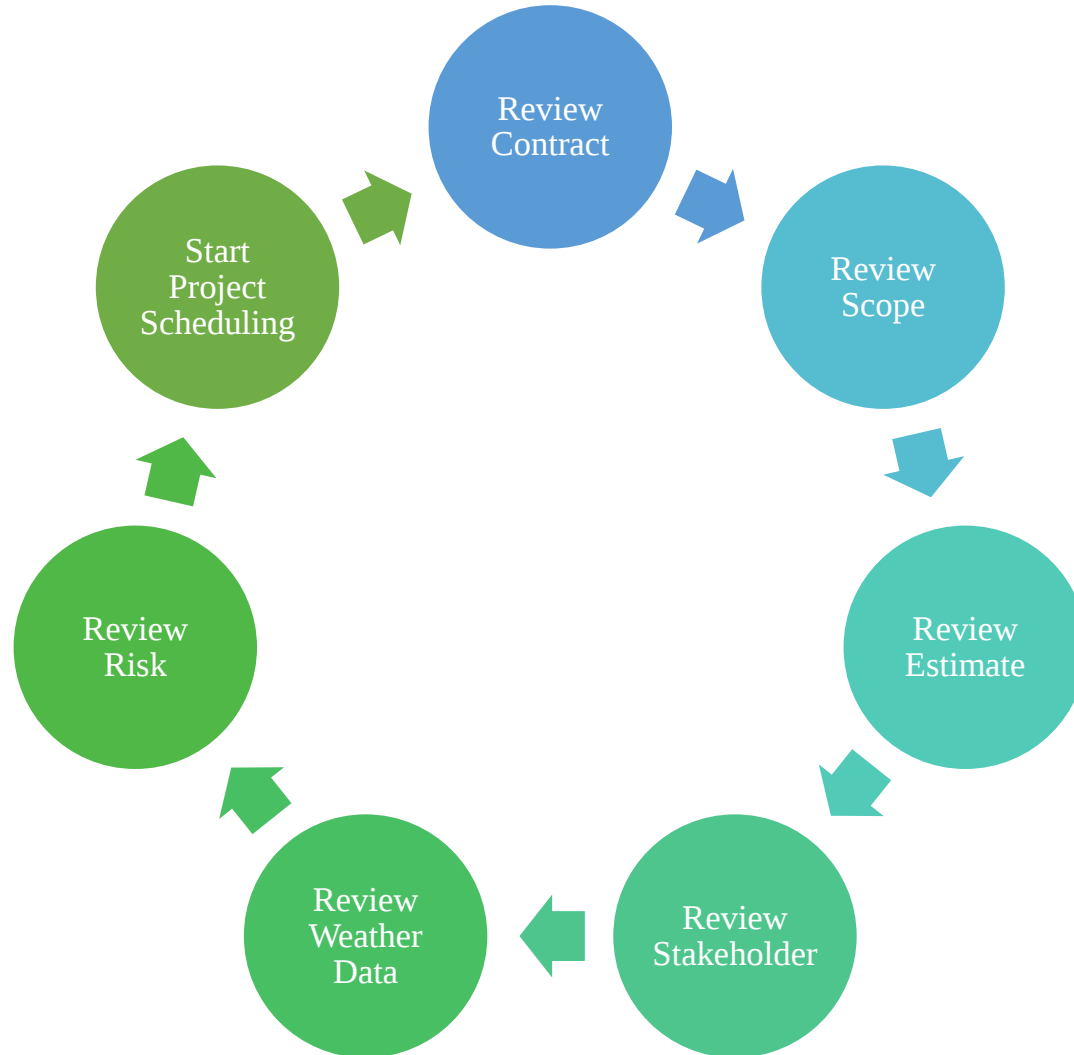


LESSON 03

DETAILED SCHEDULE DEVELOPMENT OF YOUR PROJECT

Detailed Schedule Development Of Your Project

► Project Scheduling in P6 – What to Review?



Detailed Schedule Development Of Your Project

► Define Activity – General Settings

Edit View Project Enterprise Tools Admin Help

Activities Details

Project ID	Project Name	Project Status	Data Date	Project Baseline
INTAKE	RAW WATER INTAKE	Active		
PP6	PROJECT P6	Active		
PP601Y2023N01	CONSTRUCTION OF 2 STOREYED BUILDING AT DHAKA	Active	01-Jan-23 08 AM	<Current P
PP602Y2023N02	WATER TREATMENT PROJECT PHASE 03	Active	01-Jan-23 08 AM	<Current P

Layout: Baseline Detail Time Program

Activity ID Activity

Activity ID	Activity
E-CON-01-1100	Checki
E-CON-01-1110	Comple
Service Pile (24 Nos.)	
E-CON-01-1120	Rebar
E-CON-01-1130	Install
E-CON-01-1140	Boring, 24 Pile
E-CON-01-1150	Comple
E-CON-01-1160	PIT on
E-CON-01-1170	Waiting for Service Pile Concrete Maturity

General Notebook Budget Log Spending Plan Budget Summary Dates Funding Codes Defaults Resources Settings Calculations

Defaults for New Activities

Duration Type: Fixed Duration & Units

Percent Complete Type: Physical

Activity Type: Task Dependent

Auto-numbering Defaults

Activity ID Prefix: A Activity ID Suffix: 1000 Increment: 10

☒ Increment Activity ID based on selected activity

Cost Account: Calendar: 7D/W@8h/d

Activity Type: Task Dependent

Duration Type: Fixed Duration & Units

% Complete Type: Physical

WBS: PP6.BR.2020.01.6.1.2 Service Pile (24 Nos.)

Responsible Manager: PM, BRIDGE

Use Task Dependent for non milestone activity

Use Fixed Duration & Units

Use Physical for progress input.

Enterprise Tools Admin

Details

✓ Activity Type

✓ Duration Type

✓ % Complete Type

Detailed Schedule Development Of Your Project

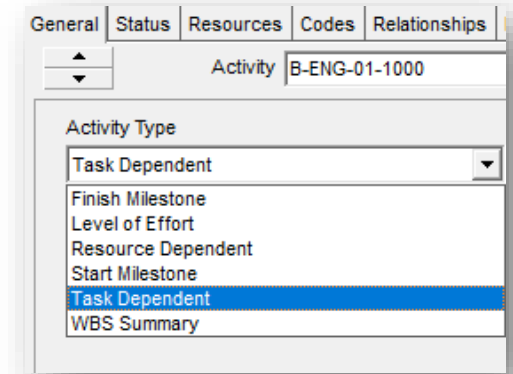
► Define Activity – Selection of Activity Type

○ Task Dependent Activity

- For a task dependent activity, assigned resources schedule according to the activity's calendar rather than according to their designated resource calendars.
- Use task dependent activities when multiple resources assigned to the same activity need to work together.

○ Resource Dependent Activity

- Resources assigned to this type of activity are scheduled to work according to the resources' calendars rather than the activity's calendar.
- The activity's duration is determined by the availability of resources to work on the activity.
- Use resource dependent activities when multiple resources assigned to the same activity can work independently.



General | Status | Resources | Codes | Relationships

Activity B-ENG-01-1000

Activity Type

- Task Dependent
- Finish Milestone
- Level of Effort
- Resource Dependent
- Start Milestone
- Task Dependent
- WBS Summary

► Activity Type

- ✓ Task Dependent
- ✓ Level of Effort
- ✓ WBS Summary
- ✓ Start Milestone
- ✓ Finish Milestone
- ✓ Resource Dependent

Detailed Schedule Development Of Your Project

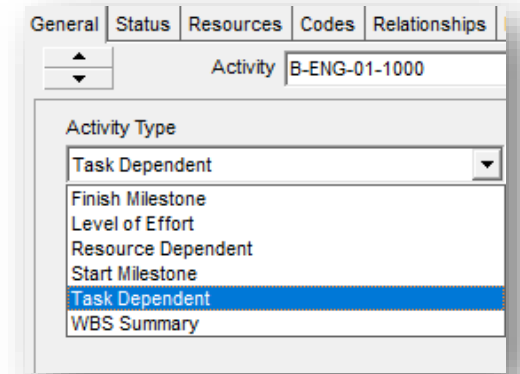
► Define Activity – Selection of Activity Type

○ Start Milestone Activity

- A start milestone activity marks the beginning of a major stage in the project.
- Since a start milestone activity does not have a duration, it is sometimes referred to as a "zero duration activity."
- A start milestone may have a primary resource and expenses associated with it, but cannot have resource assignments, role assignments, or time-based costs such as labor.
- You can assign work products or documents to a start milestone.

○ Finish Milestone Activity

- A finish milestone activity marks the end of a major stage in the project.
- Since a finish milestone activity does not have a duration, it is sometimes referred to as a "zero duration activity."
- A finish milestone may have a primary resource and expenses associated with it, but cannot have resource assignments, role assignments, or time-based costs such as labor.
- You can assign work products and documents to a finish milestone.



The screenshot shows the 'Activity Type' selection dialog in Primavera P6. The 'General' tab is active, and the 'Activity' field is set to 'B-ENG-01-1000'. The 'Activity Type' list includes: Task Dependent (selected), Finish Milestone, Level of Effort, Resource Dependent, Start Milestone, Task Dependent (highlighted), and WBS Summary.

► Activity Type

- ✓ Task Dependent
- ✓ Level of Effort
- ✓ WBS Summary
- ✓ Start Milestone
- ✓ Finish Milestone
- ✓ Resource Dependent

Detailed Schedule Development Of Your Project

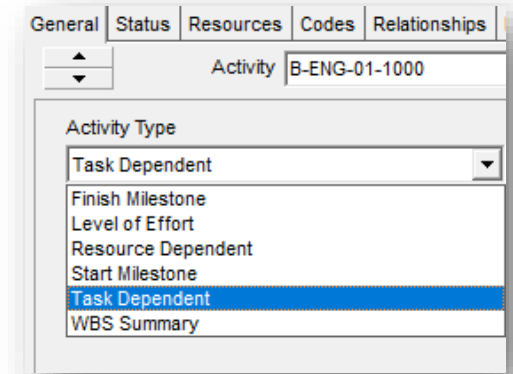
► Define Activity – Selection of Activity Type

○ Level of Effort (LOE) Activity

- A level of effort activity's duration is dependent on its predecessor and/or successor activities.
- Level of effort activities cannot have constraints assigned to them. Level of effort activities are not included when leveling resources.
- Use level of effort activities for on-going tasks that depend on other activities.
- A level of effort activity's duration is calculated from the earliest early start of its predecessors/successors (linked to the start end of the level of effort activity) to the latest early finish of its predecessors/successors (linked to the finish end of the level of effort activity).

○ WBS Summary Activity

- Use a WBS summary activity to summarize a WBS level. The WBS summary activity comprises a group of activities that share a common WBS level.
- The dates calculated on a WBS summary activity are based on the earliest start date of the activities in the group and the latest finish date of these activities.
- The WBS summary activity duration is calculated based on its assigned calendar.
- You cannot assign constraints to WBS summary activities.



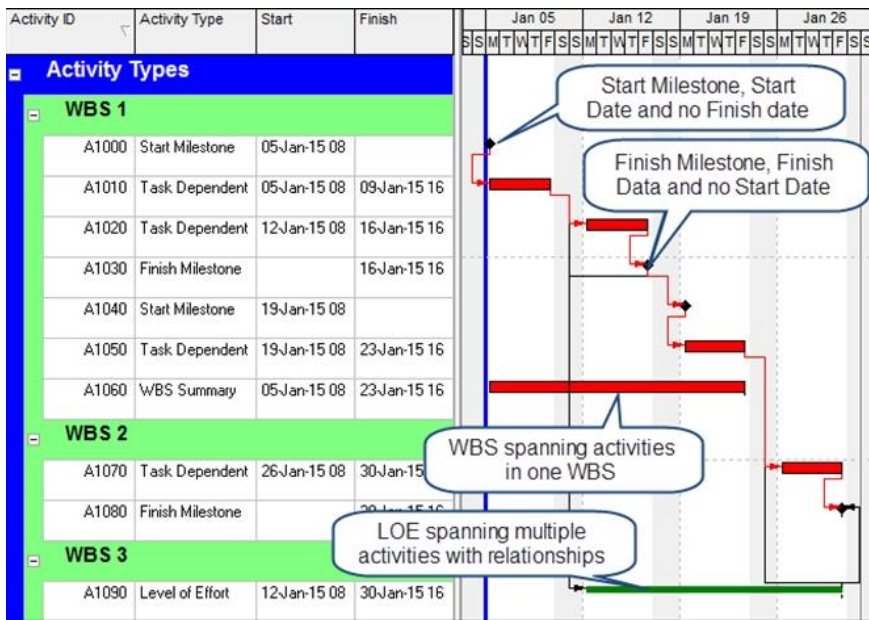
The screenshot shows the 'Activity Type' selection dialog in Primavera P6. The 'Activity' field is set to 'B-ENG-01-1000'. The 'Activity Type' dropdown menu is open, showing a list of options: 'Task Dependent', 'Finish Milestone', 'Level of Effort', 'Resource Dependent', 'Start Milestone', 'Task Dependent' (highlighted), and 'WBS Summary'.

► Activity Type

- ✓ Task Dependent
- ✓ Level of Effort
- ✓ WBS Summary
- ✓ Start Milestone
- ✓ Finish Milestone
- ✓ Resource Dependent

Detailed Schedule Development Of Your Project

► Define Activity – Selection of Activity Type



The screenshot shows the 'Activity Type' selection dialog in Primavera P6. The 'Activity' field is set to 'B-ENG-01-1000'. The 'Activity Type' dropdown is open, showing the following options:

- Task Dependent
- Finish Milestone
- Level of Effort
- Resource Dependent
- Start Milestone
- Task Dependent** (selected)
- WBS Summary

► Activity Type

✓ Task Dependent

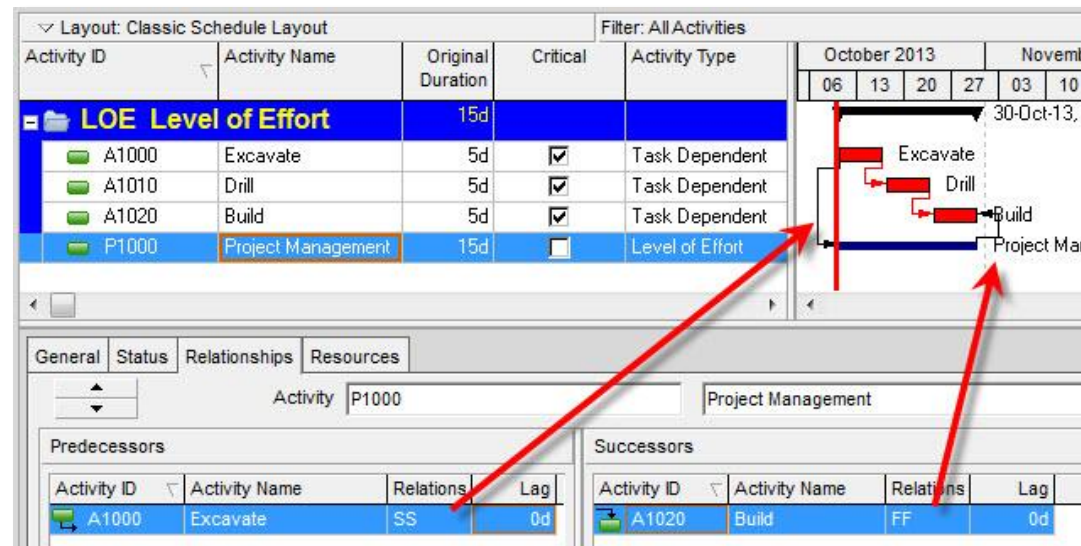
✓ Level of Effort

✓ WBS Summary

✓ Start Milestone

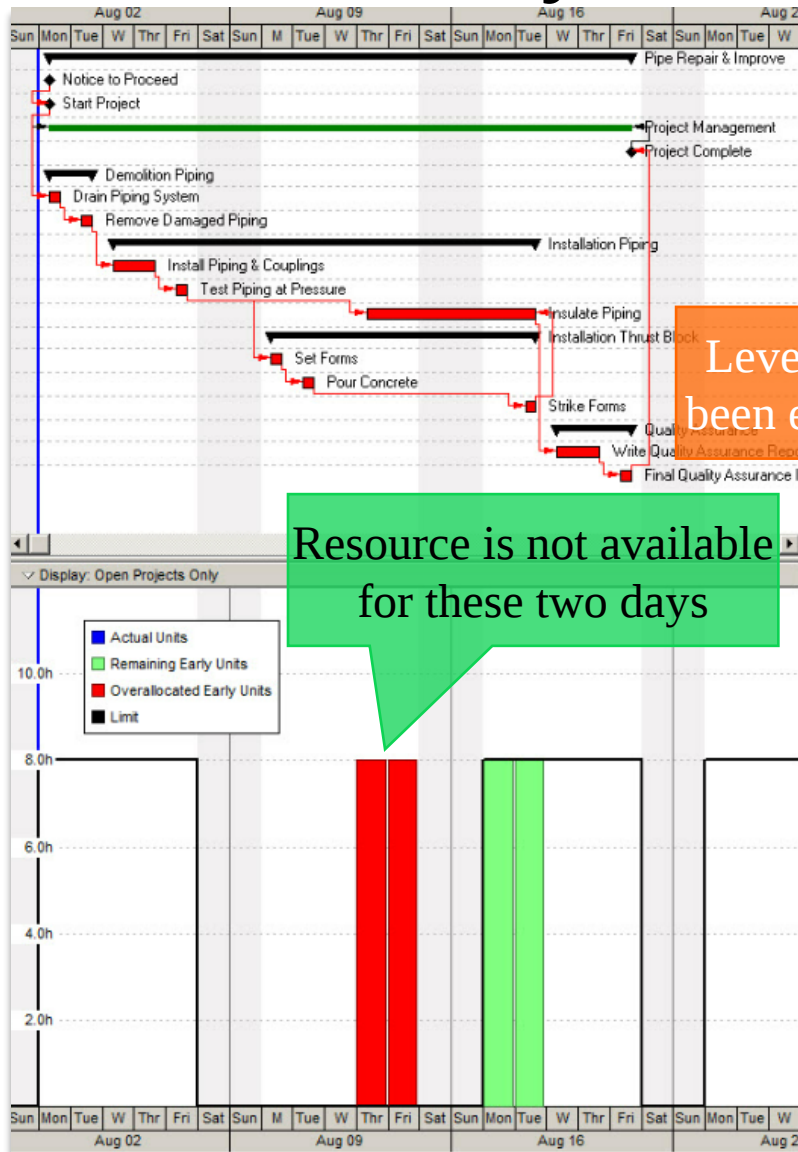
✓ Finish Milestone

✓ Resource Dependent



Detailed Schedule Development Of Your Project

► Define Activity – Selection of Activity Type



Level of effort activity has been extended automatically

Activity has been shifted to the next two resource available days

General	Status	Resources	Codes	Relationships
Activity B-ENG-01-1000				
Activity Type				
Task Dependent				
Finish Milestone				
Level of Effort				
Resource Dependent				
Start Milestone				
Task Dependent				
WBS Summary				

► Activity Type

- ✓ Task Dependent
- ✓ Level of Effort
- ✓ WBS Summary
- ✓ Start Milestone
- ✓ Finish Milestone
- ✓ Resource Dependent

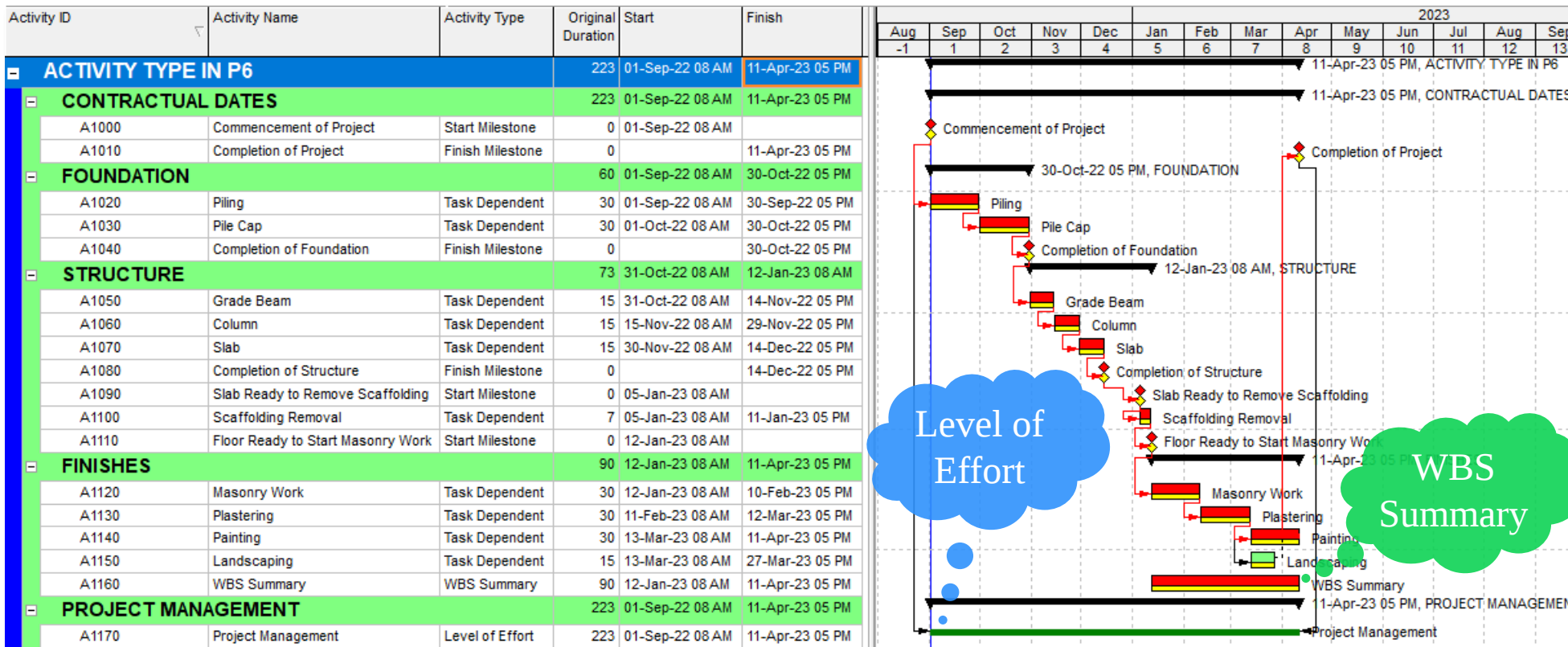
Detailed Schedule Development Of Your Project

► Define Activity – Selection of Activity Type

General	Status	Resources	Codes	Relationships
Activity B-ENG-01-1000				
Activity Type				
Task Dependent Finish Milestone Level of Effort Resource Dependent Start Milestone Task Dependent WBS Summary				

► Activity Type

- ✓ Task Dependent
- ✓ Level of Effort
- ✓ WBS Summary
- ✓ Start Milestone
- ✓ Finish Milestone
- ✓ Resource Dependent



Detailed Schedule Development Of Your Project

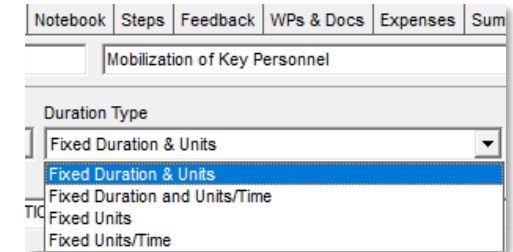
► Define Activity – Selection of Duration Type

○ Fixed Duration & Units

- Choose Fixed Duration & Units if you want the activity duration to remain constant and the units/time to change.
- This type is used when the activity is to be completed within a fixed time period and the total amount of work is fixed.
- You most often choose this duration type when you are using task dependent activities.

○ Fixed Duration & Units/Time

- Choose Fixed Duration & Units/Time if you want the activity duration to remain constant and the remaining units to change.
- This type is used when the activity is to be completed within a fixed time period regardless of the resources assigned.
- You most often choose this duration type when you are using task dependent activities.



► Duration Type

✓ Fixed Duration & Units

✓ Fixed Duration & U/T

✓ Fixed Units

✓ Fixed Units/Time

Detailed Schedule Development Of Your Project

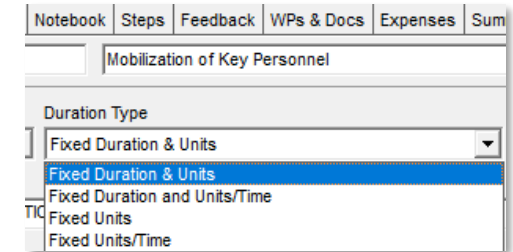
► Define Activity – Selection of Duration Type

○ Fixed Units

- Choose Fixed Units if you want the activity units to remain constant when the duration or resource units per time change.
- This type is used when the total amount of work is fixed and increasing the resources can decrease the activity duration.
- You most often choose this duration type when you are using resource dependent activities.

○ Fixed Units/Time

- Choose Fixed Units/Time if you want the resource units per time to remain constant when the activity duration or units change.
- This type is used when an activity has fixed resources with fixed productivity output per time period.
- You most often choose this duration type when you are using resource dependent activities.



► Duration Type

✓ Fixed Duration & Units

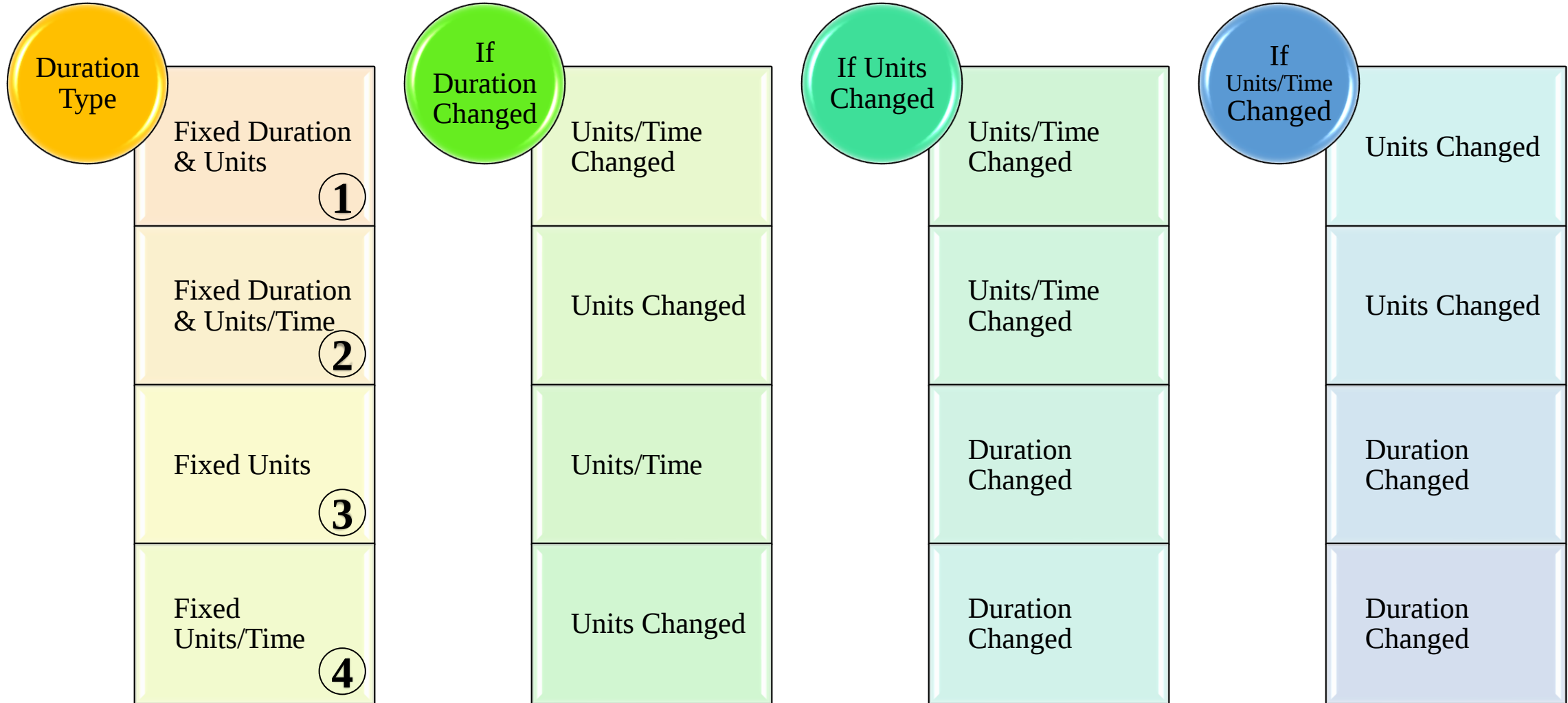
✓ Fixed Duration & U/T

✓ Fixed Units

✓ Fixed Units/Time

Detailed Schedule Development Of Your Project

► Define Activity – Selection of Duration Type

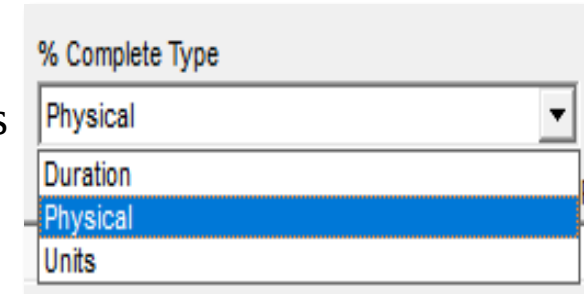


Detailed Schedule Development Of Your Project

► Define Activity – Selection of % Complete Type

○ Physical % Complete

- To indicate that the activity's percent complete will be entered by the user for this activity, select Physical.
- In this case, Activity % Complete = Physical % Complete.



% Complete Type

Physical

Duration

Physical

Units

○ Unit % Complete

- To specify that the activity's percent complete be calculated from the actual and remaining units entered by the user, select Units.
- In this case, Activity % Complete = Units % Complete.

○ Duration % Complete

- To specify that the activity's percent complete be calculated automatically from the original or planned and remaining durations, select Duration.
- In this case, Activity % Complete = Duration % Complete.

► % Complete Type

✓ Physical % Complete

✓ Direct % Input

✓ Steps % Complete

✓ Duration % Complete

✓ Unit % Complete

Detailed Schedule Development Of Your Project

► Sequencing Activities - Relationships

○ Finish To Start (FS) Relationship

- Start of a successor activity depends on the completion of its predecessor activity.
This is the default activity relationship.

A (Predecessor of B)



B (Successor of A)

○ Finish To Finish (FF) Relationship

- The finish of a successor activity depends on the finish of its predecessor activity.

A (Predecessor of B)



B (Successor of A)

General	Status	Resources	Codes	Relationships	Notebook	Steps	Feedback
				Activity	A1030		
Predecessors							
Activity ID	Activity Name	Relations	Lag				
A1020	Piling	FS	0				
		FF					
		FS					
		SF					
		SS					

➤ Predecessors

✓ FS, SS, FF, SF

✓ Lag (+), Lead (-)

➤ Successors

✓ FS, SS, FF, SF

✓ Lag (+), Lead (-)

Detailed Schedule Development Of Your Project

► Sequencing Activities - Relationships

○ Start To Start (SS) Relationship

- The start of a successor activity depends on the start of its predecessor.

A (Predecessor of B)



B (Successor of A)

○ Start To Finish (SF) Relationship

- A successor activity cannot complete until its predecessor activity starts.

A (Predecessor of B)



B (Successor of A)

General	Status	Resources	Codes	Relationships	Notebook	Steps	Feedback
				Activity	A1030		
Predecessors							
Activity ID	Activity Name	Relations	Lag				
A1020	Piling	FS	0				
		FF					
		FS					
		SF					
		SS					

➤ Predecessors

✓ FS, SS, FF, SF

✓ Lag (+), Lead (-)

➤ Successors

✓ FS, SS, FF, SF

✓ Lag (+), Lead (-)

Detailed Schedule Development Of Your Project

► Sequencing Activities – Lag/Lead

○ Lag

- An offset or delay from an activity to its successor.
- Lag is positive and it is based on the calendar of the successor activity.

○ Lead

- An offset or delay from an activity to its successor.
- Lead is negative and it is based on the calendar of the successor activity

General	Status	Resources	Codes	Relationships	Notebook	Steps	Feedback
				Activity	A1030		
Predecessors							
Activity ID	Activity Name	Relations	Lag				
A1020	Piling	FS	0				
		FF					
		FS					
		SF					
		SS					

➤ Predecessors

✓ FS, SS, FF, SF

✓ Lag (+), Lead (-)

➤ Successors

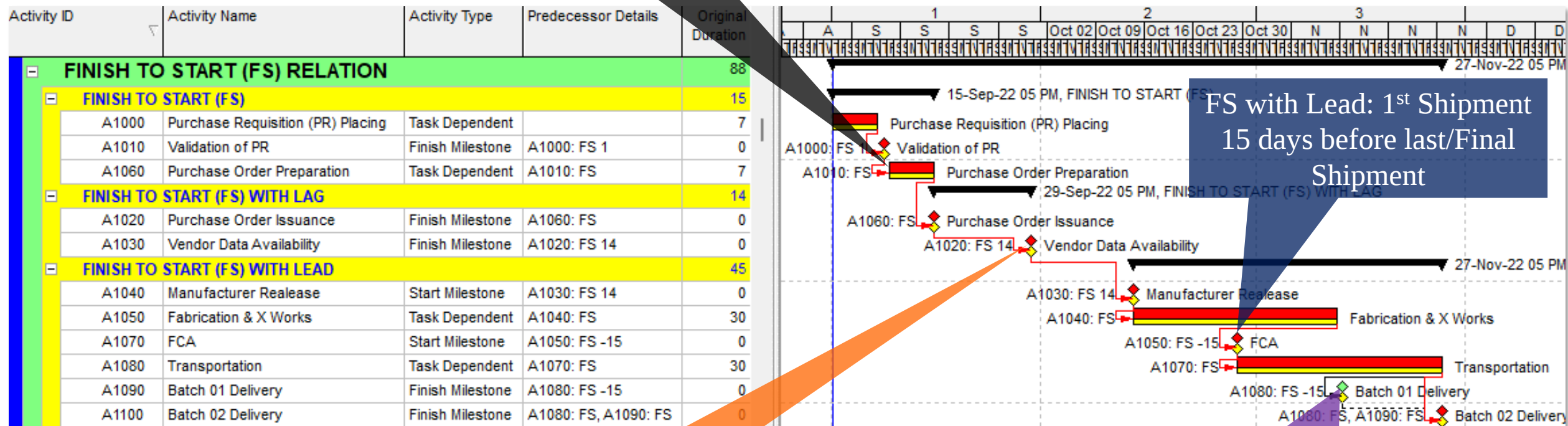
✓ FS, SS, FF, SF

✓ Lag (+), Lead (-)

Detailed Schedule Development Of Your Project

► Sequencing Activities - FS, FS & Lag, FS & Lead

FS: PO Preparation started immediately after Validation of Purchase Requisition



FS with Lag: Vendor data available 14 days after issuance of Purchase Order

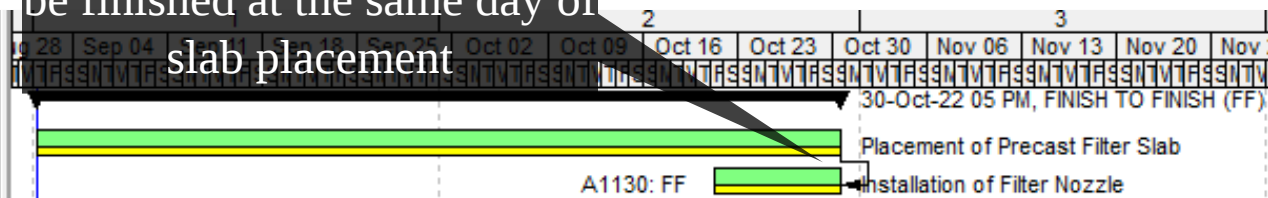
FS with Lead: 1st Delivery 15 days before last/Final Delivery

Detailed Schedule Development Of Your Project

► Sequencing Activities - FF, FF & Lag, FF & Lead

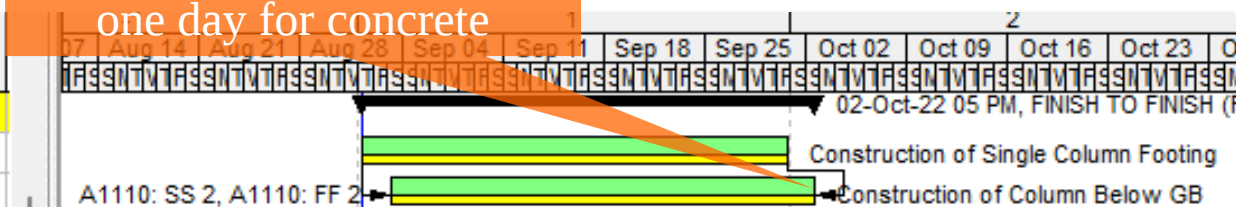
Activity ID	Activity Name	Activity Type	Predecessor Details	Original Duration
FINISH TO FINISH (FF)				60
A1130	Placement of Precast Filter Slab	Task Dependent		60
A1140	Installation of Filter Nozzle	Task Dependent	A1130: FF	10

FF: Nozzle installation will be finished at the same day of slab placement



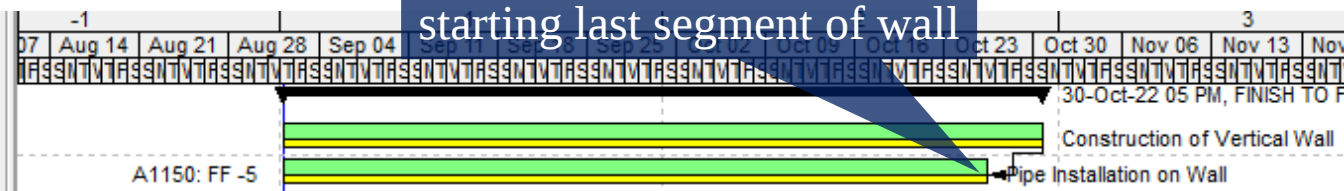
Activity ID	Activity Name	Activity Type	Predecessor Details	Original Duration
FINISH TO FINISH (FF) WITH LAG				32
A1110	Construction of Single Column Footing	Task Dependent		30
A1120	Construction of Column Below GB	Task Dependent	A1110: SS 2, A1110: FF	30

FF with Lag: 1 day required for rebar and formwork and one day for concrete



Activity ID	Activity Name	Activity Type	Predecessor Details	Original Duration
FINISH TO FINISH (FF) WITH LEAD				60
A1150	Construction of Vertical Wall	Task Dependent		60
A1160	Pipe Installation on Wall	Task Dependent	A1150: FF -5	55

FF with Lead: Installation will be finished before starting last segment of wall



► Sequencing Activities - SS, SS & Lag, SS & Lead

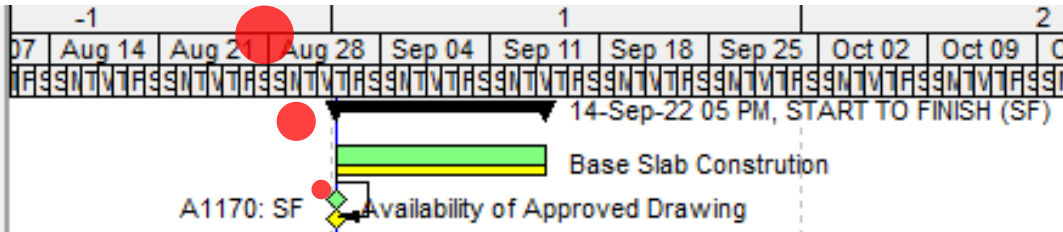
SS with Lag/Lead is generally used for parallel activities

Activity ID	Activity Name	Activity Type	Predecessor Details	Original Duration
FINISH TO FINISH (FF) WITH LAG				32
A1110	Construction of Single Column Footing	Task Dependent		30
A1120	Construction of Column Below GB	Task Dependent	A1110: SS 2, A1110: FF	30

Detailed Schedule Development Of Your Project

► Sequencing Activities - SF, SF & Lag, SF & Lead

Do not miss the documentation requirement to start the work

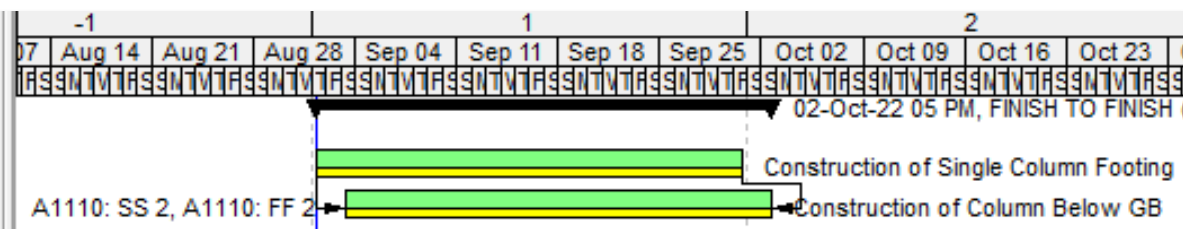
Activity ID	Activity Name	Activity Type	Predecessor Details	Original Duration																
START TO FINISH (SF)					-1	1	2	07	Aug 14	Aug 21	Aug 28	Sep 04	Sep 11	Sep 18	Sep 25	Oct 02	Oct 09	0		
A1170	Base Slab Constrution	Task Dependent		14	14-Sep-22 05 PM, START TO FINISH (SF)															
A1180	Availability of Approved Drawing	Finish Milestone	A1170: SF	0	A1170: SF															

Detailed Schedule Development Of Your Project

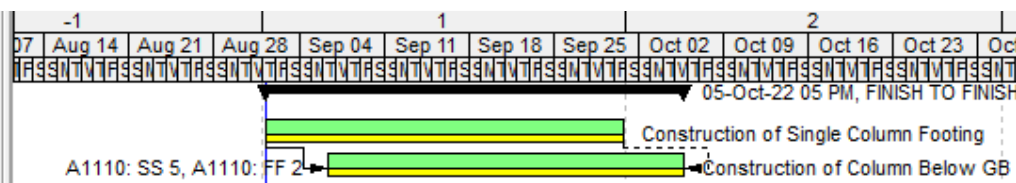
► Sequencing Activities - Parallel Relationships

Be careful
about the
duration of
parallel task

Activity ID	Activity Name	Activity Type	Predecessor Details	Original Duration	
FINISH TO FINISH (FF) RELATION				32	
A1110	Construction of Single Column Footing	Task Dependent		30	
A1120	Construction of Column Below GB	Task Dependent	A1110: SS 2, A1110: FF	30	



Activity ID	Activity Name	Activity Type	Predecessor Details	Original Duration	Start	Finish	
FINISH TO FINISH (FF) WITH LAG				35	01-Sep-22 08 AM	05-Oct-22 05 PM	
A1110	Construction of Single Column Footing	Task Dependent		30	01-Sep-22 08 AM	30-Sep-22 05 PM	
A1120	Construction of Column Below GB	Task Dependent	A1110: SS 5, A1110: FF 2	30	06-Sep-22 08 AM	05-Oct-22 05 PM	



General	Status	Resources	Codes	Relationships	Notebook	Steps	Feedback	WPs & Docs	Risks	Expenses	Summary
Activity A1120 Construction of Column Below GB											
Predecessors						Successors					
Activity ID	Activity Name	Relations	Lag	Relationship	Total Float	Project ID	WBS	Activity ID	Activity Name		
A1110	Construction of Single Column Footing	SS	5		53						
A1110	Construction of Single Column Footing	FF	2		56						

Detailed Schedule Development Of Your Project

► Setting Activity Duration and Develop Schedule

Activity Name	Original Duration	Start	Finish	Total Float	2020								
					Feb -1	Mar 1	Apr 2	May 3	Jun 4	Jul 5	Aug 6	Sep 7	
SCHEDULE	123	01-Mar-20	01-Jul-20	0									
COMMENCEMENT	0	01-Mar-20		0									
Mobilization (2%)	31	01-Mar-20	31-Mar-20	0									
Foundation (25%)	30	01-Apr-20	30-Apr-20	0									
Structure (50%)	31	16-Apr-20	16-May-20	0									
Masonry (10%)	30	02-May-20	31-May-20	0									
MEP (10%)	31	17-May-20	16-Jun-20	0									
Landscaping (3%)	15	17-Jun-20	01-Jul-20	0									
COMPLETION	0		01-Jul-20	0									

Project planned to complete in 4 months by parallel tasking. Higher cash flow and resource required.

► Based on Cash Flow

✓ Monthly Budget

✓ Investment Return

✓ Profit Plan

► Based on Resource

✓ Existing Resource

✓ Resource Rent

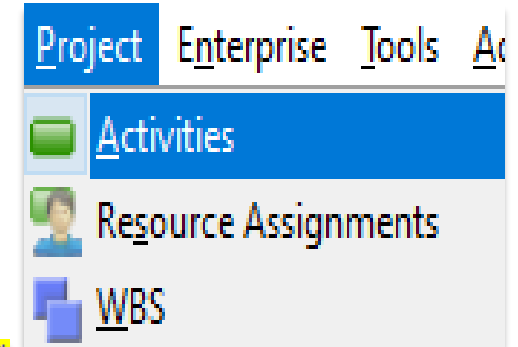
✓ New Procurement

Activity Name	Original Duration	Start	Finish	Total Float	2020										
					Feb -1	Mar 1	Apr 2	May 3	Jun 4	Jul 5	Aug 6	Sep 7	Oct 8	Nov 9	
SCHEDULE	183	01-Mar-20	30-Aug-20	0											
COMMENCEMENT	0	01-Mar-20		0											
Mobilization (2%)	31	01-Mar-20	31-Mar-20	0											
Foundation (25%)	30	01-Apr-20	30-Apr-20	0											
Structure (50%)	31	01-May-20	31-May-20	0											
Masonry (10%)	30	01-Jun-20	30-Jun-20	0											
MEP (10%)	31	01-Jul-20	31-Jul-20	0											
Landscaping (3%)	30	01-Aug-20	30-Aug-20	0											
COMPLETION	0		30-Aug-20	0											

Project planned to complete in 6 months by non-parallel tasking. Lower cash flow and resource required.

Detailed Schedule Development Of Your Project

► Final Defined Activities



- ✓ Activity ID
- ✓ Activity Name
- ✓ Activity Calendar
- ✓ Activity Type
- ✓ Duration Type
- ✓ % Complete Type
- ✓ Relationship

DISINFECTION & TREATED WATER STORAGE (W40)			7D/W@8H
C-W40-1000	W40: RESERVOIR Earthwork		7D/W@8H
C-W40-1010	W40: RESERVOIR Base Slab Including UG Channel		7D/W@8H
C-W40-1020	W40: RESERVOIR Base Slab		7D/W@8H
C-W40-1030	W40: RESERVOIR Base Slab		7D/W@8H
C-W40-1040	W40: RESERVOIR Base Slab		7D/W@8H
C-W40-1050	W40: RESERVOIR Base Slab		7D/W@8H
C-W40-1060	W40: RESERVOIR Metal Works		7D/W@8H
C-W40-1070	W40: Civil Works Completion		7D/W@8H
TREATED WATER PUMPING STATION (W45)			7D/W@8H
C-W45-1000	W45: PUMPING STATION Earthwork		7D/W@8H
C-W45-1010	W45: PUMPING STATION Underground Base Slab		7D/W@8H
C-W45-1020	W45: PUMPING STATION Underground Vertical Wall		7D/W@8H
C-W45-1030	W45: PUMPING STATION Base Slab		7D/W@8H
C-W45-1040	W45: PUMPING STATION Base Slab		7D/W@8H
C-W45-1050	W45: PUMPING STATION Base Slab		7D/W@8H
C-W45-1060	W45: PUMPING STATION Base Slab		7D/W@8H
C-W45-1070	W45: PUMPING STATION Horizontal Elements		7D/W@8H
C-W45-1080	W45: PUMPING STATION Building Construction		7D/W@8H
C-W45-1090	W45: PUMPING STATION Concrete Finishing		7D/W@8H
C-W45-1100	W45: PUMPING STATION Metal Works		7D/W@8H
C-W45-1110	W45: PUMPING STATION Metal Works		7D/W@8H
C-W45-1120	W45: PUMPING STATION Metal Works		7D/W@8H

C-W40-1000 →
Phase-Area-
Chronology

Area Code: Area
Name Task Name

Working Day/Week @
Working Hour/Day →
7D/W@8H/D

PIPELINE			7D/W@8H
SECTION 01: P1 (0+000, INTAKE) To P4 (0+072.9)			7D/W@8H
CON-PL-S1-1000	S1 Site Preparation		7D/W@8H
CON-PL-S1-1010	S1 RDC & CPT		7D/W@8H
CON-PL-S1-1020	S1 Pipelaying		7D/W@8H
CON-PL-S1-1030	S1 Backfilling		7D/W@8H
CON-PL-S1-1040	S1 Embankment Fill Before Pressure Test		7D/W@8H
CON-PL-S1-1050	S1 Pressure Test		7D/W@8H
CON-PL-S1-1060	S1 Embankment Fill After Pressure Test		7D/W@8H
SECTION 02: P42 (0+220.2) To P20 (1+000.0)			7D/W@8H
CON-PL-S2-1000	S2 Site Preparation		7D/W@8H
CON-PL-S2-1010	S2 RDC & CPT		7D/W@8H
CON-PL-S2-1020	S2 Pipelaying		7D/W@8H
CON-PL-S2-1030	S2 Backfilling		7D/W@8H
CON-PL-S2-1040	S2 Embankment Fill Before Pressure Test		7D/W@8H
CON-PL-S2-1050	S2 Pressure Test		7D/W@8H
CON-PL-S2-1060	S2 Embankment Fill After Pressure Test		7D/W@8H
SECTION 03: P31(1+192.0) To P48 (1+962.3)			7D/W@8H
CON-PL-S3-1000	S3 Site Preparation		7D/W@8H
CON-PL-S3-1010	S3 RDC & CPT		7D/W@8H
CON-PL-S3-1020	S3 Pipelaying		7D/W@8H
CON-PL-S3-1030	S3 Backfilling		7D/W@8H
CON-PL-S3-1040	S3 Embankment Fill Before Pressure Test		7D/W@8H
CON-PL-S3-1050	S3 Pressure Test		7D/W@8H
CON-PL-S3-1060	S3 Embankment Fill After Pressure Test		7D/W@8H

CON-PL-S1-1000 →
Phase-Deliverable-
Area-Chronology

Area Task Name



LESSON 04

RESOURCE LOAD YOUR DETAILED SCHEDULE

Resource Load Your Detailed Schedule

► Defining Resources With Basic Parameters

▼ Display: All Resources

Resource ID	Resource Name	Resource Type	Calendar	Unit of Measure
PROJECT P6	PROJECT P6	Material	7D/W@8h/d	
SCFLD	SCAFFOLDING	Material	7D/W@8h/d	Square Meter
FRM	FORMWORK	Material	7D/W@8h/d	Square Meter
MSBAR	REBAR	Material	7D/W@8h/d	Metric Ton
CON	CONCRETE	Material	7D/W@8h/d	Cubic Meter
RF	REBAR FIXER	Labor	7D/W@8h/d	
SCF	SCAFFOLDER	Labor	7D/W@8h/d	
FRMW	FORMWORKER	Labor	7D/W@8h/d	
BUDGET	BUDGETED COST	Labor	7D/W@8h/d	
MSN	MASON	Labor	7D/W@8h/d	

General Codes Details Units & Prices Roles Notes User Defined Fields

Shift Calendar:  Shift: 1

Effective Date	Max Units / Time	Price / Unit
01-Jan-22 12 AM	8.00/d	\$0.00/unit

Enterprise Tools Admin Help

- Projects
- Enterprise Project Structure...
- Tracking
- Project Portfolios...
- Resources...**

✓ Resource ID

✓ Resource Name

✓ Resource Type

✓ Calendar

✓ Unit of Measure

✓ Max Units / Time

✓ Price/Unit

Resource Load Your Detailed Schedule

► Resource Assignment in Activities

Activity ID	Predecessor Details	Activity Name	Original Duration	2023
				Jan Feb Mar Apr May Jun Jul
PP601Y2023N01		CONSTRUCTION OF 2 STORI	150d	30-May-23
PP601Y2023N01.3		Brick Work	150d	30-May-23
PP601Y2023N01.3.1		Internal Brick Work	90d	31-Mar-23 05 PM, PP601
A1010		Internal Brick Wall	90d	Internal Brick Wall
PP601Y2023N01.3.2		External Brick Work	60d	30-May-23
A1000	A1010: SS	External Brick Wall	60d	External Br

General	Status	Resources	Predecessors	Successors	Relationships
		Activity	A1010	Internal Brick Wall	
Resource ID	Resource Name	Budgeted Units	Units % Complete	Actual Units	Remaining Units
MSN	MASON	720.00d	0%	0.00d	720.00d

	C-CON-1000	Access Available to Site
	C-CON-1010	Mobilization (7%)
	C-CON-1020	Foundation (25%)

General	Status	Expenses	Resources	Codes	Relationships	Notebook	Steps	Feed
Activity				C-CON-1020				

Resource ID	Name	Budgeted Units	Budgeted Units / Time
	M1.Sr. Brigde Engineer	120.00d	2.00d/d
	EX1.Excavator	180.00d	3.00d/d
	C40.Concrete Class C40	480.00cum	8.00cum/d
	MS500W.Reinforcement Steel 500W TMT	480.00Ton	8.00Ton/d

► Materials Resource

- ✓ Budgeted Units
- ✓ Remaining Units

► Labor Resource

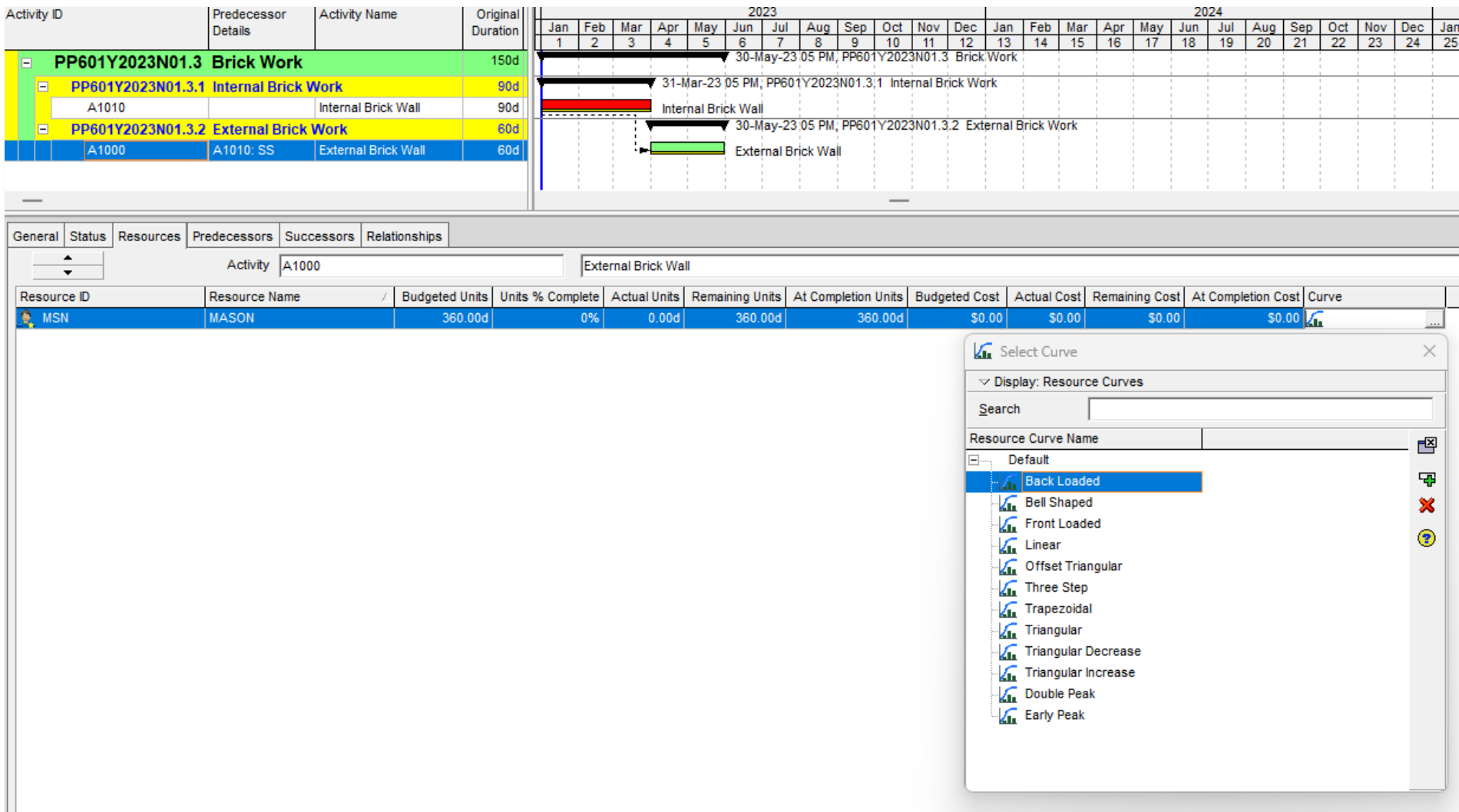
- ✓ Budgeted Units
- ✓ Remaining Units

► Nonlabor/Equipment

- ✓ Budgeted Units/Time
- ✓ Remaining Units/Time

Resource Load Your Detailed Schedule

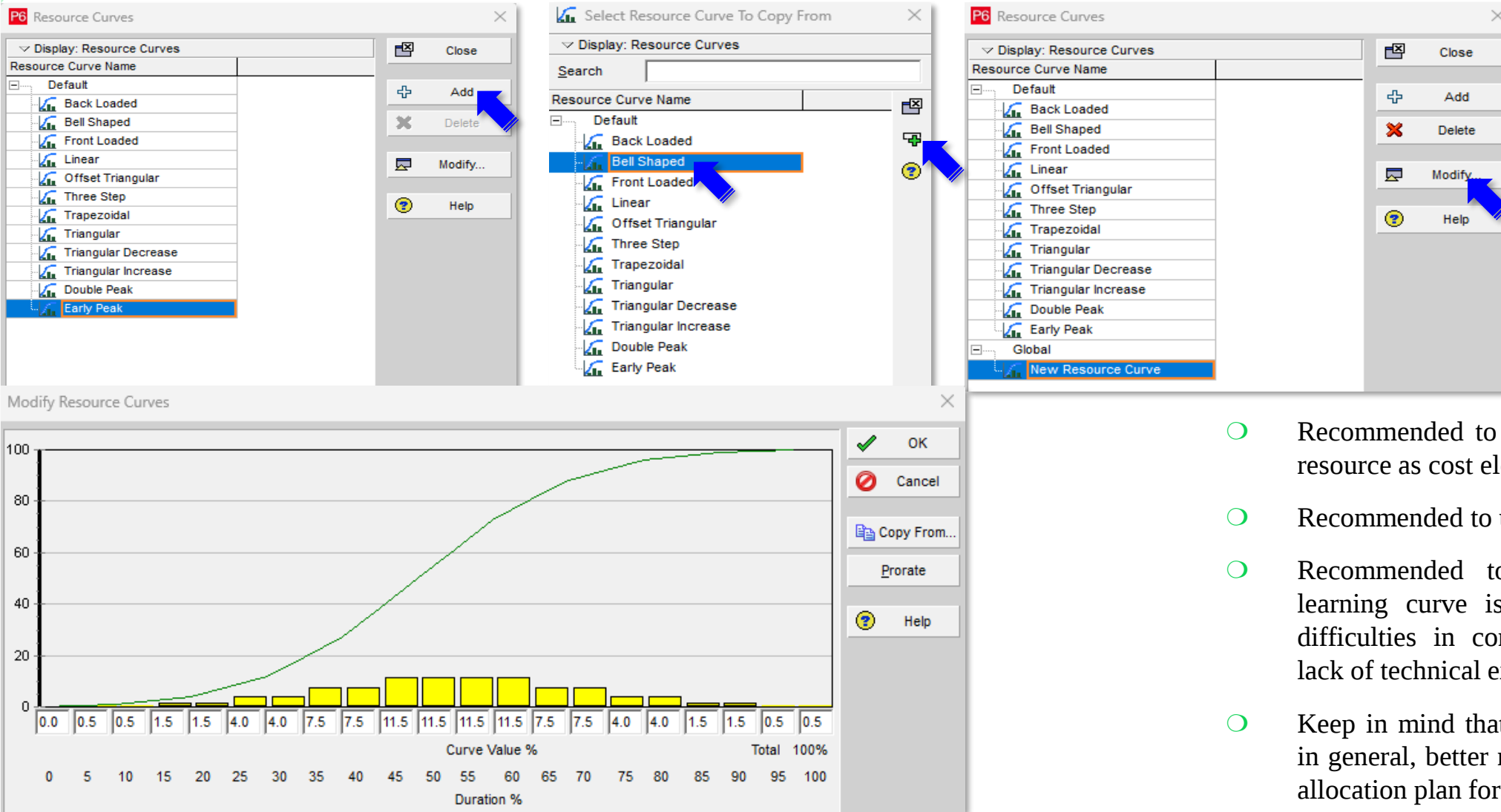
► Resource Curves



P6 Resource Assignment Columns	
Available Options	
General	
Active	
Activity Name	
Assigned by	
Assigned Date	
Auto Compute Actuals	
Budgeted Units / Time	
Calculate costs from units	
Calendar	
Cost Account	
Curve	
Default Units / Time	
Drive Activity Dates	
Max Units/Time	
Overtime Allowed	
Overtime Factor	
Price / Unit	
Primary Resource	
Proficiency	
Project	
Rate Source	
Rate Type	
Remaining Units / Time	
Resource ID Name	
Resource Type	
Role	
Role ID	
Role Max Units/Time	
Role Name	
Unit of Measure	

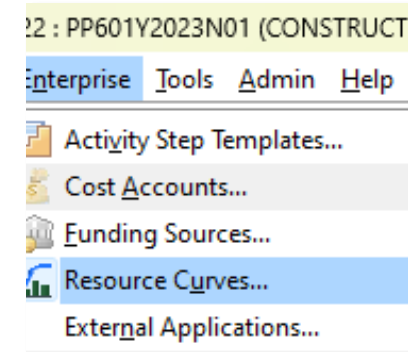
Resource Load Your Detailed Schedule

► User Defined Resource Curves



The image displays three screenshots of the Primavera P6 Resource Curves interface. The first screenshot shows the 'Resource Curves' dialog with the 'Early Peak' curve selected. The second screenshot shows the 'Select Resource Curve To Copy From' dialog with the 'Bell Shaped' curve selected. The third screenshot shows the 'Resource Curves' dialog with the 'New Resource Curve' button highlighted. Below these screenshots is a graph titled 'Modify Resource Curves' showing a 'Bell Shaped' curve. The graph plots 'Curve Value %' (0 to 100) against 'Duration %' (0 to 100). The curve starts at (0,0), rises steeply to a peak of 100% at approximately 55% duration, and then gradually declines to 0% at 100% duration. The x-axis is labeled 'Duration %' and the y-axis is labeled 'Curve Value %'. The graph also shows a bar chart at the bottom representing the curve's values across different duration intervals.

- Recommended to use for budget forecast using resource as cost element in P6.
- Recommended to use for longer duration task.
- Recommended to use for the task having learning curve issue due to new technology, difficulties in constructability, unskilled labor, lack of technical expertise, etc.
- Keep in mind that labor productivity is uniform in general, better not to use curve for manpower allocation plan for normal cases.



Resource Load Your Detailed Schedule

► Resource Levelling → Auto Levelling

PP601Y2023N01 - CONSTRUCTION OF 2 STOREYED BUILDING AT DHAKA

☐ Automatically level resources when scheduling

☐ Consider assignments in other projects with priority equal/higher than 5

☒ Preserve scheduled early and late dates

☐ Recalculate assignment costs after leveling

☒ Level all resources  [Select Resources...](#)

☐ Level resources only within activity Total Float

Preserve minimum float when leveling 0h

Max percent to over-allocate resources 25

Leveling priorities	
Field Name	Sort Order
Activity Leveling Priority	Ascending

[+](#) Add [✖](#) Remove

[▶ Level](#)

[▶ Default](#)

[View Log](#)

[? Help](#)

P6 Select Resources

▼ Display: Resources on Current Projects

Level	Resource Code	Max Units/Time
☒	MSN.MASON	10.00d/d

[✔ OK](#)

[✖ Cancel](#)

[+ Select All](#)

[✖ Clear All](#)

[? Help](#)

[Tools](#) [Admin](#)

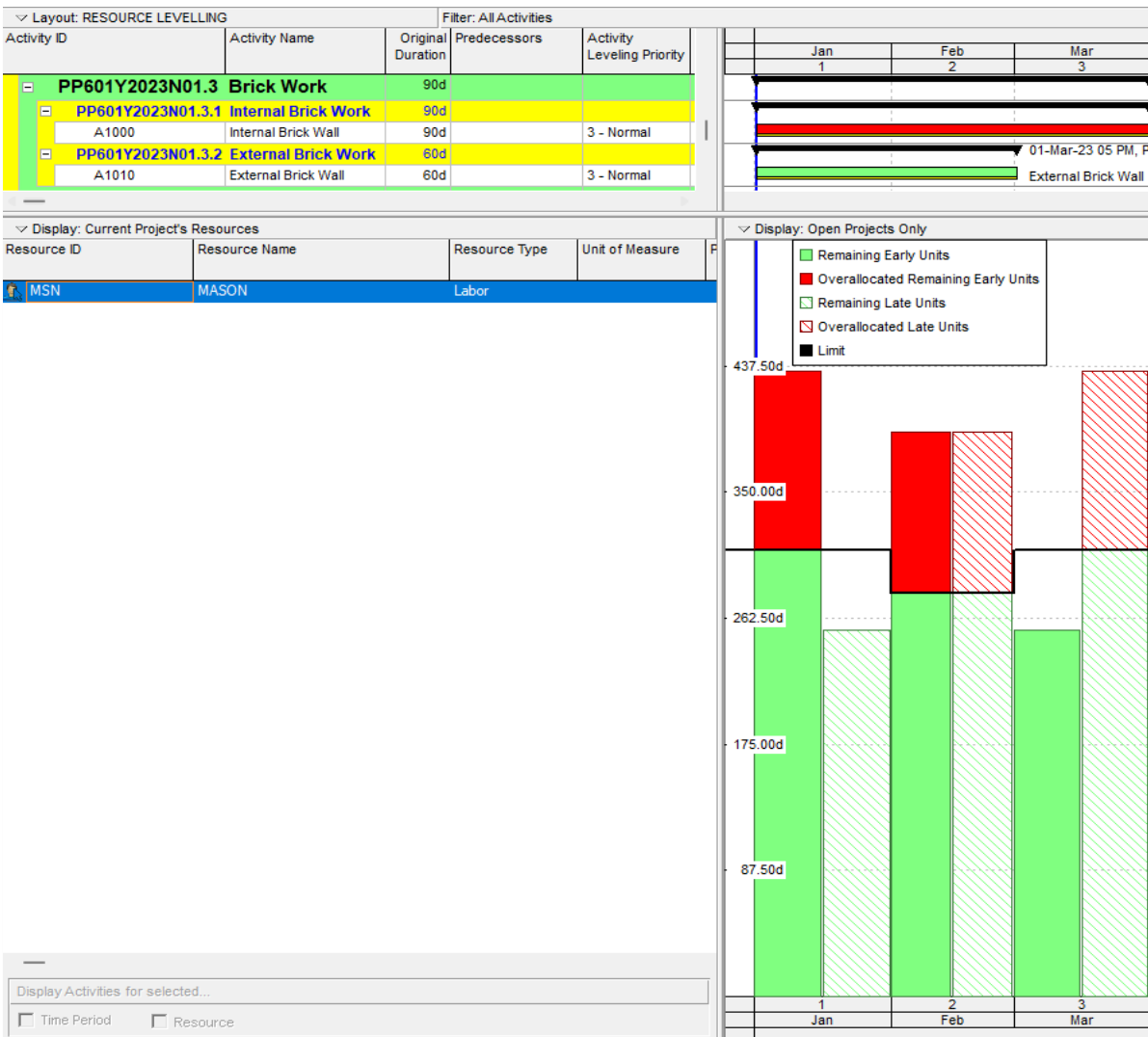
[Schedule ...](#)

[Level Resource](#)

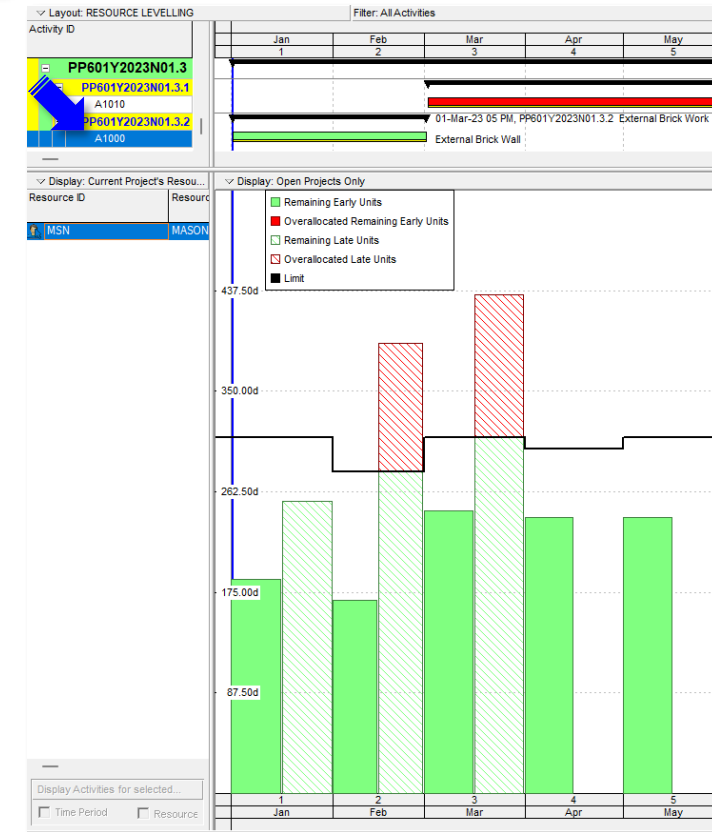
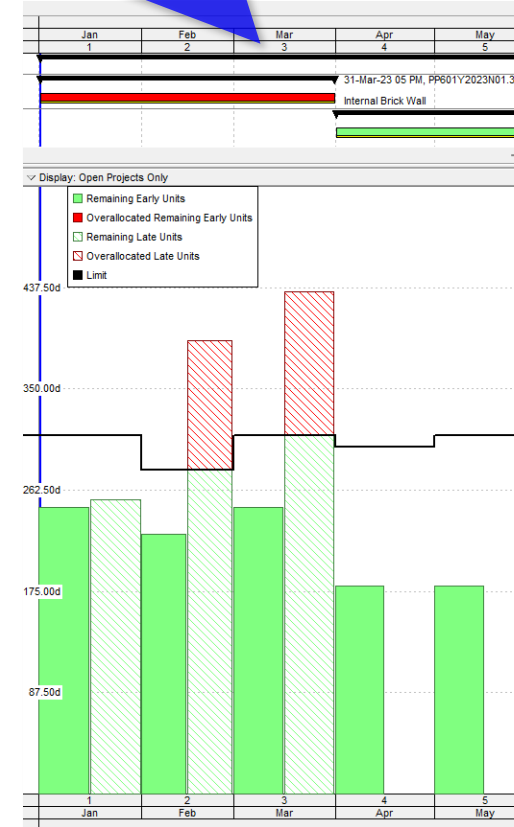
- ✓ Select Resources
- ✓ Set % Overallocation
- ✓ Set Leveling Priorities
- ✓ Sort Order

Resource Load Your Detailed Schedule

► Resource Auto Levelling → No Activity Relationship & Same Priority



Always respect Activity ID for Normal Levelling Priority



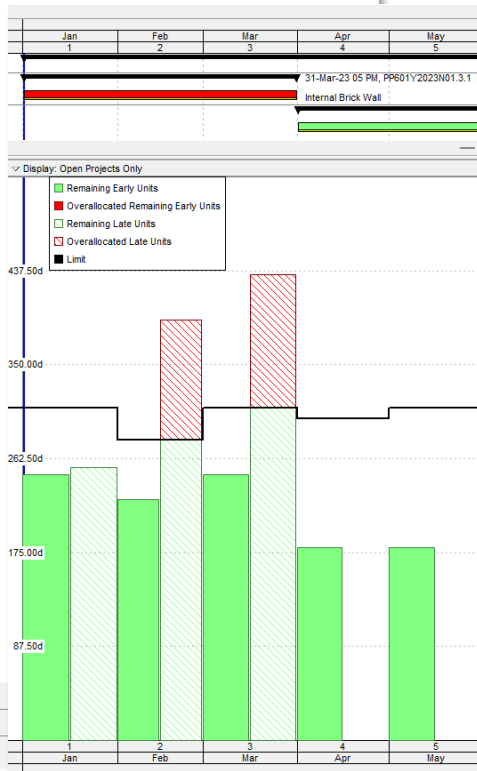
Resource Load Your Detailed Schedule

► Resource Auto Levelling → No Activity Relationship & Mixed Priority

Always respect Activity Levelling Priority for mixed priorities in case of no activity relationship

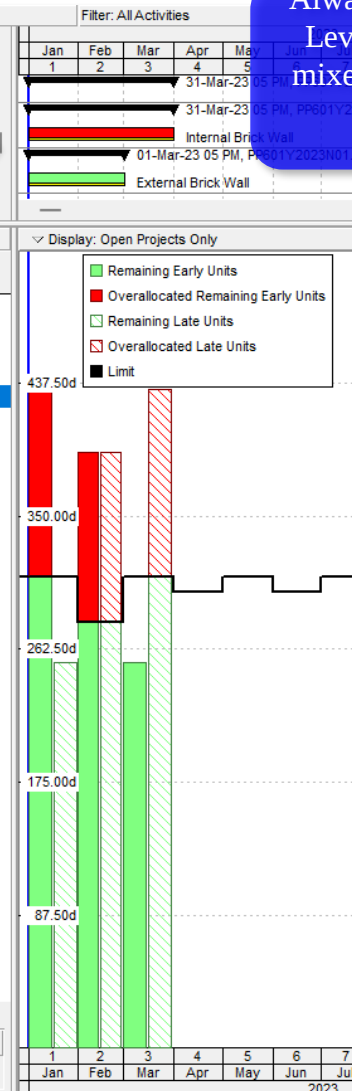
Layout: RESOURCE LEVELLING				
Filter: All Activities				
Activity ID	Activity Name	Original Duration	Predecessors	Activity Levelling Priority
PP601Y2023N01.3	Brick Work	90d		
PP601Y2023N01.3.1	Internal Brick Work	90d		
A1000	Internal Brick Wall	90d		3 - Normal
PP601Y2023N01.3.2	External Brick Work	60d		
A1010	External Brick Wall	60d		3 - Normal

Display: Current Project's Resources			
Resource ID	Resource Name	Resource Type	Unit of Measure
MSN	MASON	Labor	



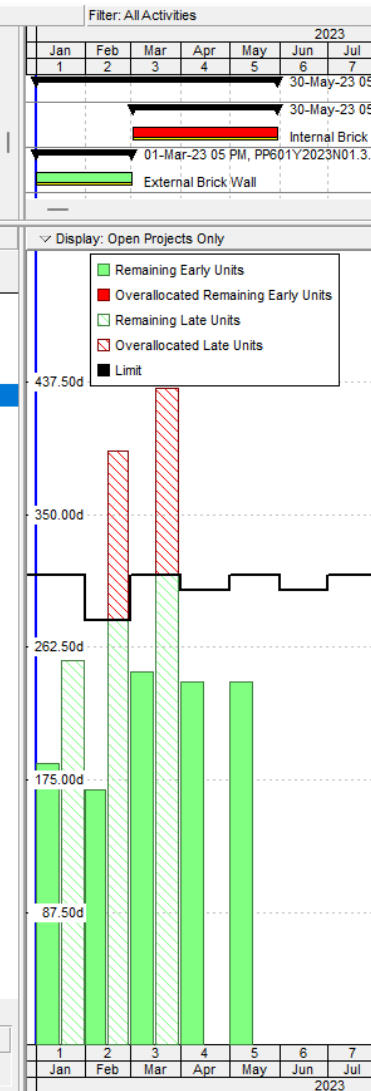
Layout: RESOURCE CURVE			
Filter: All Activities			
Activity ID	Predecessor Details	Activity Levelling Priority	
PP601Y2023N01.3	Brick Work		
PP601Y2023N01.3.1	Internal Brick W		
A1000	Internal Brick Wall	3 - Normal	
PP601Y2023N01.3.2	External Brick		
A1010	External Brick Wall	1 - Top	

Display: Current Project's Resources	
Resource ID	Resource Name
BRK	BRICK
CEM	CEMENT
FSND	FINE SAND
BUDGET	BUDGETED COST
MSN	MASON



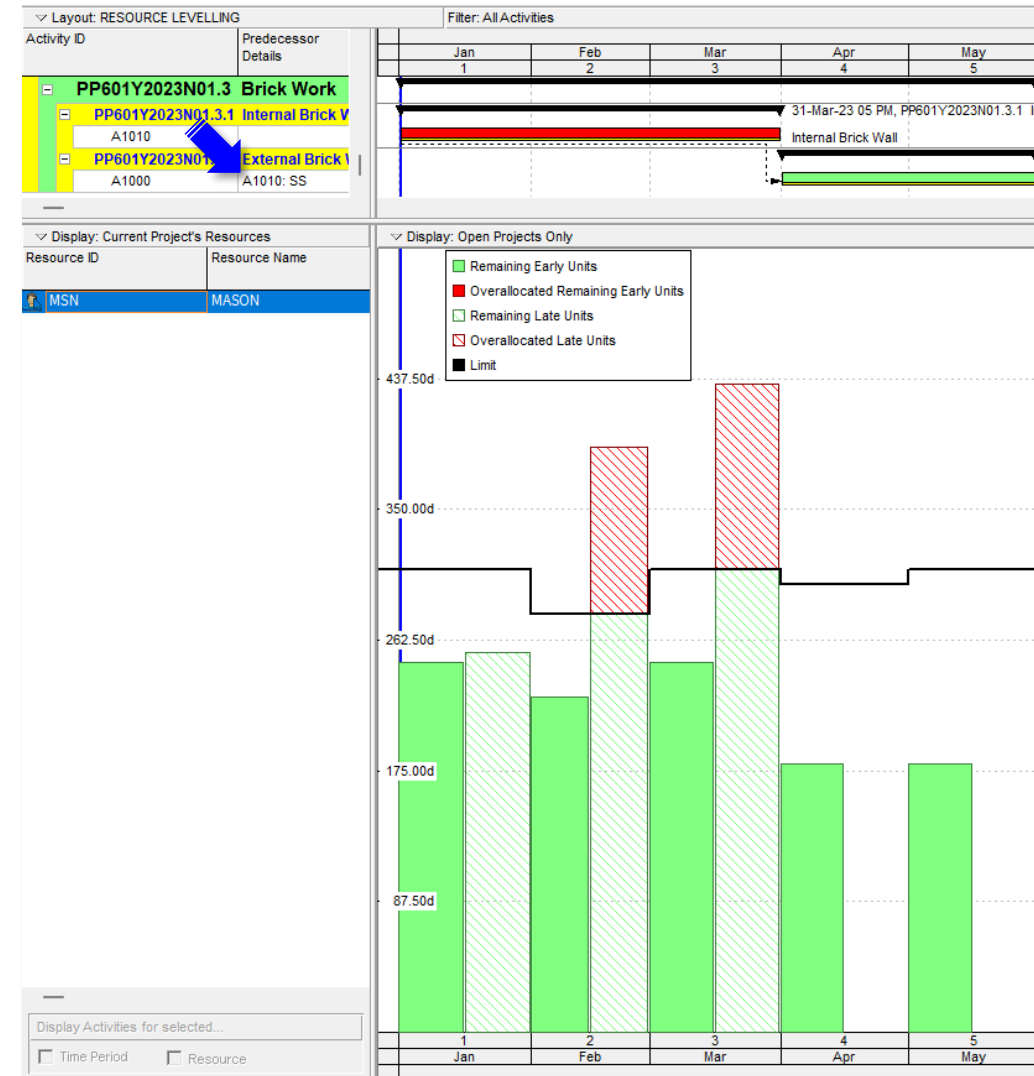
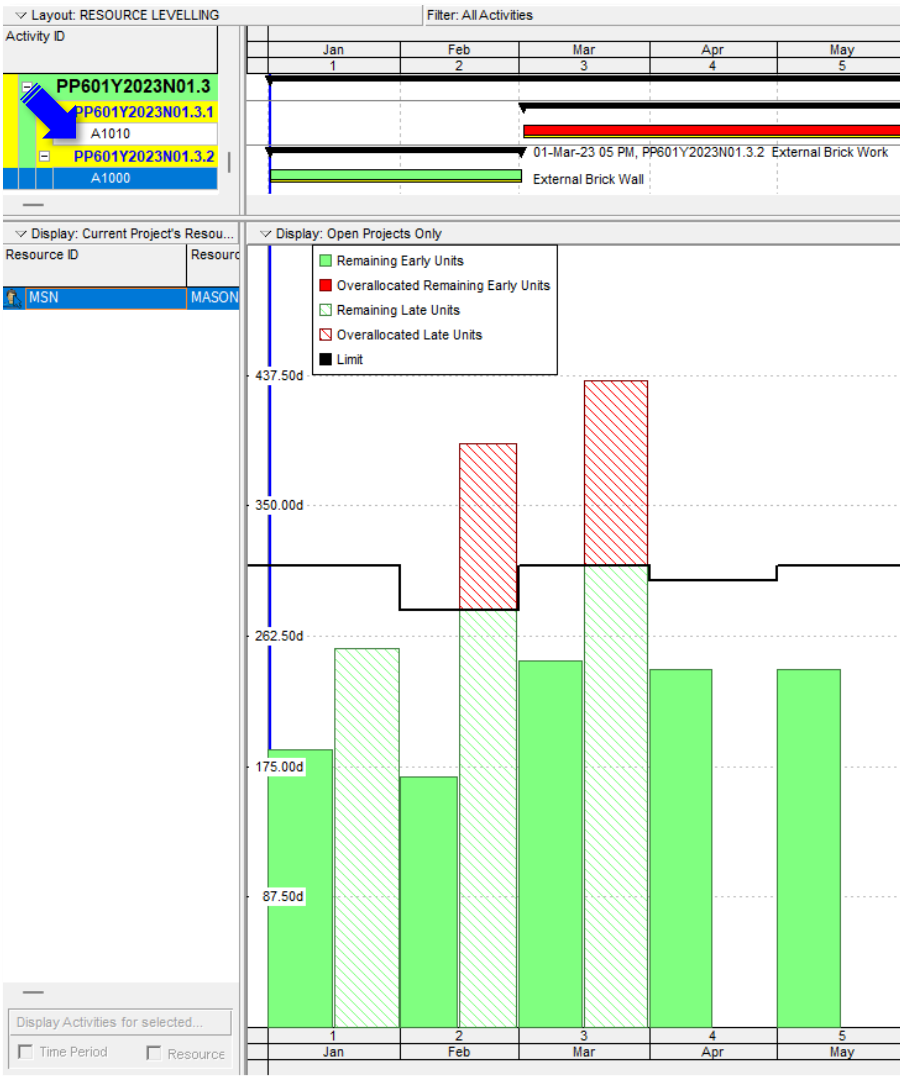
Layout: RESOURCE CURVE			
Filter: All Activities			
Activity ID	Predecessor Details	Activity Levelling Priority	
PP601Y2023N01.3	Brick Work		
PP601Y2023N01.3.1	Internal Brick W		
A1000	Internal Brick Wall	3 - Normal	
PP601Y2023N01.3.2	External Brick W		
A1010	External Brick Wall	1 - Top	

Display: Current Project's Resources	
Resource ID	Resource Name
BRK	BRICK
CEM	CEMENT
FSND	FINE SAND
BUDGET	BUDGETED COST
MSN	MASON



Resource Load Your Detailed Schedule

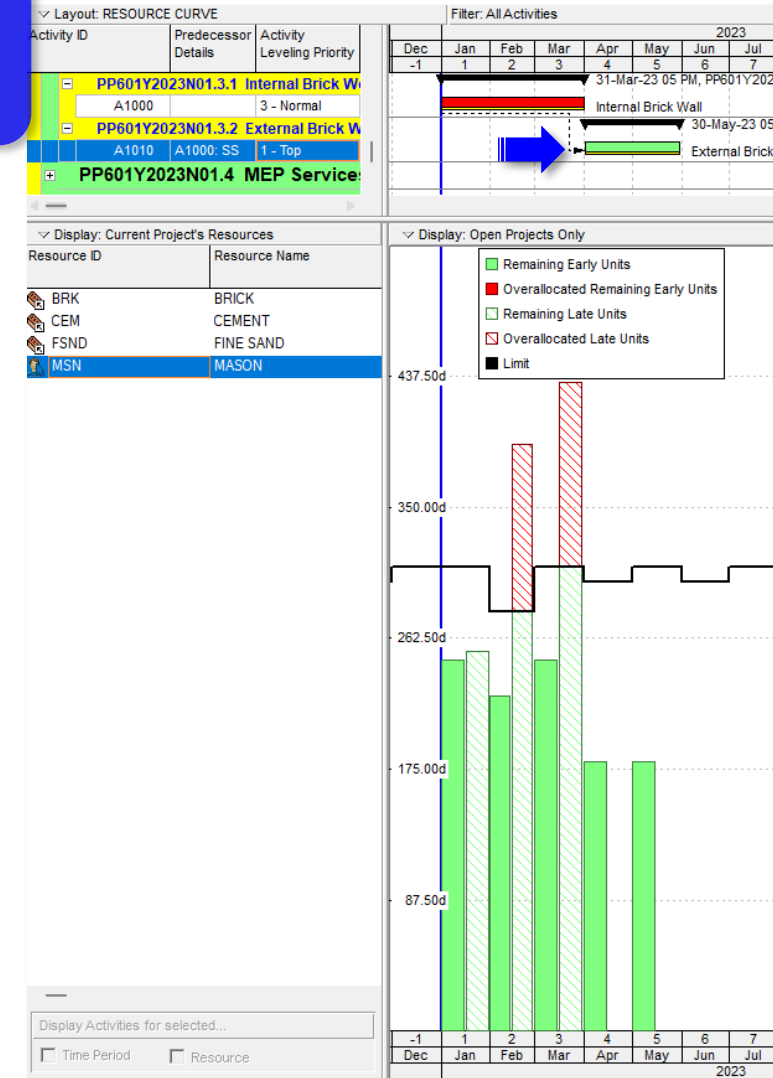
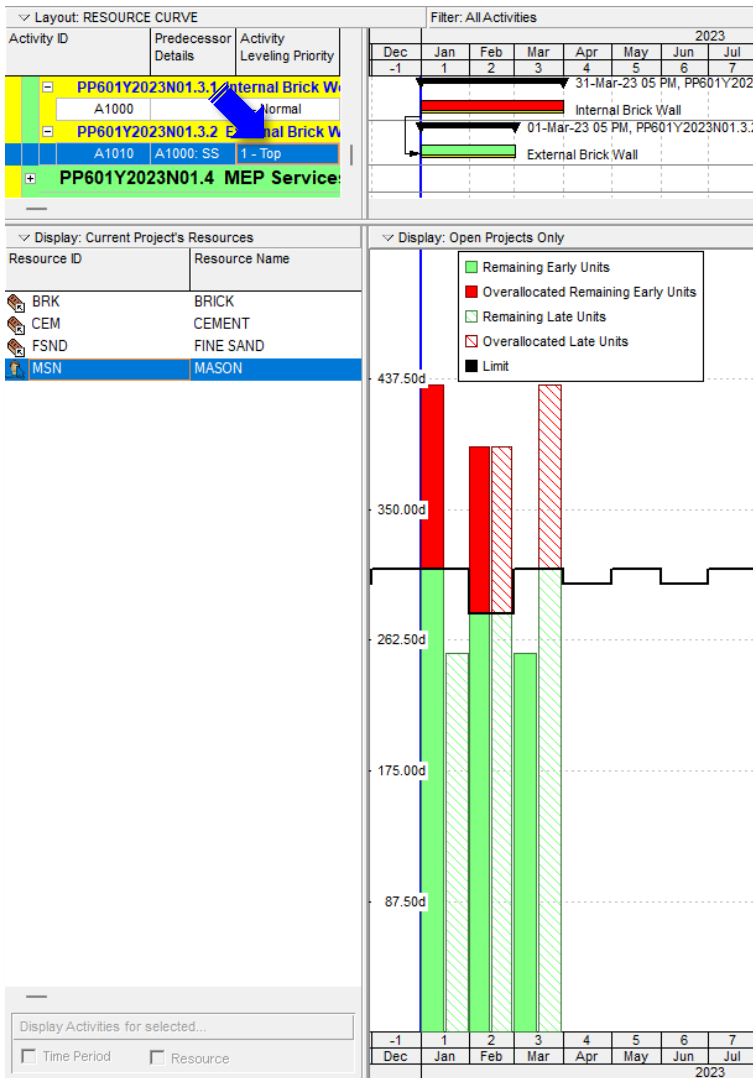
► Resource Auto Levelling → With Activity Relationship & Same Priority



Resource Load Your Detailed Schedule

► Resource Auto Levelling → With Activity Relationship & Mixed Priority

Always respect Activity Relationship for mixed Activity Levelling Priorities



Resource Load Your Detailed Schedule

► Resource Auto Levelling → With Activity Relationship & Mixed Priority

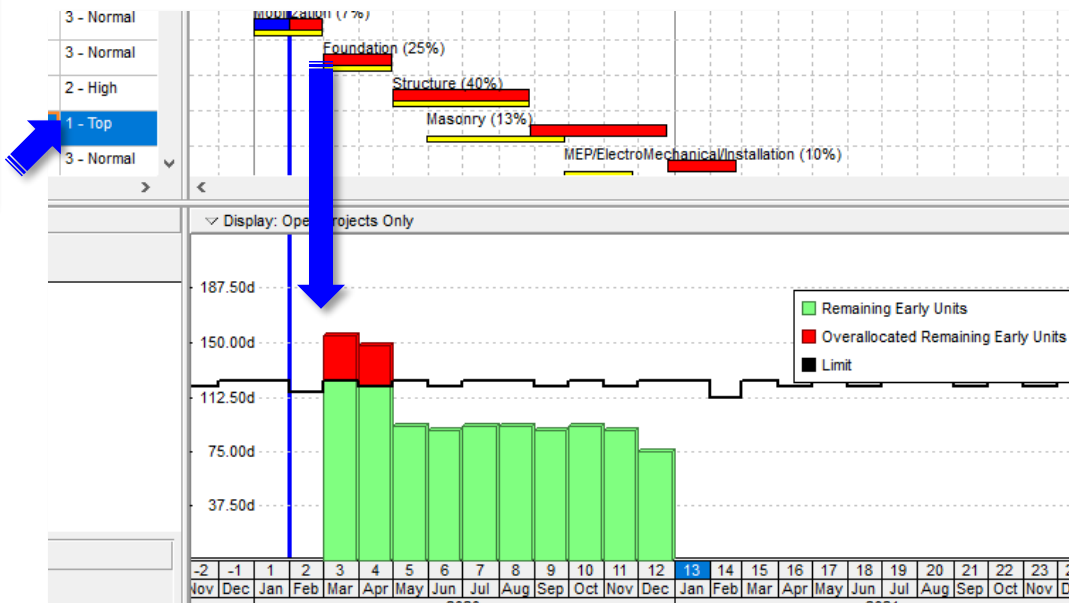
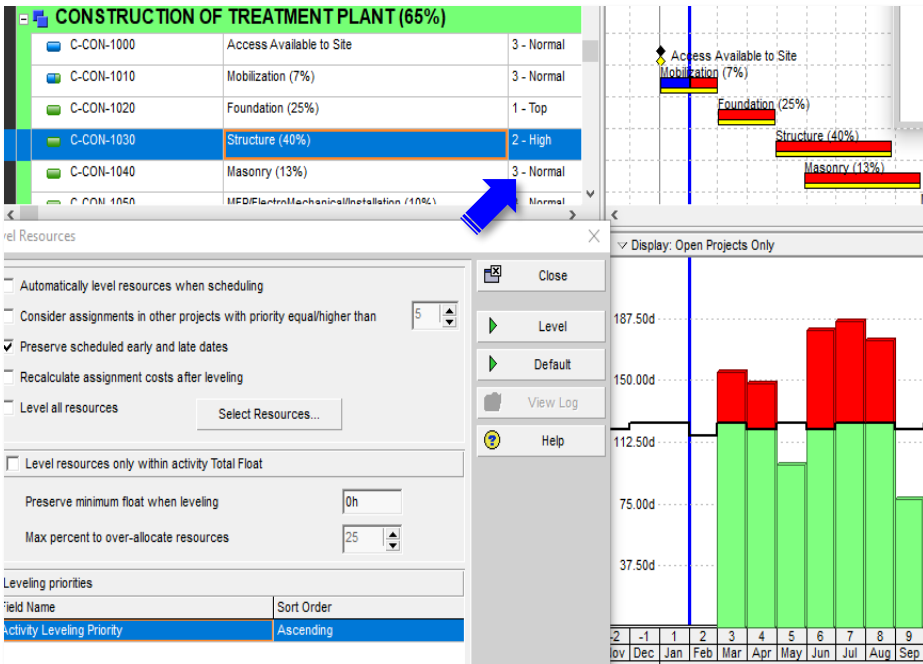
✓ Applicable for Parallel Resource Position

✓ Manual Leveling for Non-Parallel Resource

✓ Respects Relationship

✓ Respects Activity Leveling Priority

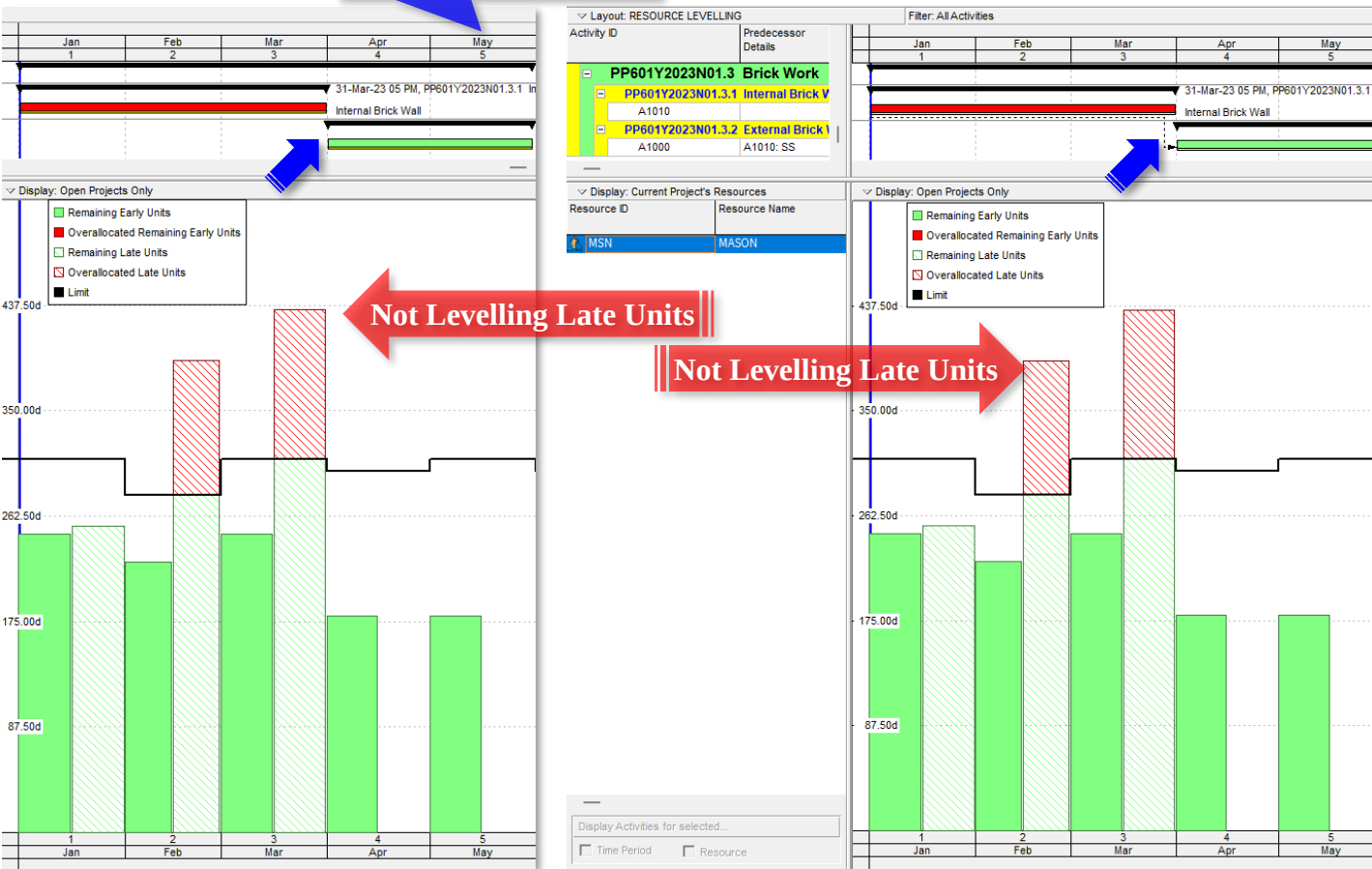
✓ Respects ID



Resource Load Your Detailed Schedule

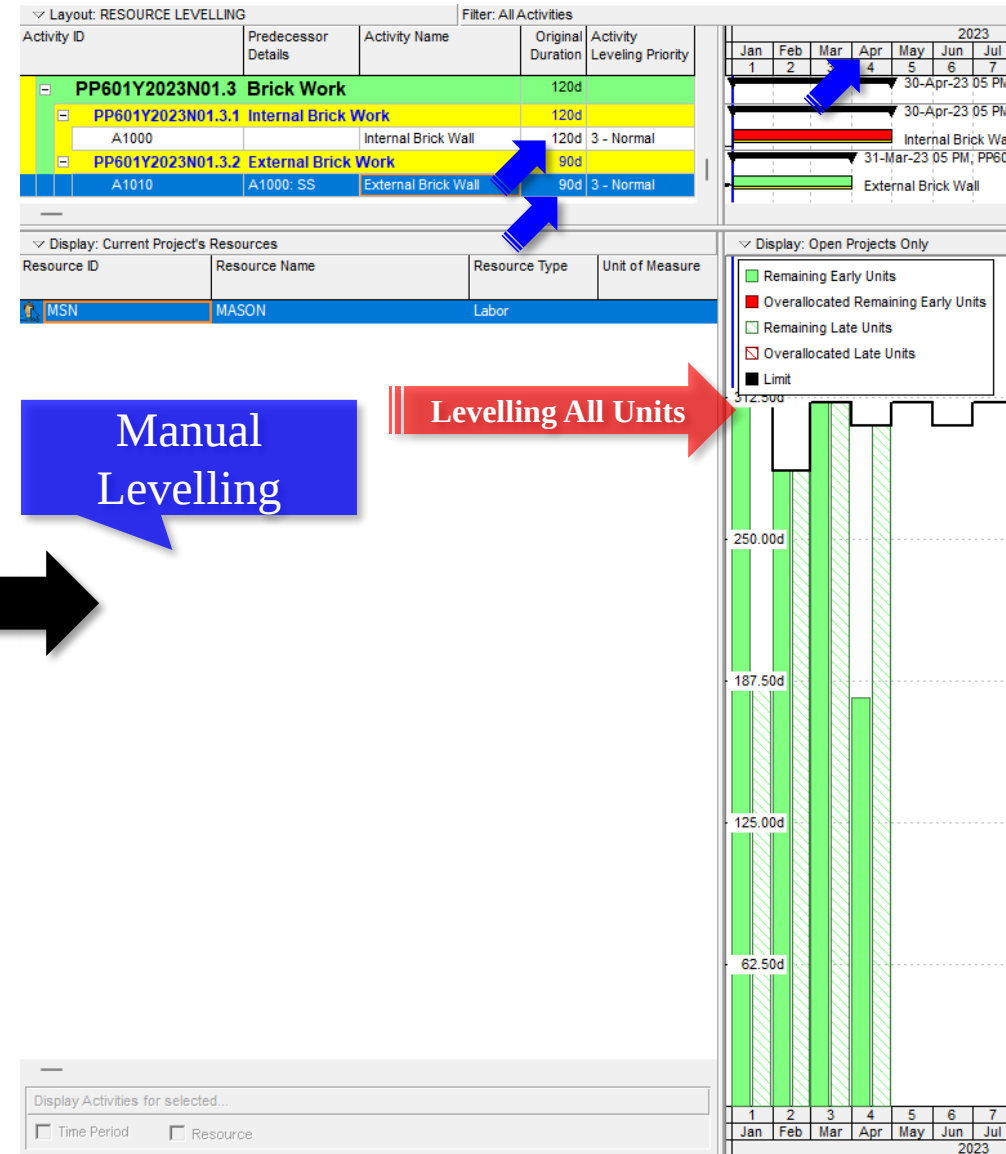
► Resource Manual Levelling → Optimised Solution

Auto Levelling



Manual Levelling

Levelling All Units





LESSON 05

COST LOAD YOUR DETAILED SCHEDULE

Cost Load Your Detailed Schedule

► Budget Distribution – Top-Down Estimation

WBS Code	WBS Name	Est Weight	At Completion Total Cost
RWP.BL.REV.A	REV.A (34 M, CD: 01 MAR 21, DD: 01 MAR 2	1.0	30,664,585.01
RWP.BL.REV.A.1	CONTRACTUAL DATES	0.0	0.00
RWP.BL.REV.A.2	CONTRACTUAL MILESTONES	0.0	0.00
RWP.BL.REV.A.3	PRE-CONSTRUCTION	5.0	1,533,229.25
RWP.BL.REV.A.3.1	MOBILIZATION	90.0	1,379,906.33
RWP.BL.REV.A.3.2	DOCUMENTATION & TESTING	10.0	153,322.93
RWP.BL.REV.A.4	CONSTRUCTION	95.0	29,131,355.76
RWP.BL.REV.A.4.1	PIPELINE	50.0	14,565,677.88
RWP.BL.REV.A.4.2	MAJOR ROAD CROSSING	5.0	1,456,567.79
RWP.BL.REV.A.4.3	INTERCONNECTION CHAMBER	5.0	1,456,567.79
RWP.BL.REV.A.4.4	RIVER CROSSING	20.0	5,826,271.15
RWP.BL.REV.A.4.5	MAINTENANCE ROAD	15.0	4,369,703.36
RWP.BL.REV.A.4.6	OPTICAL FIBER CABLING	5.0	1,456,567.79
RWP.BL.REV.A.4.7	TESTING & COMMISSIONING	0.0	0.00

Top Down Estimation

Resource Units To Estimate

☒ Estimate Labor ☐ Estimate Nonlabor

Activities To Estimate

WBS: M, CD: 01 MAR 21, DD: 01 MAR 21) ... Total Activities: 223

Resource: COST BUDGETED COST ... Current Units: 30664585.01

Estimation Method

☒ Prior Experience Estimated Units: 0.00

☐ Function Point Function Points: 0

☐ Apply adjustment 0 % Estimated Units: 0.00 Adjusted Units: 0.00

Make sure that the Unit Format and Duration Format are in Day

User Preferences

Time Units

Dates

Currency

Assistance

Application

Password

Resource Analysis

Calculations

Startup Filters

Units Format

Unit of Time

Day

☒ Show Unit label

Durations Format

Unit of Time

Day

☒ Show Duration label

Units/Time Format

Resource Units/Time can units per duration

☐ Show as a percent

☒ Show as units/dura

Activity ID	Activity Name	Activity Count	Est Weight	Budgeted Total Cost	Original Duration	Start	Finish	Total Float
PRE-CONSTRUCTION								
MOBILIZATION								
PCON-MOB-1000	Project Management Team	1	1.0	197,129.48	60	01-Mar-21 A	29-Apr-21	0
PCON-MOB-1010	Technical Support Team	1	1.0	197,129.48	60	01-Mar-21	29-Apr-21	0
PCON-MOB-1020	Direct Manpower	1	1.0	197,129.48	60	30-Apr-21	28-Jun-21	0
PCON-MOB-1030	Key Equipments	1	1.0	197,129.48	60	30-Apr-21	28-Jun-21	0
PCON-MOB-1040	Site Establishment	1	3.0	591,388.43	90	29-Jun-21	26-Sep-21	0
DOCUMENTATION & TESTING								
PCON-DOC-1000	Construction Management Plan	1	1.0	19,165.37	90	30-Apr-21	28-Jul-21	60
PCON-DOC-1010	HSE Management Plan	1	1.0	19,165.37	90	30-Apr-21	28-Jul-21	60
PCON-DOC-1020	Traffic Management Plan	1	1.0	19,165.37	90	30-Apr-21	28-Jul-21	60
PCON-DOC-1030	General Method Statement of Works	1	1.0	19,165.37	90	30-Apr-21	28-Jul-21	60
PCON-DOC-1040	Quality Management Plan	1	1.0	19,165.37	90	30-Apr-21	28-Jul-21	60
PCON-DOC-1050	Material Sourcing, Testing & Approval	1	3.0	57,496.10	150	30-Apr-21	26-Sep-21	14

2021

M A M Jun Jul A S Oct N D Jan F M Apr M Jun Jul

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17

26-Sep-21, PRE-CONSTRUCTION

26-Sep-21, MOBILIZATION

Project Management Team

Technical Support Team

Direct Manpower

Key Equipments

Site Establishment

26-Sep-21, DOCUMENTATION & TESTING

Construction Management Plan

HSE Management Plan

Traffic Management Plan

General Method Statement of Works

Quality Management Plan

Material Sourcing, Testing & Approval

Cost Load Your Detailed Schedule

► Budget Distribution – Expenses As BOQ Item

Activity ID	Predecessor Details	Activity Name	Original Duration	Activity Leveling Priority	Start	Finish	Total Float /
PP601Y2023N01.3		Brick Work	120d		01-Jan-23 08 AM	30-Apr-23 05 PM	0d
PP601Y2023N01.3.1		Internal Brick Work	120d		01-Jan-23 08 AM	30-Apr-23 05 PM	0d
A1000		Internal Brick Wall	120d	3 - Normal	01-Jan-23 08 AM	30-Apr-23 05 PM	0d
PP601Y2023N01.3.2		External Brick Work	90d		01-Jan-23 08 AM	31-Mar-23 05 PM	30d
A1010	A1000: SS	External Brick Wall	90d	3 - Normal	01-Jan-23 08 AM	31-Mar-23 05 PM	30d

General	Status	Resources	Predecessors	Successors	Relationships	Expenses		
Activity: A1000 Internal Brick Wall								
Expense Item	Unit of Measure	Expense Category	Accrual Type	Budgeted Units	Price / Unit	Budgeted Cost	Cost Account	Vendor
B.3.1.11 Masonry Work	sqm		Uniform over Activity	1000.000	\$1,500.00	\$1,500,000.00		

P6 Activity Details

Available Tabs

Codes
Discussion
Feedback
Notebook
Risks
Steps
Summary
User Defined Fields
WPs & Docs

Display Tabs

General
Status
Resources
Predecessors
Successors
Relationships
Expenses

OK

Cancel

Apply

Default

Help

Activities Details

Layout: Baseline Detail Time Program

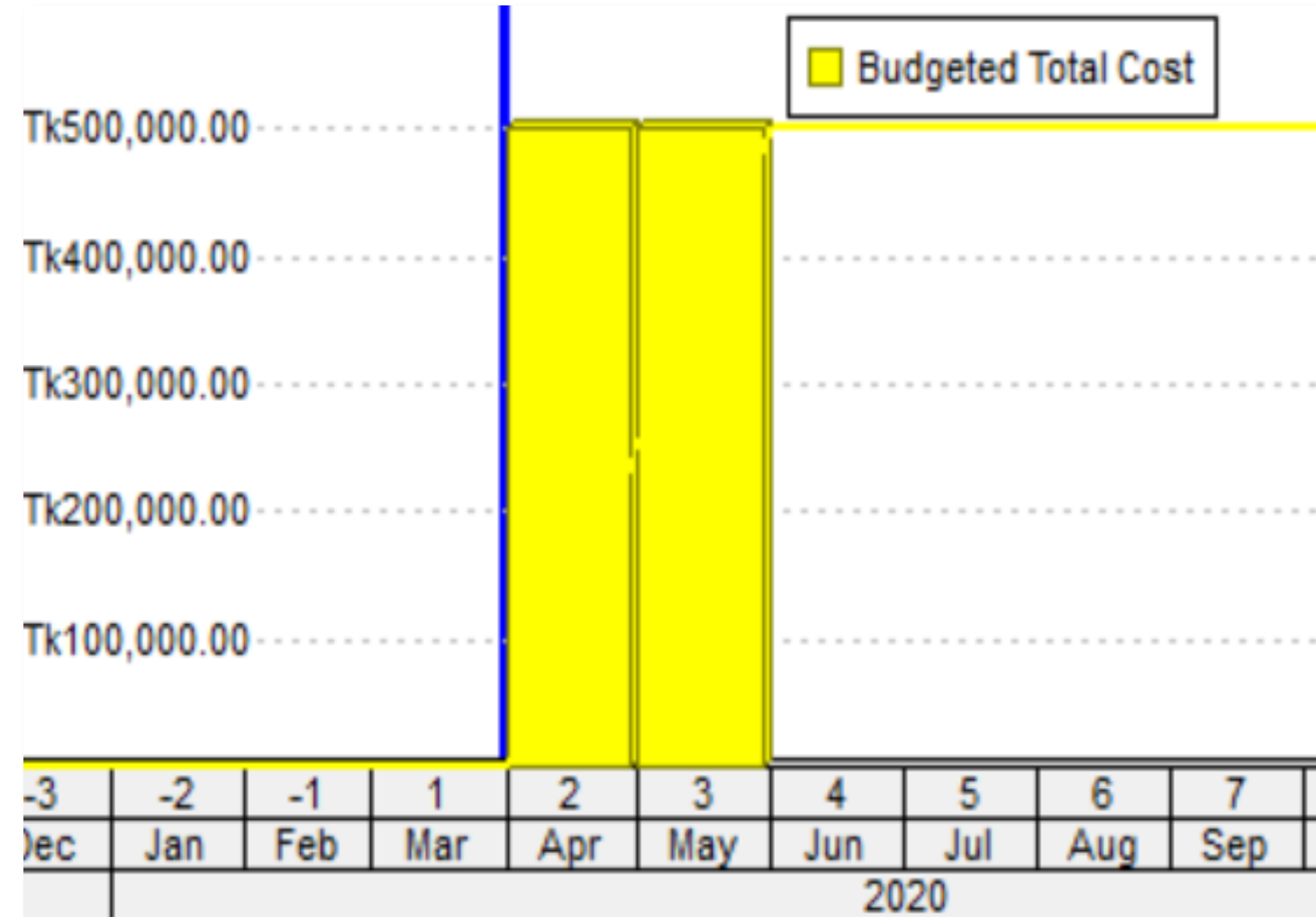
Activity ID: A1000

General Status Expenses Resources Codes

- ✓ Expense Item
- ✓ Unit of Measure
- ✓ Expense Category
- ✓ Accrual Type
- ✓ Budgeted Units
- ✓ Price/Units

Cost Load Your Detailed Schedule

► Cost Distribution System – Uniform Over Activity



Accrual Type

Uniform over Activity ▼

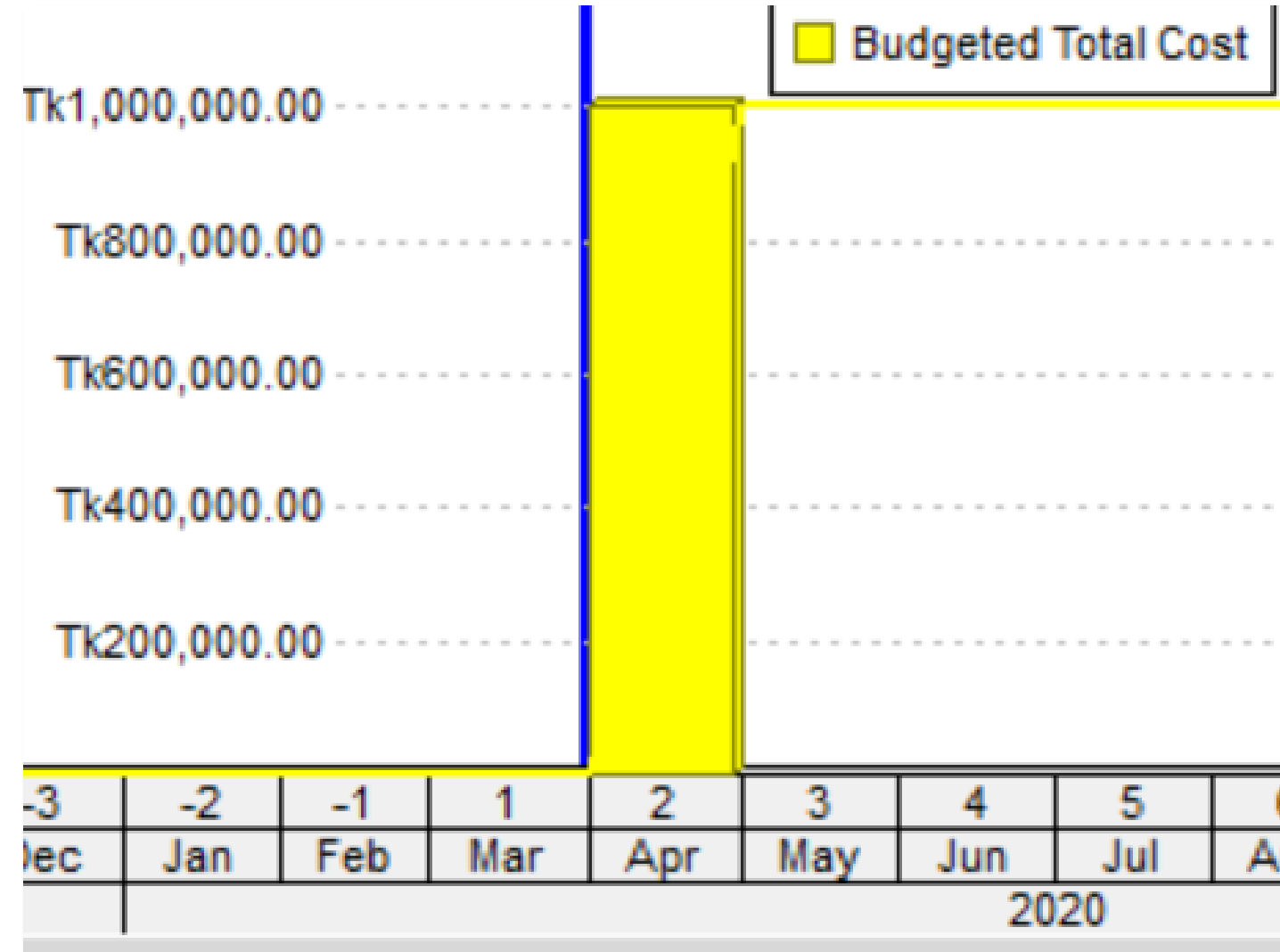
End of Activity

Start of Activity

Uniform over Activity

Cost Load Your Detailed Schedule

► Cost Distribution System – Start of Activity



Accrual Type

Uniform over Ac ▼

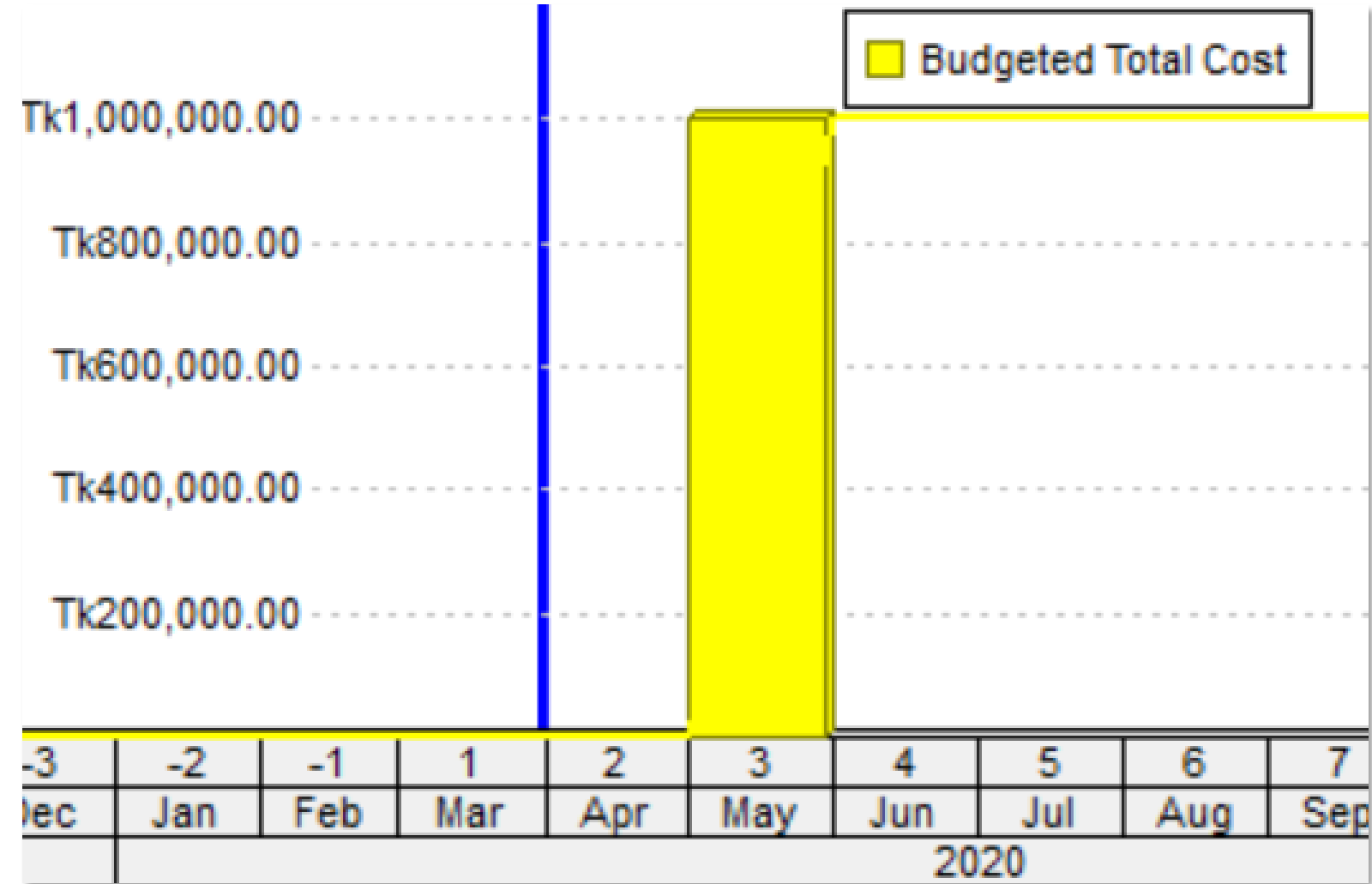
End of Activity

Start of Activity

Uniform over Activity

Cost Load Your Detailed Schedule

► Cost Distribution System – End of Activity



Accrual Type

Start of Activity ▼

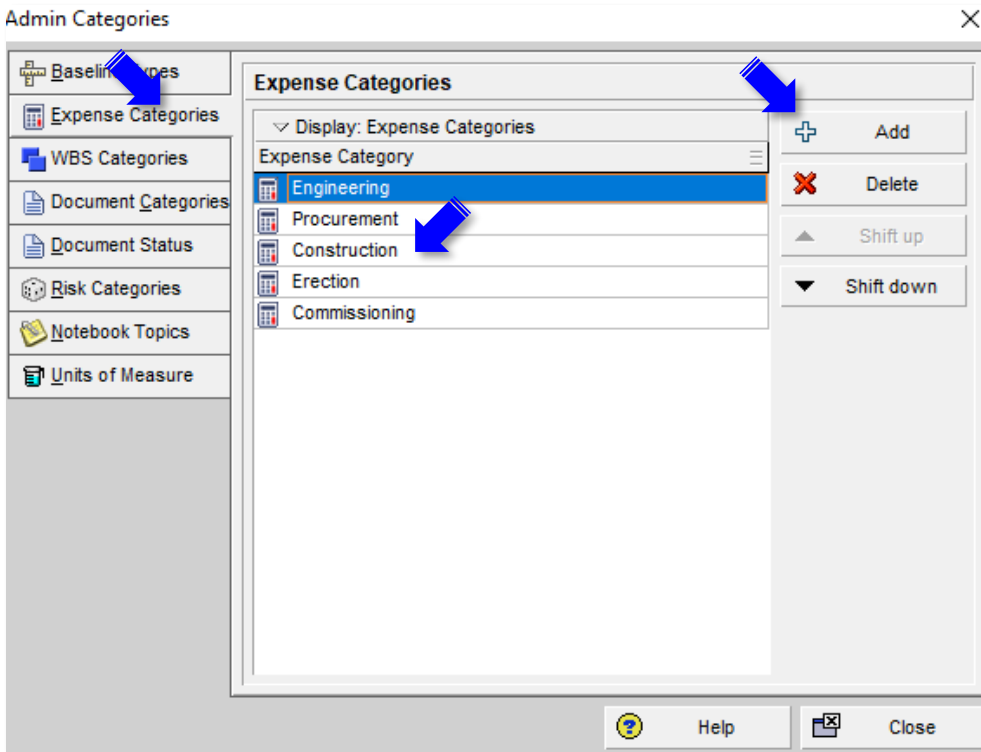
End of Activity

Start of Activity

Uniform over Activity

Cost Load Your Detailed Schedule

► Defining & Assigning Expense Category



Activities

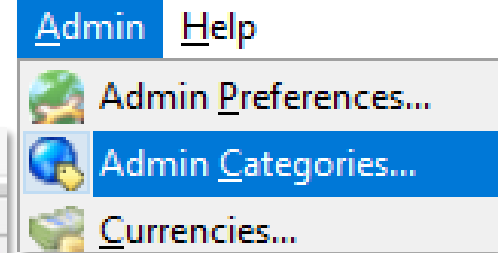
Layout: Baseline Detail Time Program Filter: All Activities

Activity ID	Activity Name	Activity Count	Planned Duration	Start	Finish	Total Float	Dec	Jan	Feb
A1000	COMMENCEMENT	1	0	01-Mar-20	A		-3	-2	-
A1010	Mobilization (2%)	1	31	01-Mar-20	15-Apr-20	0			
A1020	Foundation (25%)	1	30	16-Apr-20	15-May-20	0			
A1030	Structure (50%)	1	31	16-May-20	15-Jun-20	0			
A1040	Masonry (10%)	1	30	11-Jun-20	10-Jul-20	0			

General Status Expenses Resources Codes Relationships Notebook Steps Feedback WPs & Docs Summary

Activity A1020 Foundation (25%)

Expense Item	Expense Category	Accrual Type	Budgeted Units	Unit of Measure	Price / Unit	Budgeted Cost
Budgeted Cost	Construction	Uniform over Activity	1.000	LS	Tk1,000,000.00	Tk1,000,000.00



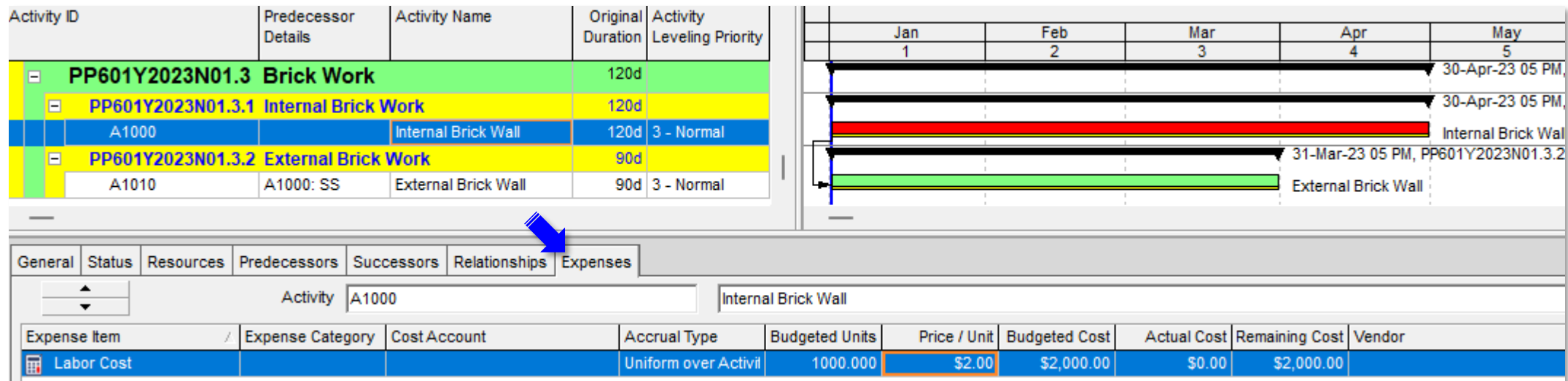
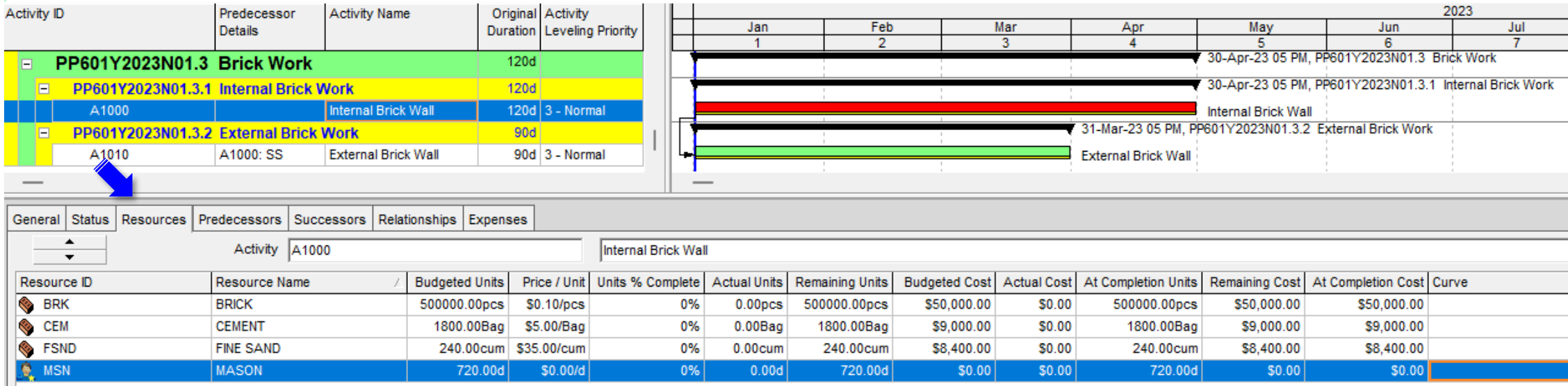
✓ Expense Categories

✓ Add Category

✓ Category Name

Cost Load Your Detailed Schedule

► Budget Distribution – Detailed Estimation



Cost Load Your Detailed Schedule

► Defining & Assigning Cost Account

22 : PP601Y2023N01 (CONSTRUCTION) P6 Cost Accounts

Enterprise Tools Help

Projects

Enterprise Project Structure...

Resources...

Roles...

QBS...

Project Codes...

Calendars...

Cost Accounts...

Cost Account ID: PP601Y2023N01 Cost Account Name: 2 Storeyed Building at Dhaka

Cost Account Description:

Display: All Cost Accounts

Cost Account ID: PP601Y2023N01 Cost Account Name: 2 Storeyed Building at Dhaka

Layout: Detailed Time Program

Filter: All Activities

Activity ID Activity Name Owner Est Weight Original Duration Remaining Duration Schedule % Complete Start Finish Resources Budgeted Total Cost To Fk

CONSTRUCTION OF 2 STOREYED BUILDING AT DHAKA

Contractual Dates

Milestones

Foundation

A1090 Excavation saiful125 5.0 15.0d 15.0d 0% 01-Jan-23 15-Jan-23 Budget, Dirr \$625.00 0.

A1120 Footing Construction saiful125 95.0 15.0d 15.0d 0% 16-Jan-23 30-Jan-23 Budget, Dirr \$11,875.00 0.

Structure

A1140 Structure Up To Grade Beam saiful125 30.0 15.0d 15.0d 0% 31-Jan-23 14-Feb-23 Budget, Dirr \$7,500.00 0.

A1150 Structure From Ground Floor To Roof saiful125 60.0 60.0d 60.0d 0% 15-Feb-23 15-Apr-23 Budget, Dirr \$15,000.00 0.

A1160 Structure From Roof To Stair Room & Overhead Tank saiful125 10.0 30.0d 30.0d 0% 16-Apr-23 15-May-23 Budget, Dirr \$2,500.00 16.

Brick Work

A1230 Internal Wall saiful125 65.0 30.0d 30.0d 0% 16-Apr-23 15-May-23 Budget, Dirr \$4,875.00 0.

A1650 External Wall saiful125 35.0 14.0d 14.0d 0% 16-May-23 29-May-23 Budget, Dirr \$2,625.00 16.

MEP Services

A1290 Plumb saiful125 50.0 15.0d 15.0d 0% 16-May-23 30-May-23 Budget, Dirr \$475.00 0.

General Status Resources Codes Relationships Notebook Steps Feedback WPs & Docs Expenses Summary

Activity A1120 Footing Construction

Resource ID Name Price / Unit Rate Type Rate Source Primary Resource Budgeted Units Budgeted Units / Time Actual Units Remaining Units Remaining Units / Time Role Cost Account

PP601Y2023N01.BGT.Budget \$1.00/d Price / Unit Resource 11875.0d 791.7d/d 0.0d 11875.0d 791.7d/d PP601Y2023N01...

PP601Y2023N01.DMAN.Direct Manpower \$0.00/d Price / Unit Resource 150.0d 10.0d/d 0.0d 150.0d 10.0d/d PP601Y2023N01.RCC

Expense Item / Cost Account Expense Category Accrual Type Budgeted Cost Actual Cost Remaining Cost At Completion Cost Vendor

Labor Cost PP601Y2023... Uniform over Activ \$0.00 \$0.00 \$0.00 \$0.00

Select Cost Account

Display: All Cost Accounts

Search

Cost Account ID Cost Account Name

PP601Y2023N01 2 Storeyed Building at Dhaka

PP601Y2023N01.RCC Concrete Work

PP601Y2023N01.MSN Masonry Work

PP601Y2023N01.MEP Electromechanical

PP601Y2023N01.FNS Finishes

PP601Y2023N01.CLS Closing

PP602Y2023N02 2 Storeyed Building at Chittag

January F March April May June July August S

1 2 3 4 5 6 7 8 9

Project Commencement

Foundation Completion

30-Jan-23, Foundation

Excavation

Footing Construction

15-May-23, Structure

Structure Up To Grade Beam

Structure From Ground Floor To Roof

Structure From Roof To Stair Room &

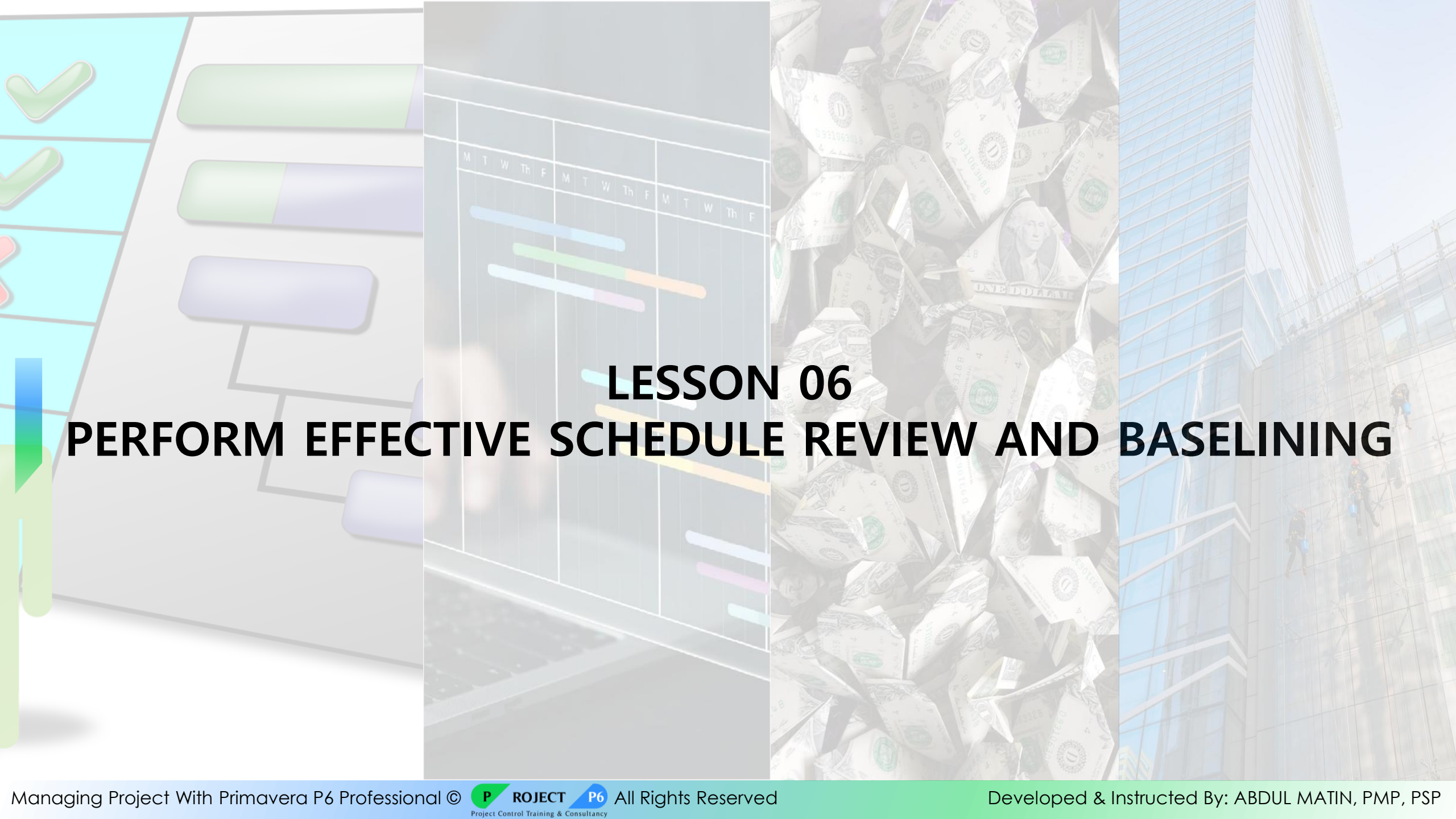
29-May-23, Brick Work

Internal Wall

External Wall

05-Jun-23, MEP Services

Plumbing



LESSON 06

PERFORM EFFECTIVE SCHEDULE REVIEW AND BASELINING

Effective Schedule Review & Baselining

► DCMA 14 Points

► History of DCMA 14 Points

The US Defence Contract Management Agency has developed a comprehensive approach to Earned Value Management known as DCMA EVMs, but to achieve effective EVM, the quality of the supporting information is critical. EVM can be prone to manipulation and if the underpinning data is inherently weak the whole process is undermined.

The DCMA 14 points analysis is used to check the technical quality of either an internal or external schedule and is widely used around the world in all industry sectors.

► Key Points of DCMA Analysis

Each part of the 14 points analysis has a mathematical calculation related to it. The calculations used in DCMA can be performed manually but it is recommended that a proprietary software is used so the benefits are not lost in the cost of preparing the analysis.

The primary role of the DCMA 14 points analysis is to assess the overall technical structure of the schedule and ensure the fundamental rules of schedule development have been followed.

Effective Schedule Review & Baselining

► DCMA 14 Points Assessment Metric Descriptions

► 1. Logic

- This metric looks for incomplete tasks with missing logic links or links that don't make sense.
- The number of tasks without predecessors and/or successors should not exceed **5%**.
- The formula is: Missing Logic % = (# of tasks missing logic / # of incomplete tasks) x 100.

► 2. Leads

- This metric looks for incomplete tasks that have logic links with leads (negative lag) in predecessor relationships.
- Ideally, there should not be any leads (**0%**) as they distort total float and can impact resource demand, out turn dates etc.
- The formula is: Leads % = (# of logic links with leads / # of logic links) x 100.

► 3. Lags

- This metric looks for incomplete tasks that have lags in predecessor relationships.
- The number of task links with lags should not exceed **5%**.
- The formula is: Lags % = (# of logic links with lags / # of logic links) x 100.

Effective Schedule Review & Baseline

► DCMA 14 Points Assessment Metric Descriptions

► 4. Relationship Types

- This metric looks for incomplete tasks containing each relationship type.
- Finish-to-Start (FS) relationship is the most logical, it should account for at least **90%** of the relationship types being used.
- The formula is: % of FS Relationship Types = $(\# \text{ of logic links with FS Relationships} / \# \text{ of logic links}) \times 100$.

► 5. Hard Constraints

- This metric counts the number of hard constraints used in the incomplete tasks.
- Hard constraints may prevent the schedule from being logic-driven. The number of tasks with hard constraints shouldn't exceed **5%**.
- The formula is: Hard Constraint % = $(\text{Total \# of incomplete tasks with hard constraints} / \text{Total \# of incomplete tasks}) \times 100$.

► 6. High Float

- This metric counts incomplete tasks with a total float greater than 44 working days for 5-day work calendar.
- This may indicate missing predecessors / successors. The number of tasks with high float shouldn't exceed **5%**.
- The formula is: High Float % = $(\text{Total \# of incomplete tasks with high float} / \text{Total \# of incomplete tasks}) \times 100$.

Effective Schedule Review & Baselining

► DCMA 14 Points Assessment Metric Descriptions

► 7. Negative Float

- This metric counts incomplete tasks with total float less than 0 working day.
- These tasks should have an explanation and corrective action plan.
- The formula is: Negative Float % = $(\text{Total \# of incomplete tasks with negative float} / \text{Total \# of incomplete tasks}) \times 100$.

► 8. High Duration

- This metric looks at incomplete tasks that have a remaining duration greater than 44 working days for 5-day work calendar.
- The number of tasks with the higher duration should not exceed **5%**.
- The formula is: High Duration % = $(\text{Total \# of incomplete tasks with high duration} / \text{Total \# of incomplete tasks}) \times 100$.

► 9. Invalid Dates

- This metric looks at incomplete tasks that have no actual dates in the future beyond the status date.
- No forecast dates in the past before the status date.
- There should not be any invalid dates in the schedule.

Effective Schedule Review & Baselining

► DCMA 14 Points Assessment Metric Descriptions

► 10. Resources

- This metric reports on all tasks having a duration greater than zero have currency or hours assigned.
- Some projects may not have resources loaded directly into the schedule. If they are loaded into the schedule, then this metric uses the following formula.
- $\text{Missing Resource \%} = (\text{Total \# of incomplete tasks with missing resource} / \text{Total \# of incomplete tasks}) \times 100.$

► 11. Missed Tasks/Late Tasks

- This metric identifies tasks that have finished late compared to the baseline. It helps to identify how well the schedule is meeting the baseline plan and is a good check to gauge whether the project will finish on time or not.
- Number of tasks should not exceed **5%**.
- The formula is: $\text{Missed \%} = (\text{\# of tasks with actual/forecast finish date past baseline date} / \text{\# of tasks with baseline finish dates on or before status date}) \times 100.$

► 12. Critical Path Test

- This metric checks the integrity of the critical path.
- The metric checks whether introducing a delay into the schedule results in the projects finish date being equally delayed.
- This is a test on the critical path to see if there is broken logic when a slip is introduced.

Effective Schedule Review & Baselining

► DCMA 14 Points Assessment Metric Descriptions

► 13. Critical Path Length Index (CPLI)

- This metric gauges the project can realistically be completed on time.
- It measures the ratio of the project critical path length plus the project total float to the project critical path length.
- This is a measure on purely of the realism of the critical path.

► 14. Baseline Execution Index (BEI)

- This metric determines how many activities are behind or ahead of schedule against the baseline.
- The baseline execution index measures tasks accomplished against tasks planned for completion.
- This test is nearly the reverse of Check #11, Missed Tasks. Instead looking for under 5% missed, we are looking for over **95%** success.

► Summary of DCMA 14 Points Analysis

- 6 Points has limit of 5% → Logic, Lags, Hard Constraints, High Float, High Duration & Missed Tasks.
- 1 Point has target of greater than 90% → FS Relationship.
- 1 Point has target of greater than 95% and is related to task accomplishment against plan → Baseline Execution Index
- 4 Points has zero limit → Leads, Negative Float, Invalid Dates, Resources.
- 2 Points are non-limit related and to test the critical path quality.

Effective Schedule Review & Baseline

► Creating & Maintaining Baseline Schedule

P6 Maintain Baselines

Project Name/Baseline Name	Data Date	Date Added	Last Update Date
 CONSTRUCTION OF 2 STOREYED BUILDING AT DHAKA			

 Close

 Add

Add New Baseline

What would you like to do?

☒ Save a copy of the current project as a new baseline

☐ Convert another project to a new baseline of the current project

 OK

 Cancel

 Help

Baseline Name

Baseline Type: <None>

Data Date

Last Update Da

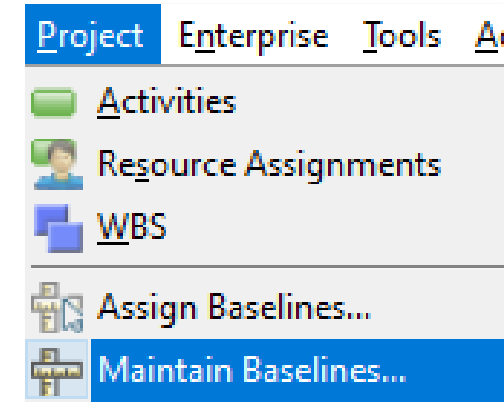
 Help

Project Enterprise Tools Ad

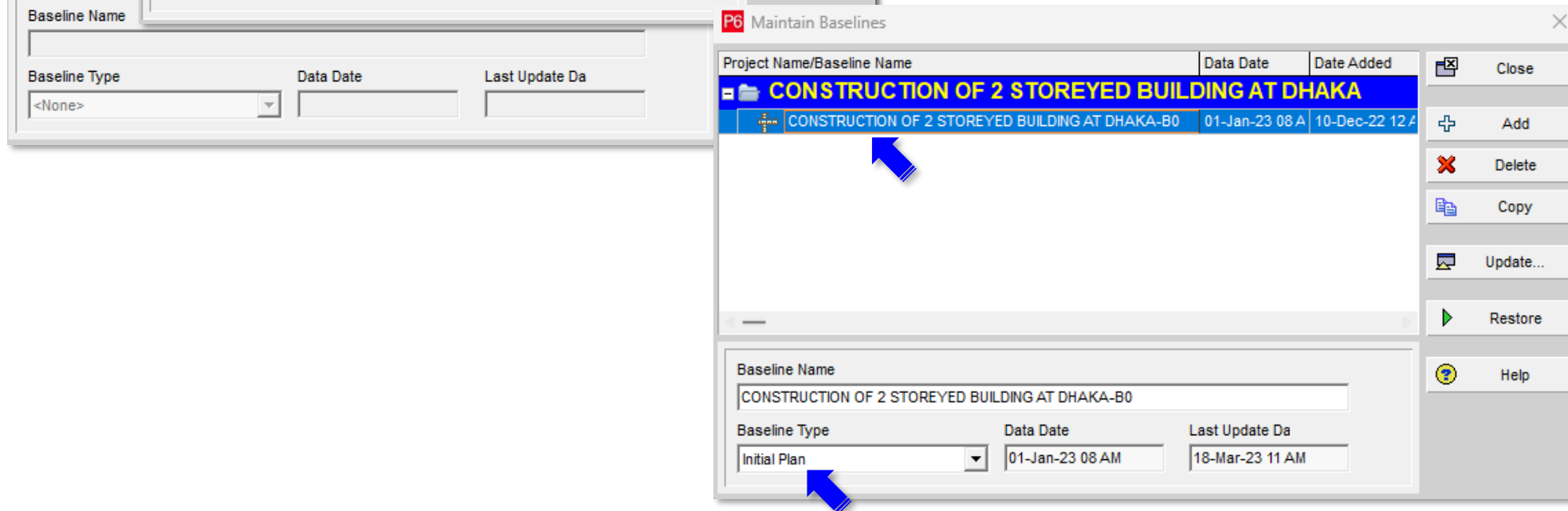
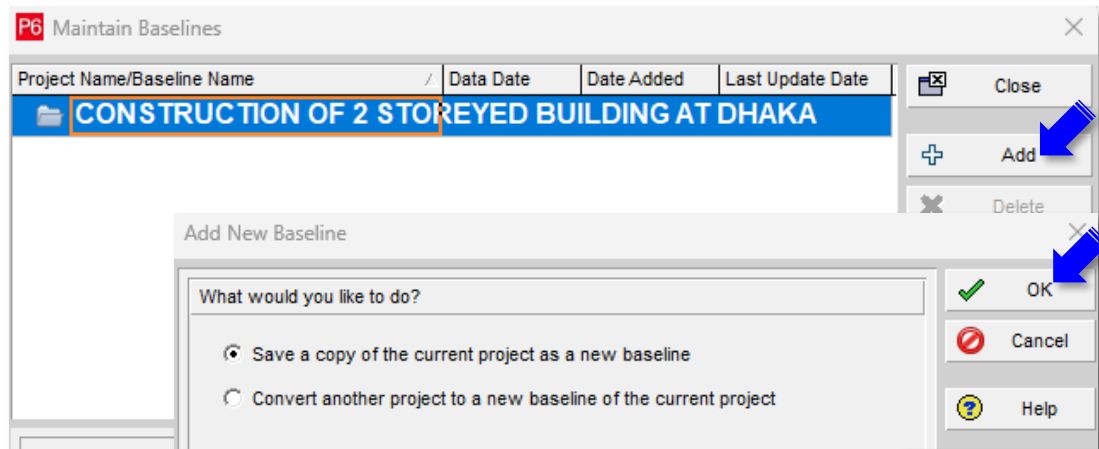
-  Activities
-  Resource Assignments
-  WBS
-  Assign Baselines...
-  **Maintain Baselines...**

Effective Schedule Review & Baseline

► Creating & Maintaining Baseline Schedule

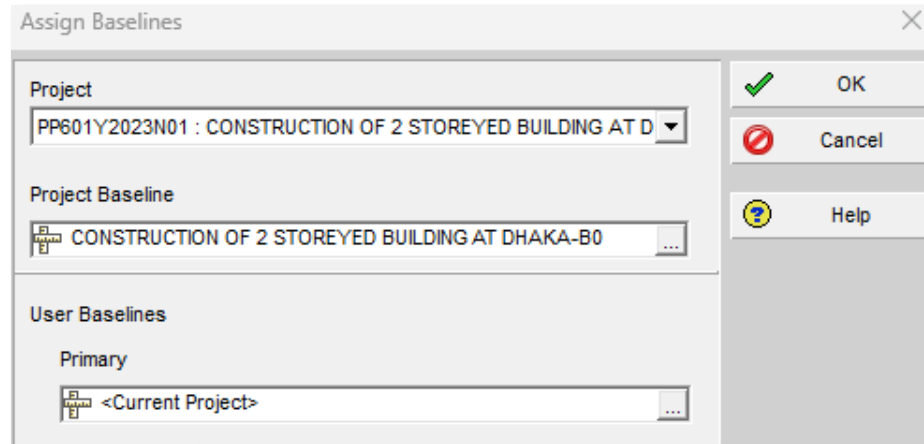
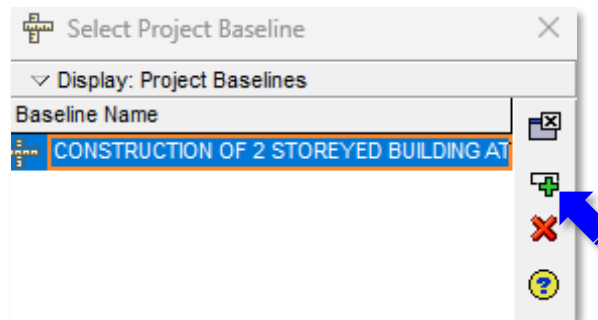
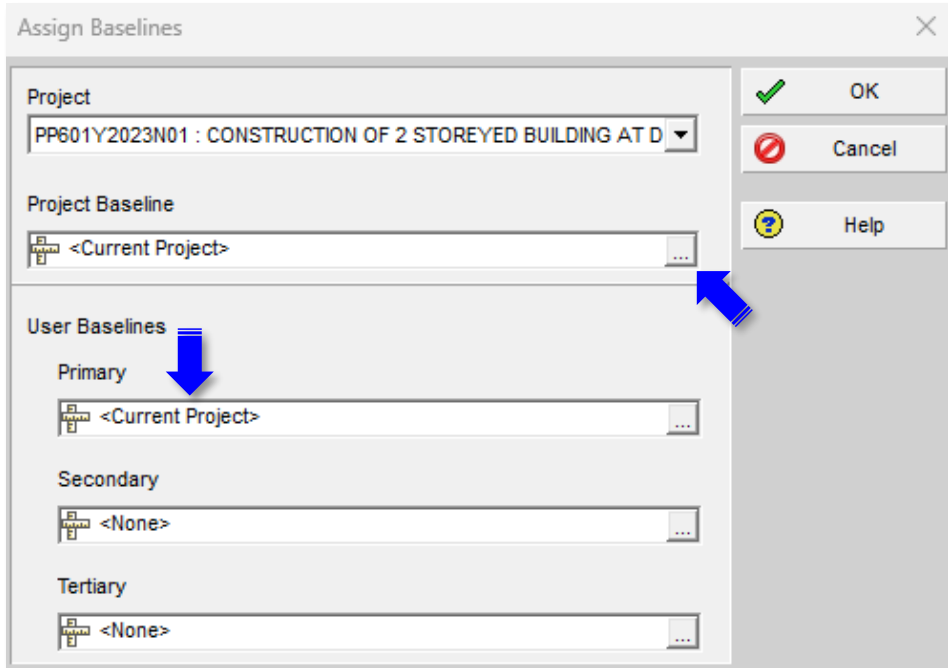
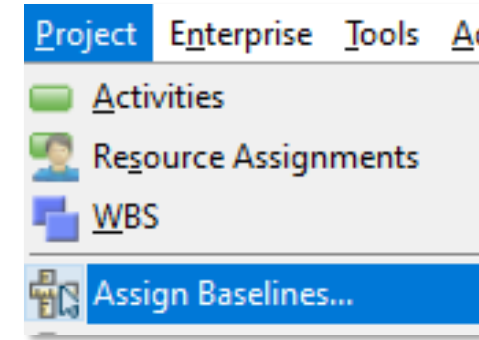


- ✓ Add Baseline
- ✓ Copy Current Project
- ✓ Convert Stored Project
- ✓ Set Baseline Name
- ✓ Set Baseline Type



Effective Schedule Review & Baselining

► Assigning Baseline Schedule



You will see your assigned Project Baseline at the status bar of P6

But the User Baselines will not be visible at the status bar of P6

► Project Baseline

► User Baselines

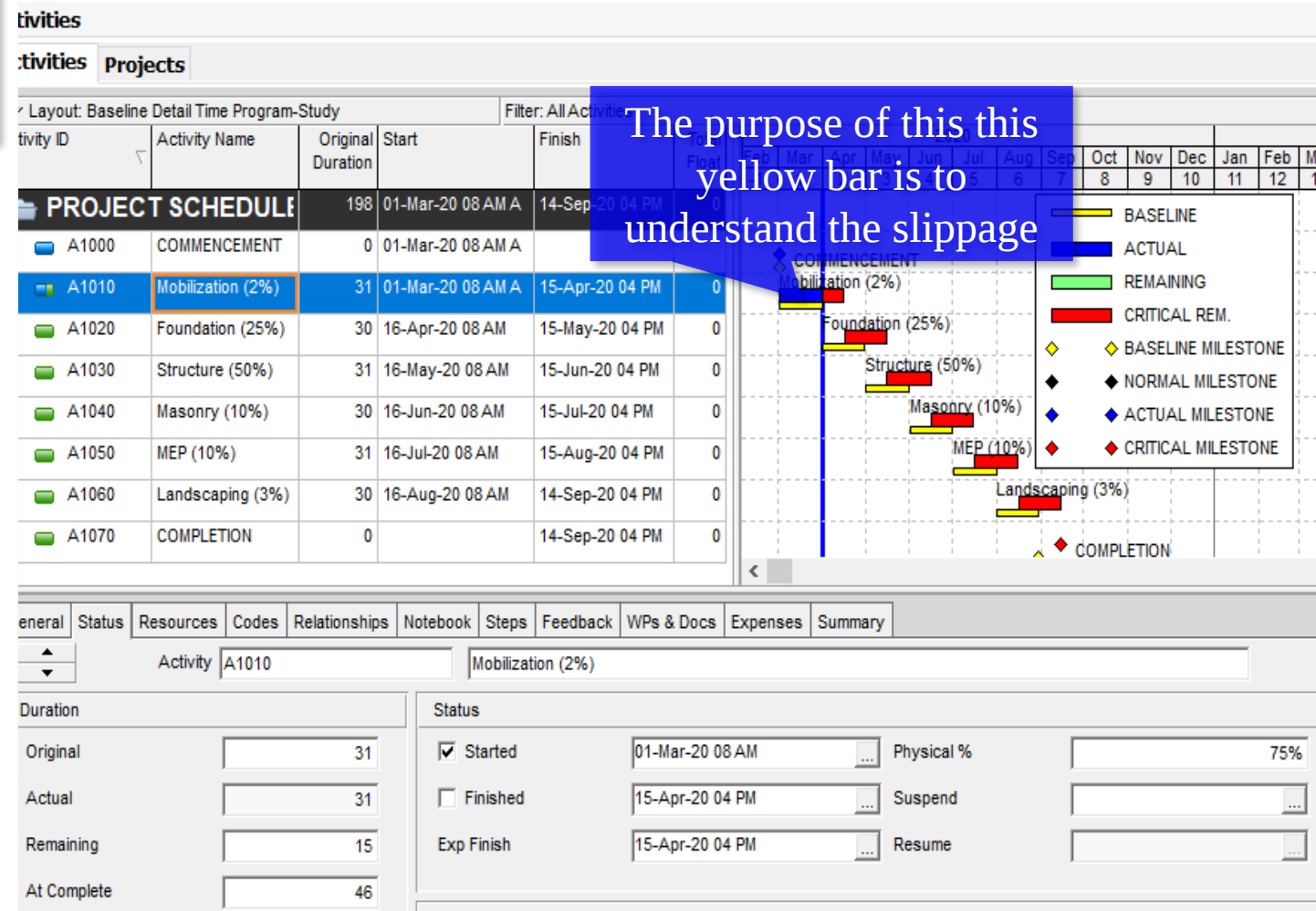
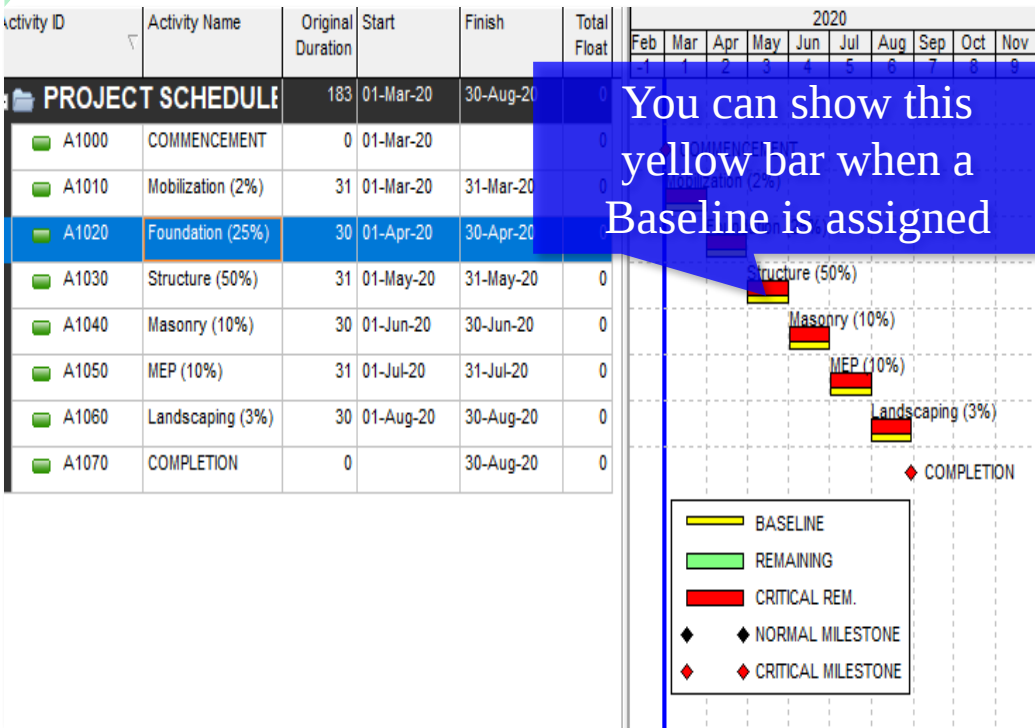
✓ Primary Baseline

✓ Secondary Baseline

✓ Tertiary Baseline

Effective Schedule Review & Baselining

► Schedule with Assigned Baseline



The background features a collage of financial and time-related imagery. On the left, there's a bar chart with red and orange bars. In the center, a pie chart with blue, red, and orange segments is visible. Below the pie chart, several stacks of silver coins are arranged in descending order of height. On the right, a large, detailed alarm clock with a white face and black numbers is prominent. The overall theme is project management, specifically focusing on time and value.

LESSON 07

EARN VALUE MANAGEMENT ESSENTIALS AND IMPLEMENTATION

Earn Value Management Essentials and Implementation

► Earned Value Options and Settings – Overall Project

Admin Preferences

General

Data Limits

ID Lengths

Time Periods

Earned Value

Reports

Options

Rate Types

Industry

Technique for computing performance percent complete

☒ Activity % Complete

☐ Use WBS Milestones

☐ 0/100 % Complete

☐ 50/50 % Complete

☐ Custom % Complete

6

Technique for computing Estimate to Complete (ETC)

☒ ETC = remaining cost for activity

or

ETC = PF * (Budget at Completion - Earned Value), where:

☐ PF = 1

☐ PF = 1 / Cost Performance Index

☐ PF = 1 / (Cost Performance Index * Schedule Performance Index)

☐ PF = 0.88

Earned value calculation

When calculating earned value from a baseline use

Budgeted values with planned dates

- **Activity % Complete:** This is the default and most used option. Performance % complete is equal to the Activity % complete.
- **Use WBS Milestones:** Calculate performance percent complete by defining milestones at the WBS level and assigning a level of significance or weight to each of them.
- **0/100 % Complete:** Performance Percent Complete is 0 until the activity is complete. Once the activity is complete, Performance Percent Complete is 100.
- **50/50 % Complete:** Once an activity is started, Performance Percent Complete is 50. Performance Percent Complete remains at 50% until the activity finishes, at which time the percent is 100.
- **Custom % Complete:** Manually enter a Performance Percent Complete at any WBS level. This percentage applies to all activities within the WBS level once an Actual Start is applied to the activity. After the activity is completed, the activity's Performance Percent Complete is 100 percent.
- Performance Percent Complete is used to calculate Earned Value (Earned Value Cost = Budget At Completion x Performance percent complete). Earn value is one of the main KPI of a project

Earn Value Management Essentials and Implementation

► Earned Value Options and Settings – Overall Project



Admin Preferences

General

Technique for computing performance percent complete

☒ Activity % Complete ☐ 50/50 % Complete

☐ Use WBS Milestones ☐ Custom % Complete

☐ 0/100 % Complete

Earned Value

Technique for computing Estimate to Complete (ETC)

☒ ETC = remaining cost for activity
or
ETC = PF * (Budget at Completion - Earned Value), where:

☐ PF = 1

☐ PF = 1 / Cost Performance Index

☐ PF = 1 / (Cost Performance Index * Schedule Performance Index)

☐ PF =

Earned value calculation

When calculating earned value from a baseline use

Earn Value Management Essentials and Implementation

► Earned Value Options and Settings – WBS Level

WBS Code | WBS Name

PP603Y2023N03 | ELEVEN STATIONS SIGNALING PROJ

PP603Y2023N03.1 | Contractual Dates

PP603Y2023N03.2 | Contractual Milestones

PP603Y2023N03.3 | Chittagong

PP603Y2023N03.4 | Pahartali

PP603Y2023N03.5 | Fouzdarhat

PP603Y2023N03.6 | Bhatiyari

PP603Y2023N03.7 | Kumira

PP603Y2023N03.8 | Barabakund

PP603Y2023N03.9 | Sitakund

PP603Y2023N03.10 | Baraiyadhala

PP603Y2023N03.11 | Barotakia

2023

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

Apr-23 08 AM

Apr-23 08 AM

20-Sep-23 04 PM

Apr-23 08 AM

20-Sep-23 04 PM

11-Jul-23 08 AM

28-Sep-23 08 AM

Apr-23 08 AM

20-Sep-23 04 PM

11-Jul-23 08 AM

Apr-23 08 AM

17-Oct-23 0

28-Sep-23 08 AM

23-Jul-23 08 AM

22-Oct-23 08 AM

General | Notebook | Budget Log | Spending Plan | Budget Summary | WBS Milestones | WPs & Docs | Earned Value

Technique for computing performance percent complete

Activity percent complete

Use resource curves / future period buckets

WBS Milestones percent complete

0/100

50/50

Custom percent complete

6

Technique for computing Estimate to Complete (ETC)

ETC = remaining cost for activity

or

ETC = PF * (Budget at Completion - Earned Value), where:

PF = 1

PF = 1 / Cost Performance Index

PF = 1 / (Cost Performance Index * Schedule Performance Index)

PF = 0.88

WBS Code | WBS Name

PP603Y2023N03 | ELEVEN STATIONS SIGNALING PROJECT

PP603Y2023N03.1 | Contractual Dates

PP603Y2023N03.2 | Contractual Milestones

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PP603Y2023N03.9 | Sitakund

PP603Y2023N03.10 | Baraiyadhala

PP603Y2023N03.11 | Barotakia

General | Notebook | Budget Log | Spending Plan | Budget Summary | WBS Milestones

% Complete

0%

WBS Milestone	Weight	Completed
Foundation	25.0	☐
Structure	55.0	☐
Masonry	10.0	☐
MEP	2.0	☐
Finishes	8.0	☐

Earn Value Management Essentials and Implementation

► Key Performance Indicators (KPIs) – 3 Basic Values

○ **Planned Value (PV)**

- Budgeted Cost of Work Scheduled (BCWS)
- This is the total budgeted cost up to the analysis date
- It answers the question “how much did we plan to spend as of this date?” or “how much work should have been completed by this date?”
- If the activity budget is \$100 and 20% of the activity’s baseline time has elapsed, the approximate BCWS or PV is \$20.

○ **Earned Value (EV)**

- Budgeted Cost of Work Performed (BCWP)
- This is the cost originally budgeted to accomplish the work that has been completed as of the analysis date
- It answers the question “how much work has been completed?”
- If the activity budget is \$100 and 10% of the activity’s physical work has been completed, the BCWP or EV is \$10.

○ **Actual Cost (AC)**

- Actual Cost of Work Performed (ACWP)
- This is what it cost to accomplish all the work completed as of the analysis date
- It answers the question “how much have we actually spent?”
- This is usually determined from the organization’s accounting system

Earn Value Management Essentials and Implementation

► Key Performance Indicators (KPIs) – 4 Measures

○ **Schedule Variance (SV)**

- Schedule Variance (SV) = $BCWP (EV) - BCWS (PV)$
- SV = 0, you are right on schedule. SV < 0 (Negative), you are behind schedule. SV > 0 (Positive), you are ahead of schedule

○ **Schedule Performance Index (SPI)**

- Schedule Performance Index (SPI) = $BCWP (EV) / BCWS (PV)$
- SPI = 1, you are right on schedule. SPI < 1, you are behind schedule. SPI > 1, you are ahead of schedule

○ **Cost Variance (CV)**

- Cost Variance (CV) = $BCWP (EV) - ACWP (AC)$
- CV = 0, you are right on budget. CV < 0 (Negative), you are over budget. CV > 0 (Positive), you are under budget

○ **Cost Performance Index (CPI)**

- Cost Performance Index (CPI) = $BCWP (EV) / ACWP (AC)$
- CPI = 1, you are right on budget. CPI < 1, you are over budget. CPI > 1, you are under budget

Earn Value Management Essentials and Implementation

► Key Performance Indicators (KPIs) – 5 Forecasts

- **Budget At Completion (BAC)**
 - Total Original Budgeted Cost. This is the same as BCWS (PV) at completion
- **Estimate At Completion (EAC)**
 - Actual Cost + Estimate To Complete (ETC)
 - $ETC = PF \times (BAC - EV)$, Where $PF = 1$ or $1/CPI$ or $1 / (CPI \times SPI)$ or Your Judgement.
- **Independent Estimate At Completion (IEAC)**
 - Projected final cost of the project based on cost performance
 - $IEAC = BAC / CPI$
- **Independent Schedule At Completion (ISAC)**
 - Projected total duration of the project based on schedule performance
 - $ISAC = \text{Baseline Duration} / SPI$
- **Variance At Completion (VAC)**
 - Forecast of final cost variance
 - $VAC = BAC - IEAC$ or, if you prefer, $VAC = BAC - EAC$

Earn Value Management Essentials and Implementation

► Key Performance Indicators (KPIs) – 1 Solution

○ To Complete Performance Index (TCPI)

- Can we do something to get back on track when our project is behind schedule or over budget?
- Can we meet the desired schedule and budget despite the fact that we are running behind?
- The To Complete Performance Index is an indication of how we must perform for the duration of the project in order to meet our desired cost goal
- If TCPI is greater than 1, we must perform better than planned in order to meet the goal; and if less than 1 we can get by with performing under our plan.
- $TCPI = (BAC - EV) / (EAC - AC)$

Earn Value Management Essentials and Implementation

► Cost Forecasting

► Cost Forecasting

- Cost Forecasting will help us to forecast the future state of the project based on several assumptions. We can either forecast the cost of total project or only the remaining work.

► Budget At Completion (BAC)

- Total Original Budgeted Cost. This is the same as BCWS (PV) at completion

► Estimate At Completion (EAC)

- EAC is the expected total cost of completing all work expressed as the sum of the actual cost to date and the estimate to complete the remaining project work, Estimate to Completion (**ETC**) is the expected cost to finish all the remaining project work.
- EAC can be calculated based on different assumptions. Each assumptions requires different formula.
- If the CPI is expected to be the same for the remainder of the project, **$EAC = BAC / CPI$**
- If future work will be accomplished at the planned rate, **$EAC = AC + (BAC - EV)$**
- If CPI and SPI influence the remaining work, **$EAC = AC + (BAC - EV) / (CPI \times SPI)$**
- If initial plan is no longer valid, **$EAC = AC + \text{Bottom-Up ETC}$**
- Note: Questions usually give you an indication of which assumption to use, if not provided, it is advisable to take the first assumption i.e. CPI remains the same for the entire project.

► Estimate To Completion (ETC)

- $ETC = EAC - AC$, ETC can give you different answer depending on the choice of EAC.

Earn Value Management Essentials and Implementation

► Variance At Completion

► Variance At Completion (VAC)

- Variance at Completion is a projection of the amount of budget deficit or surplus.
- VAC is expressed as the difference between the budget at completion (BAC) and the estimate at completion (EAC).
- It basically estimates the difference in cost at the completion of the project.
- $VAC = BAC - EAC$, so depending on EAC, VAC values differ.

► To Complete Performance Index (TCPI)

- TCPI is the efficiency to be maintained to complete the project at a specific amount (\$) or effort (man-days).
- $TCPI = (BAC - EV) / (EAC - AC)$, so depending on EAC, TCPI values differ.

Earn Value Management Essentials and Implementation

► EVM Metrics & Conventions – Example 01

Suppose you are making cc block for a large foundation rebar clear cover.

Plans:

200 blocks per day

Schedule: 5 days to make a total of 1000 blocks

Budgeted cost per block is \$0.05

Total budget is \$50.00 for block materials, or \$10 per day

We'll use earned value to examine our progress.

Progress Report at End of Day 1:

200 blocks have been casted, but 150 useable blocks have been found (some were broken and had to be thrown away)

Analysis:

BCWS (PV) = \$10.00

BCWP (EV) = \$7.50 (Earned Value) [150 Blocks x \$.05 Per Block]

ACWP (AC) = \$9.00 [From Progress Report of Day 1]

Therefore:

SV = EV - PV = -\$2.50 (You are behind schedule)

SPI = EV / PV = 0.75 (You are running at 75% of the planned schedule)

CV = EV - AC = \$7.50 - \$9.00 = -\$1.50 (You are \$1.50 over budget)

CPI = EV / AC = 0.833 (You are running over budget by about 17%)

Earn Value Management Essentials and Implementation

► EVM Metrics & Conventions – Example 01

Forecasting the Block Budget:

$$EAC_{\text{Current rate}} = BAC / CPI = \$50 / 0.833 = \$60$$

$$EAC_{\text{Remaining work at the planned rate}} = AC + (BAC - EV) = \$9 + (\$50 - \$7.5) = \$9 + \$42.5 = \$51.5$$

$$EAC_{\text{CPI and SPI influence the remaining work}} = AC + (BAC - EV) / (CPI \times SPI) = \$9 + \$42.5 / (0.833 \times 0.75) = \$9 + \$68.03 = \$77.03$$

$$VAC = BAC - EAC_{\text{Current rate}} = \$50 - \$60 = -\$10 \text{ (\$10 Over budget)}$$

$$VAC = BAC - EAC_{\text{Remaining work at the planned rate}} = \$50 - \$51.5 = -\$1.5 \text{ (\$1.5 Over budget)}$$

$$VAC = BAC - EAC_{\text{CPI and SPI influence the remaining work}} = \$50 - \$77.03 = -\$27.03 \text{ (\$27.03 Over budget)}$$

Calculating the efficiency to complete the project:

Suppose we want to finish at exactly the \$50 budget.

$$\text{Then, } TCPI = (BAC - EV) / (EAC - AC) = (\mathbf{50} - 7.5) / (50 - 9) = 42.5 / 41 = 1.036$$

This means that we must perform the works with 3.6% higher efficiency than the baseline plan to complete the project on budget.

CPI at Completion with $EAC_{\text{Current rate}}$ **\$60:**

$$\text{Then, } TCPI = (50 - 7.5) / (\mathbf{60} - 9) = 42.5 / 51.02 = 0.833$$

CPI at Completion with $EAC_{\text{Remaining work at the planned rate}}$ **\$51.5:**

$$\text{Then, } TCPI = (50 - 7.5) / (\mathbf{51.5} - 9) = 42.5 / 42.5 = 1.00$$

CPI at Completion with $EAC_{\text{CPI and SPI influence the remaining work}}$ **\$77.03:**

$$\text{Then, } TCPI = (50 - 7.5) / (\mathbf{77.03} - 9) = 42.5 / 68.03 = 0.625$$

Earn Value Management Essentials and Implementation

► EVM Metrics & Conventions – Example 02

You have a Project to build a new fence. The fence has four sides. Each side is planned to take one day to build and budgeted for \$1,000 per side. The sides are planned to be completed one after the other (one side per day over four days period). Today is the end of day three.

Using the project status chart below, calculate the Earned Value Metrics.

Activity	Day 1	Day2	Day 3	Day4	Status End of Day 3
Side 1	S -----F				Complete spent \$1,000
Side 2		S-----PF	----F		Complete spent \$1,200
Side 3			PS--S--PF		50% done, spent \$600
Side 4				PS-----PF	Not Yet started

Legend:

S = Actual Started,
F = Actual Finished,
PS = Planned Start, and
PF = Planned Finished

KPI	Calculation	Answer
BAC	Budget of building 4 sides. Budget = 4 sides x \$1,000 per side	\$4,000
PV	3 Sides should have been completed by the end of the day 3. Therefore, PV = 3 x \$1,000	\$3,000
EV	Side 1 and 2 have been completed 100%, and ½ of Side 3 has been completed, Therefore, EV = 2.5 x \$ 1,000	\$2,500
AC	Money spent for side 1 is \$1,000, for side 2 is \$1,200 and for side 3 is \$600. Therefore, Actual Total Cost = \$1,000 + \$1,200 + \$600	\$2,800
CV	EV – AC = \$2,500 - \$2,800	-\$300
CPI	EV/AC = \$2,500/\$2,800	0.893
SV	EV – PV = \$2,500 - \$3,000	-\$500
SPI	EV/PV = \$2,500/\$3,000	0.833
EAC	Future work at current rate, BAC/CPI = \$4,000/0.89	\$4,494
	Future work as planned, AC + (BAC – EV) = \$2,800 + \$4,000 - \$2,500	\$4,300
	Future work impacted by CPI and SPI, AC + (BAC – EV)/(CPI x SPI) = \$2,800 + (\$4,000 - \$2,500)/(0.893 x 0.833)	\$4,816
	Re-estimate, AC + Bottom-Up ETC (Estimate remaining cost)	
ETC	Future work at current rate, EAC – AC = \$4,494 - \$2,800	\$1,694
	Future work as planned, EAC – AC = \$4,300 - \$2,800	\$1,500
	Future work impacted by CPI and SPI, EAC – AC = \$4,816 - \$2,800	\$2,016
VAC	Future work at current rate, BAC – EAC = \$4,000 - \$4,494	-\$494
	Future work as planned, BAC – EAC = \$4,000 - \$4,300	-\$300
	Future work impacted by CPI and SPI, BAC – EAC = \$4,000 - \$4,816	-\$816
TCPI	To complete the project on baseline cost, BAC – EV)/(EAC-AC) = (\$4,000 - \$ 2,500)/(\$4,000 - \$2,800) = \$1,500/\$1,200	1.25
	Future work at current rate, (BAC – EV)/(EAC-AC) = (\$4,000 - \$ 2,500)/(\$4,494 - \$2,800) = \$1,500/\$1,694	0.885
	Future work as planned, (BAC – EV)/(EAC-AC) = (\$4,000 - \$ 2,500)/(\$4,300 - \$2,800) = \$1,500/\$1,500	1.000
	Future work impacted by CPI and SPI, (BAC – EV)/(EAC-AC) = (\$4,000 - \$ 2,500)/(\$4,816 - \$2,800) = \$1,500/\$2,016	0.744

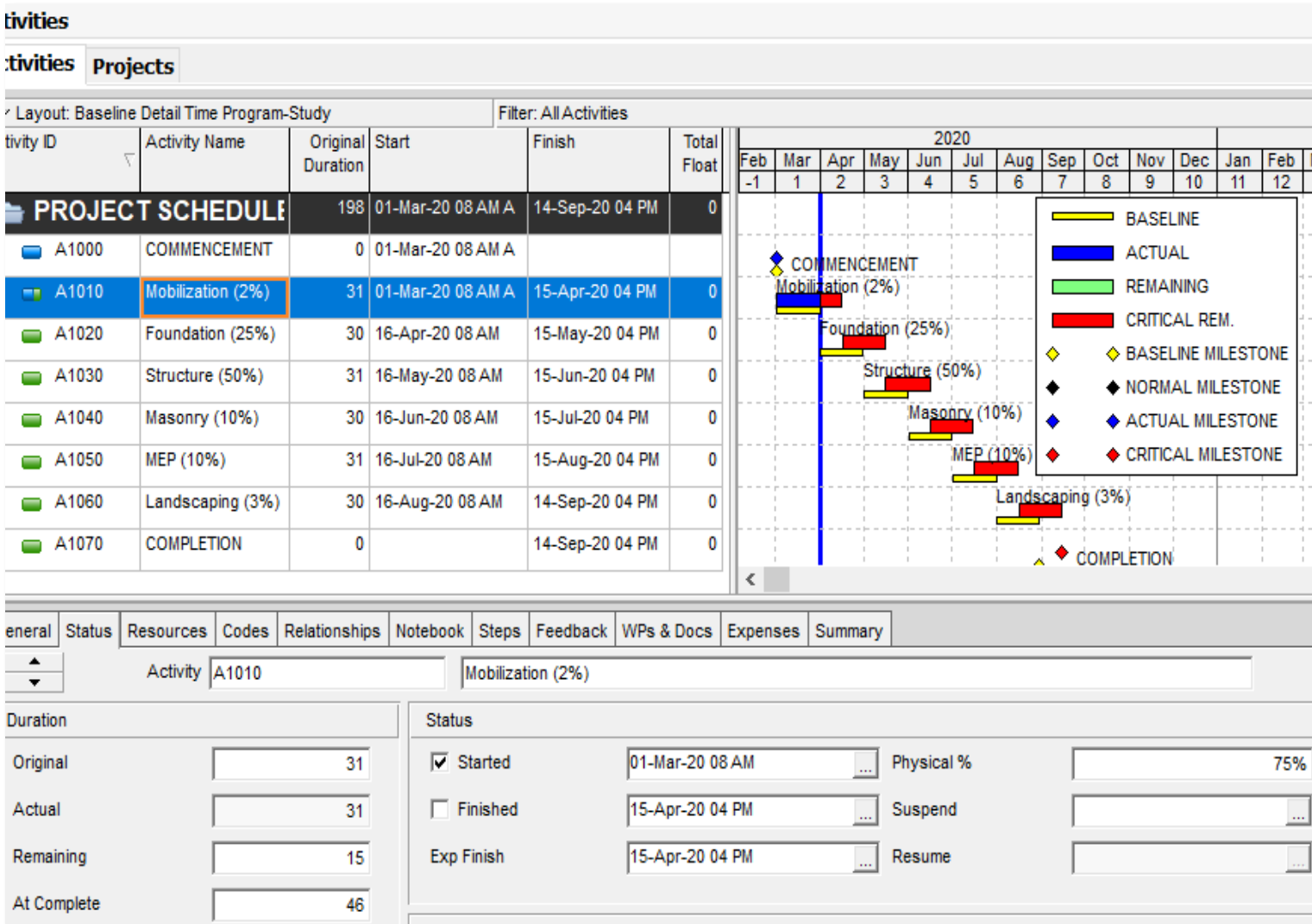
The background features a light beige color with a series of vertical dashed lines. A central blue dashed line has a blue downward-pointing triangle at the top. To the left, there are four colored rectangular blocks (blue, yellow, green, and blue) arranged in a descending staircase pattern. On the right, a cartoon superhero character in a blue suit with a yellow cape is shown in a dynamic pose. The text 'LESSON 08' and 'PERIODIC STATUS UPDATING & IMPACT MITIGATION' is centered in a bold, black, sans-serif font.

LESSON 08

PERIODIC STATUS UPDATING & IMPACT MITIGATION

Periodic Status Updating & Impact Mitigation

► Updating Schedule



✓ Time Should be On

✓ Actual Start/Finish Date

✓ Physical % Complete

✓ Remaining Duration

✓ Or Expected Finish

✓ Date Constrain If Any

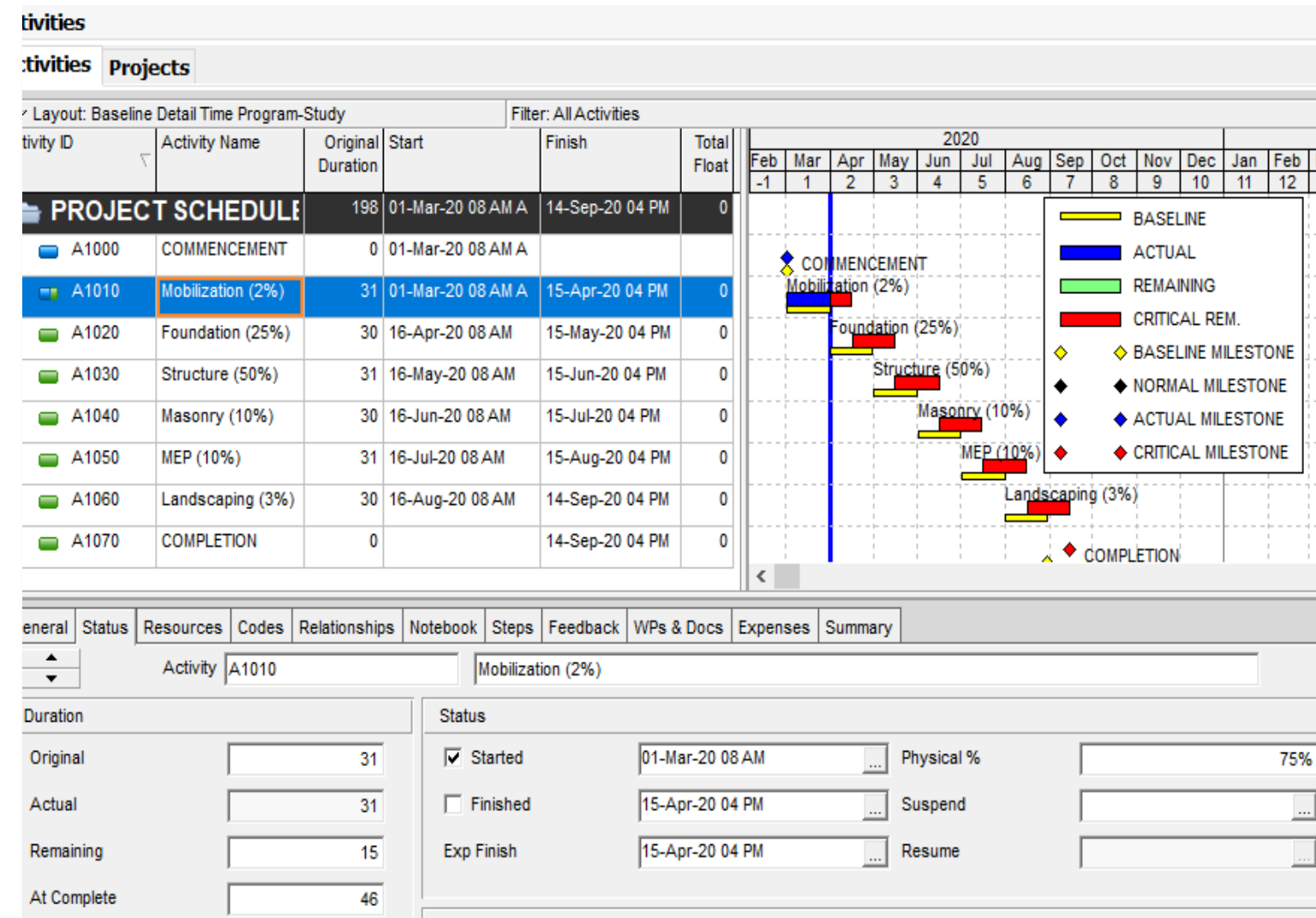
✓ Relationship/Lag/Lead

✓ Unit % Complete

✓ Expense % Complete

Periodic Status Updating & Impact Mitigation

► Updating Schedule → Progress Only Update



✓ Time Should be On

✓ Actual Start/Finish Date

✓ Physical % Complete

✓ Unit % Complete

✓ Expense % Complete

✓ Remaining Duration

✓—Or Expected Finish

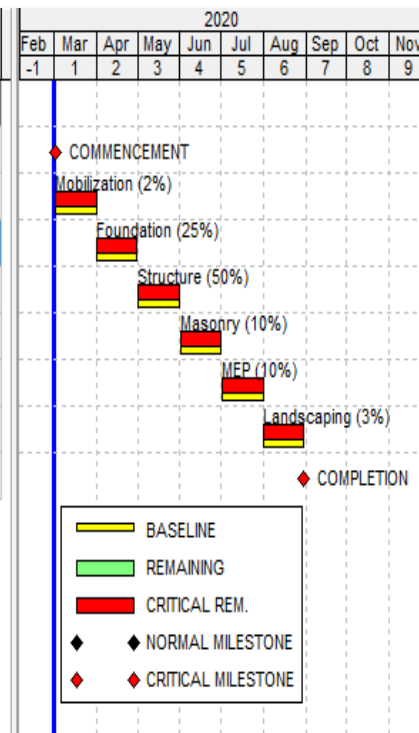
✓—Date Constrain If Any

✓—Relationship/Lag/Lead

Periodic Status Updating & Impact Mitigation

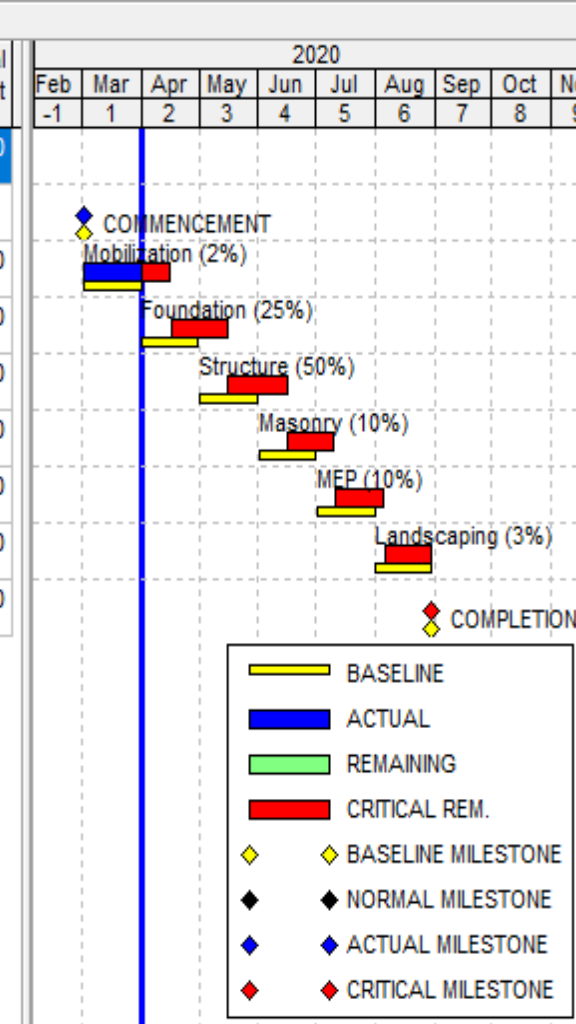
► Updating Schedule → No Logic Change

Activity ID	Activity Name	Original Duration	Start	Finish	Total Float
PROJECT SCHEDULE					
A1000	COMMENCEMENT	0	01-Mar-20	30-Aug-20	0
A1010	Mobilization (2%)	31	01-Mar-20	31-Mar-20	0
A1020	Foundation (25%)	30	01-Apr-20	30-Apr-20	0
A1030	Structure (50%)	31	01-May-20	31-May-20	0
A1040	Masonry (10%)	30	01-Jun-20	30-Jun-20	0
A1050	MEP (10%)	31	01-Jul-20	31-Jul-20	0
A1060	Landscaping (3%)	30	01-Aug-20	30-Aug-20	0
A1070	COMPLETION	0		30-Aug-20	0



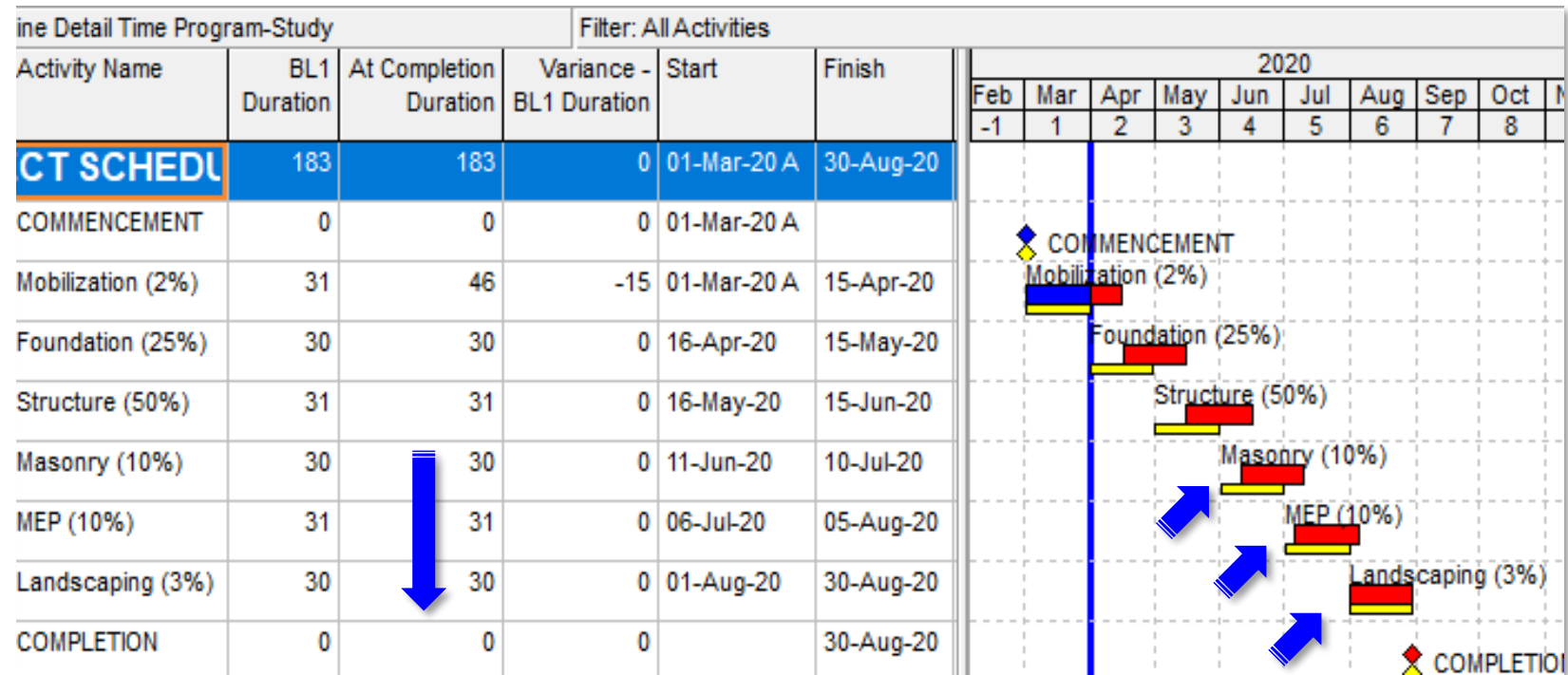
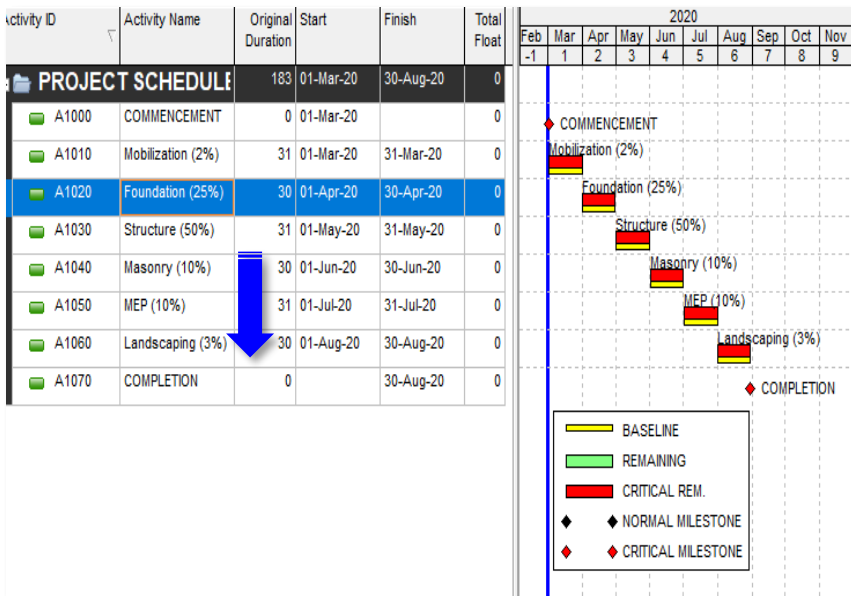
Output: Baseline Detail Time Program-Study Filter: All Activities

Activity ID	Activity Name	Original Duration	Start	Finish	Total Float
PROJECT SCHEDULE					
A1000	COMMENCEMENT	0	01-Mar-20 08 AM A	30-Aug-20 04 PM	0
A1010	Mobilization (2%)	31	01-Mar-20 08 AM A	15-Apr-20 04 PM	0
A1020	Foundation (25%)	30	16-Apr-20 08 AM	15-May-20 04 PM	0
A1030	Structure (50%)	31	16-May-20 08 AM	15-Jun-20 04 PM	0
A1040	Masonry (10%)	25	16-Jun-20 08 AM	10-Jul-20 04 PM	0
A1050	MEP (10%)	26	11-Jul-20 08 AM	05-Aug-20 04 PM	0
A1060	Landscaping (3%)	25	06-Aug-20 08 AM	30-Aug-20 04 PM	0
A1070	COMPLETION	0		30-Aug-20 04 PM	0



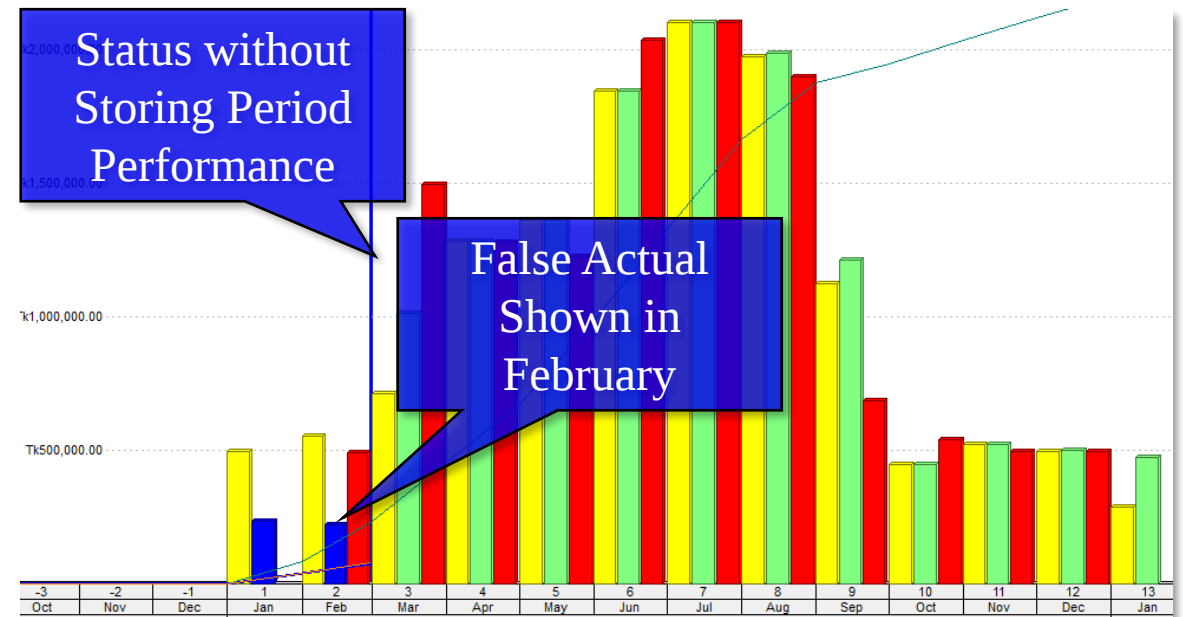
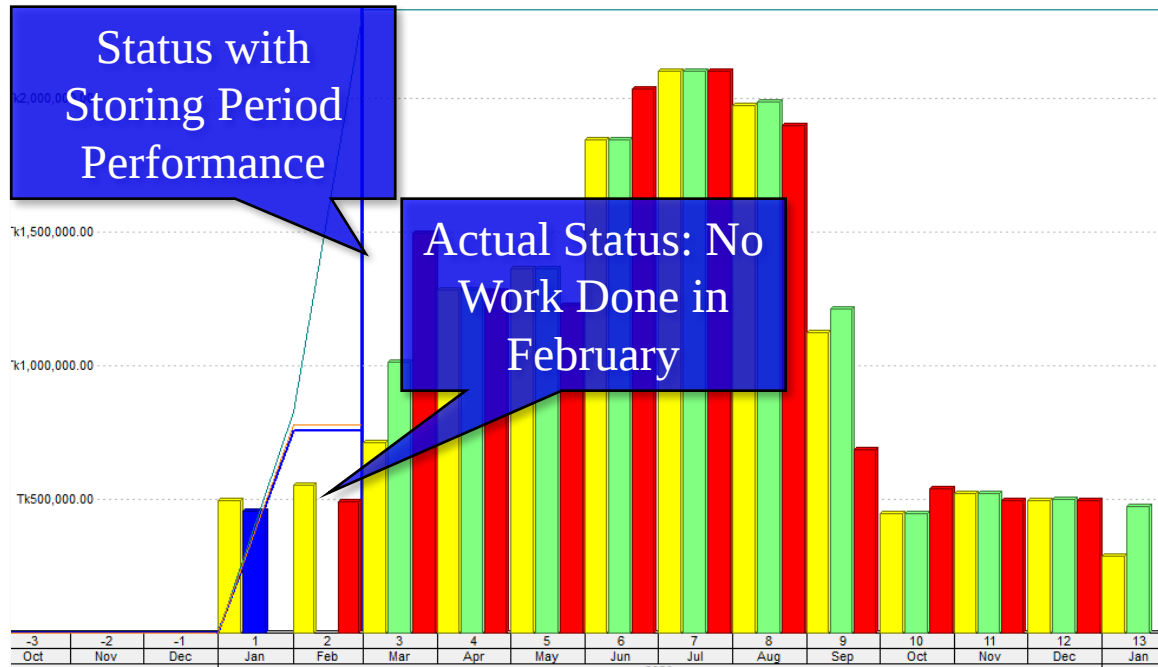
Periodic Status Updating & Impact Mitigation

► Updating Schedule → Logic Change



Periodic Status Updating & Impact Mitigation

► Updating Schedule → Storing Period Performance





LESSON 09

UPDATED SCHEDULE & PROGRESS ANALYSIS REPORT PREPARATION

