Minnesota Department of Transportation

P6 Schedule Creation and Baseline Process

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1.0 GENERAL INFORMATION

The purpose of this document is to delineate the process to take the project schedule from initiation to recording the schedule baseline.

During the schedule development process, the schedule will progress through the following stages:

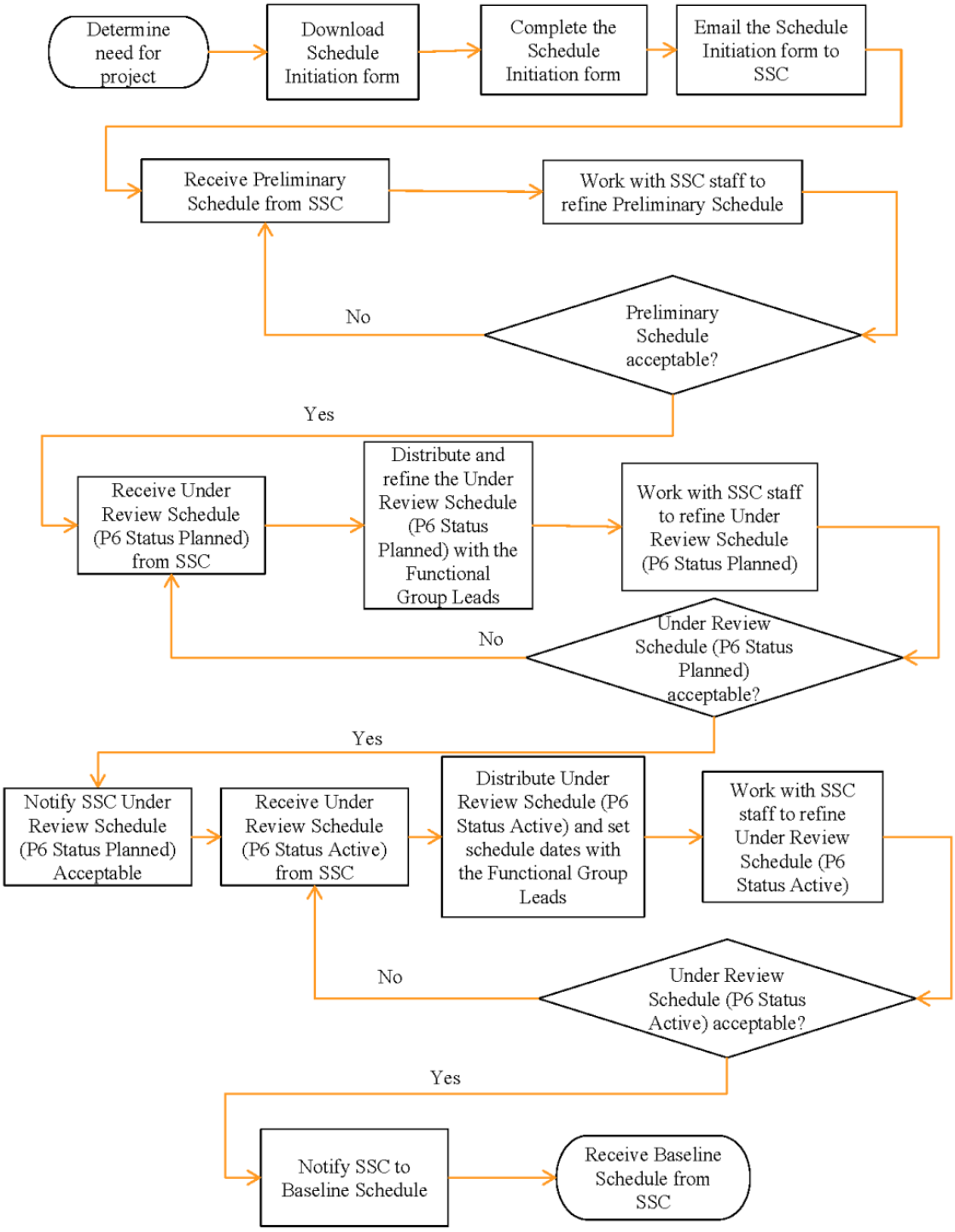
Undeveloped	P6 Admin team has created the schedule shell. A schedule shell is project which does not contain any activities.
Preliminary	Initial schedule set up by SSC staff based on the schedule initiation form prepared by the project manager
Under Review	(P6 Status Planned) Preliminary schedule that has been updated by SSC staff based on project manager comments and input from the functional groups participating on the project team. The project manager will distribute the under review schedule to functional groups participating on the project team for approval of work packages, activities, relationships (logic), durations, roles, role hours, and activity owners. (P6 Status Active) Schedule has buy-in from the functional groups participating on the project team. The accepted schedule does NOT include schedule dates.
Baselined*	Schedule for which the baselined schedule dates have been accepted by the functional group participating on project team. SSC staff will record the baseline schedule in P6.
Recovery	After a schedule is baselined and a project is impacted, the status will change to Recovery (note: P6 Status will remain Active) until a recovery plan has been accepted by the district and functional groups. After acceptance of the recovery plan, the status will move back to baselined. Recovery schedules are addressed in PD-20-01_Schedule Maintenance.docx

*Schedule baselining may occur multiple times during the lifecycle of a project (scoping, design, construction, and other schedule impacts). Baselining the bridge and right-of-way modules will occur with the design module.

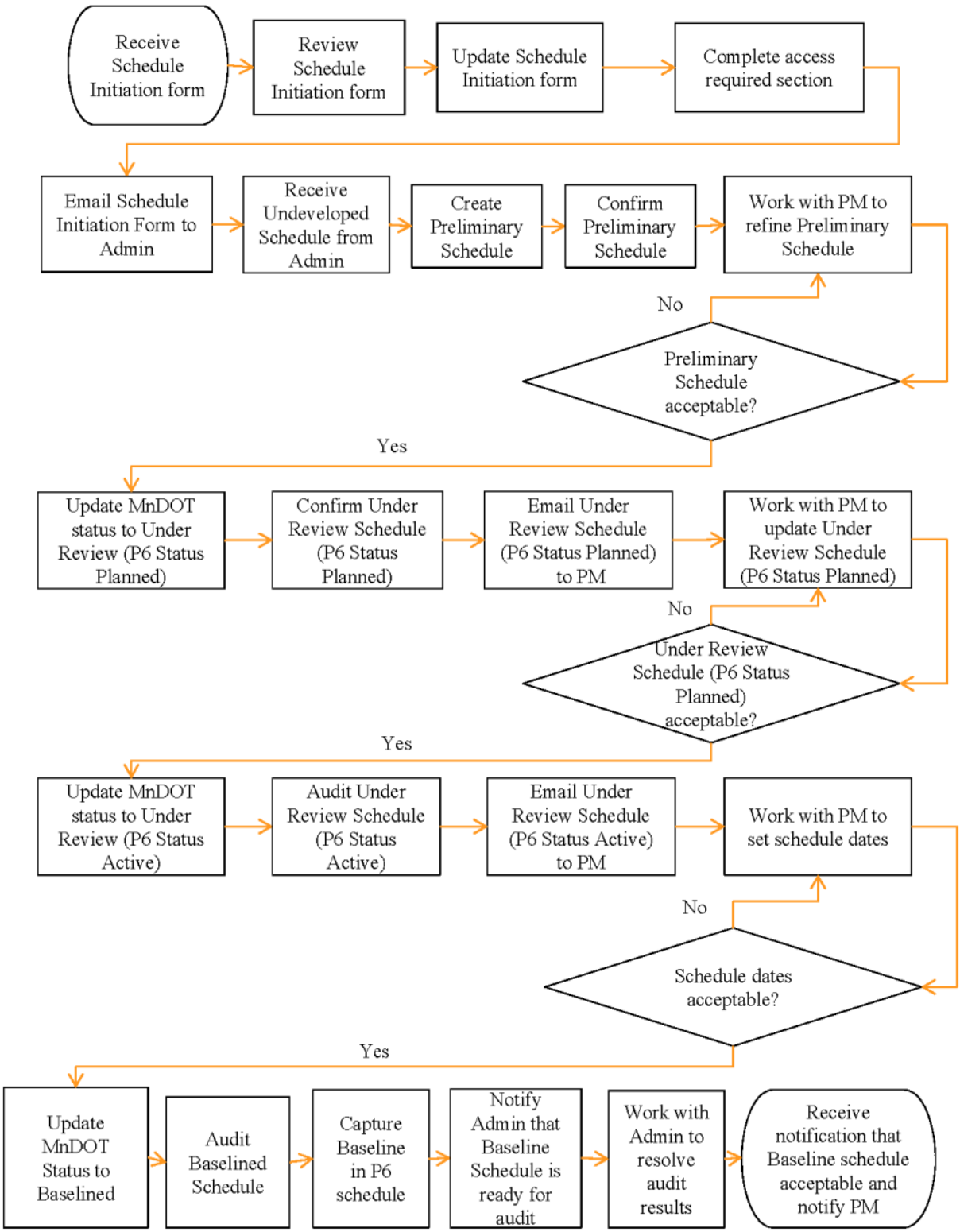
2.0 PROCESS SUMMARY

This section delineates the general process for each of the primary staff roles that create and baseline a schedule: Project Manager (PM), Shared Service Center (SSC), and EPMS Administration (Admin).

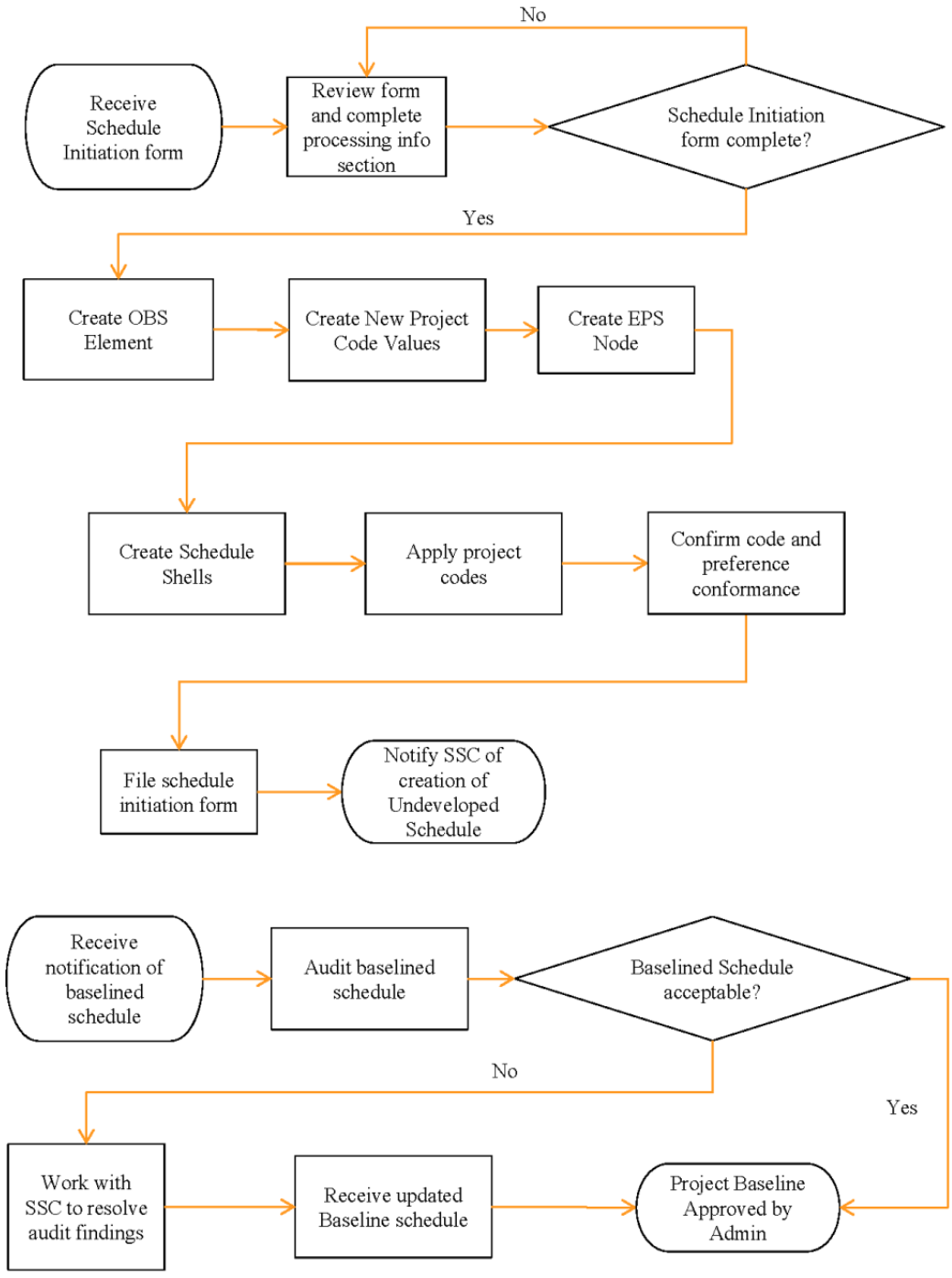
2.1 PM PROCESS



2.2 SSC PROCESS



2.3 ADMIN PROCESS

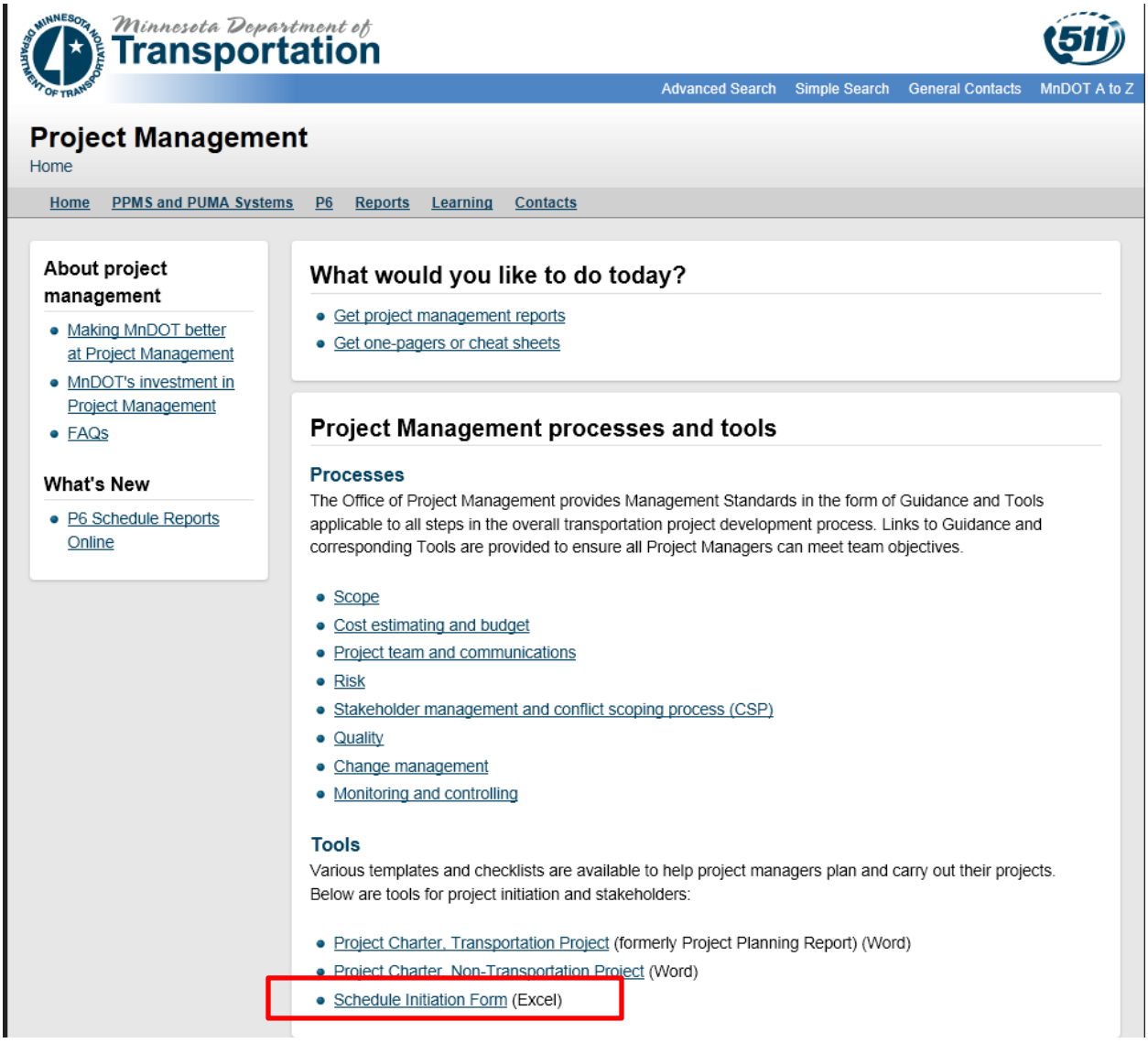


3.0 PROCESS DETAILS

This section provides greater detail for the processes each of the primary staff roles use to create and baseline a schedule: Project Manager (PM), Shared Service Center (SSC), and EPMS Administration (Admin).

3.1 PM PROCESS DETAILS

1. Determine need for project schedule.
2. Download schedule initiation form from the Project Management website.



3. Complete the schedule initiation form

   Follow the instructions on the "instructions" tab in the workbook.

   The schedule initiation form may need to be updated during the lifecycle of the project.

   If a project has a clearly defined project scope, the PM can select the work packages required to take the project from the scoping through the letting phase.

   If the project is not scoped, the PM will select appropriate work packages to bring the project to the next phase in the project lifecycle. The remaining phases will appear as single bars in the schedule. The PM will need to determine how far to build out the schedule. Once a schedule is created in P6, the additional work packages required to take the project to the letting can be inserted.

4. Email the schedule initiation form to SSC.

   SSC staff is divided into regions. See OP-00-08_SSC Overview for regional contact information. The SSC staff will process the completed project initiation form and contact the PM when a preliminary schedule is available.

5. Receive the Preliminary Schedule from SSC.

   The PM will receive the following reports for the Preliminary Schedule:

   1. Gantt Chart Report: a graphic report that includes activity details and a bar chart (Gantt chart) of the schedule.
   2. Activity Logic Report: a tabular report that shows the relationships between activities in the schedule.

   If there are questions about the data or additional reports that are needed for this initial review of the schedule, the PM should contact the SSC scheduler.

   Please note that the Preliminary schedule is a basic schedule based on the information on the data from the project initiation form and a schedule template. It is intended as a starting point and requires review and refinement as outlined in the steps below.

6. Work with the SSC to refine the activities, durations, logic, functional group assignment, activity owners, roles, role hours and calendars in the Preliminary Schedule.

   The PM will work with the SSC staff to customize the preliminary schedule for the project. The schedule will be modified to add or remove activities, confirm the ties between the activities, refine the activity durations, and confirm the roles and functional groups required to complete the project. The schedule should be built out to the appropriate phase of the project lifecycle. SSC staff will build the under review schedule based on the information provided by the PM.

   The SSC is available to provide guidance on schedule-related items, including understanding how activities and logic work in the schedule, how to estimate durations, and how to understand and estimate roles and role hours. If you need guidance on these schedule-related items, set up a meeting with the SSC and your project team. However, SSC staff is not familiar with the specific project requirements. Customizing the schedule for your project will need to be completed by the PM and project team members.

7. Repeat 5-6 until PM approves Preliminary Schedule

8. Receive the Under Review Schedule (P6 Status Planned) from SSC.

   The PM will receive the following reports for the Under Review Schedule. The reports will have activity details, but will NOT have schedule dates unless requested by the PM:

   1. Gantt Chart Report: a graphical report that includes activity details and a bar chart (Gantt chart) of the schedule.
   2. Activity Logic Report: a tabular report that shows the relationships between activities in the schedule.
   3. Role Review by Activity: a report grouped by activity showing role and role hour assignments for each activity
   4. Role Review by Role: a report grouped by role showing activities and role hour assignments for each role.

9. Distribute the Under Review Schedule (P6 Status Planned) to the Project Team and refine the activities, durations, logic, functional group assignments, activity owners, roles, role hours and calendars with Functional Group Leads.

   The project manager shall specify the date by which they need feedback otherwise the information will stay as planned (guidance: 1 week unless a more critical project). The project manager and functional group will negotiate schedule issues. Possible outcomes if they disagree:
   a) Schedule gets adjusted as requested by functional group
   b) Functional group agrees to the original activities
   c) The PM seeks alternate methods to get the work delivered

   Note: the Under Review Schedule (P6 Status Planned) will not have specific delivery dates assigned. The dates will be negotiated with the Functional Group Lead using the Under Review Schedule (P6 Status Active).

10. The PM will work with the SSC staff to update the information in the Under Review Schedule (P6 Status Planned) to incorporate the functional group and activity owner comments.

11. Repeat 8-10 until PM receives concurrence from the Functional Group Lead on the Under Review Schedule (P6 Status Planned). Concurrence is defined as agreement on activities, durations, logic, functional group assignment, activity owners, roles, role hours and calendars. It does NOT include schedule date concurrence.

12. Notify the SSC that the Under Review Schedule (P6 Status Planned) is accepted by the Functional Groups.

13. Receive the Under Review Schedule (P6 Status Active) from SSC.

    Once the P6 Status code is changed to Active, the activities will appear in Team Member for owner activity updating.

14. Distribute the Under Review Schedule (P6 Status Active) to the Project Team and work with the Functional Group Leads to obtain concurrence on schedule dates.

    The PM will coordinate with the Functional Group Leads to confirm the accepted Under Review Schedule is accurate and the functional group can deliver their activities by the dates shown in the schedule.

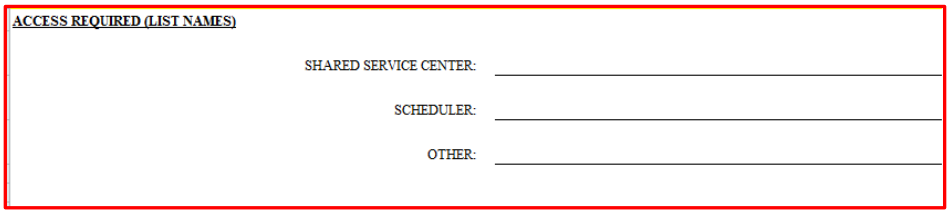
    Note: Functional Groups will be balancing their workload on a statewide and Districtwide basis. Functional Groups will need to concur on the project timeline before a schedule can be baselined.

After concurrence is obtained, the PM will notify the SSC staff that the project schedule is ready to be baselined in P6.

15. Work with the SSC to refine the schedule based on input from the Functional Group Leads.
16. Repeat 13-15 until you receive schedule concurrence from the Functional Group Leads on schedule dates.
17. Notify the SSC that the schedule is ready to be baselined.
18. Receive baseline schedule from SSC, distribute to project team, and save copy to project document management system.

3.2 SSC PROCESS DETAILS

1. Receive schedule initiation form from PM.
2. Review schedule initiation form content and discuss revisions with PM.
   Confirm that the information in the header tab matches the authoritative source, work location and description complies with appropriate standards, and all information required to initiate a schedule has been provided.
3. Update schedule initiation form based on PM revisions.
4. Complete the access required information on the Header Info tab of the Schedule Initiation form.


ACCESS REQUIRED (LIST NAMES)

SHARED SERVICE CENTER: _____

SCHEDULER: _____

OTHER: _____

   Security Access to a schedule is granted only to users with a current P6 access. If users do not have access to P6, the SSC must submit FM-00-01_MnDOT Primavera Security Access Form to Admin.
5. Email the schedule initiation form to Admin.
6. Receive notification that the Undeveloped Schedule (EPS Node, schedule shell and codes) has been created from Admin.

   For an Undeveloped Schedule the project status codes will be:
   - Planned Status (P6 Project Status)
   - Planned or Programmed (MnDOT Project Status)

7. Create the Preliminary Schedule by adding the schedule modules and project work packages/templates requested by the PM in the Project initiation form. See Cheat Sheet CS-10-04_Adding Work Package for additional information.

   If a new work package or activity is requested, see Cheat Sheet CS-10-05_Work Package Development.docx

   If roles need to be added, see PD-00-08_Role Loading.docx and RD-00-07_Role Dictionary

   The authoritative project template is located in the EPS at the following location: Templates\Project Templates\Authoritative Project Templates. The work packages are located in the EPS at the following: location Templates\Work Packages.

To determine which work packages need to be added or deleted from the project template, click the "Create Summary" button on the templates tab in the Project Initiation Form. The form will then create a list of work packages to be added or deleted.

For a Preliminary Schedule the project codes will be:

- Planned Status (P6 Project Status)
- Planned or Programmed (MnDOT Project Status)

The SSC will generate the following reports for the Preliminary Schedule and distribute to the Project Manager:

1. Gantt Chart Report (in the Activities screen as a global layout)

2. MnDOT Activity Logic Report (in the P6 Reports screen as a global report)

To Add a Work Package or Template:

a) Open the moderate preservation template and the new project together using CTRL+Click

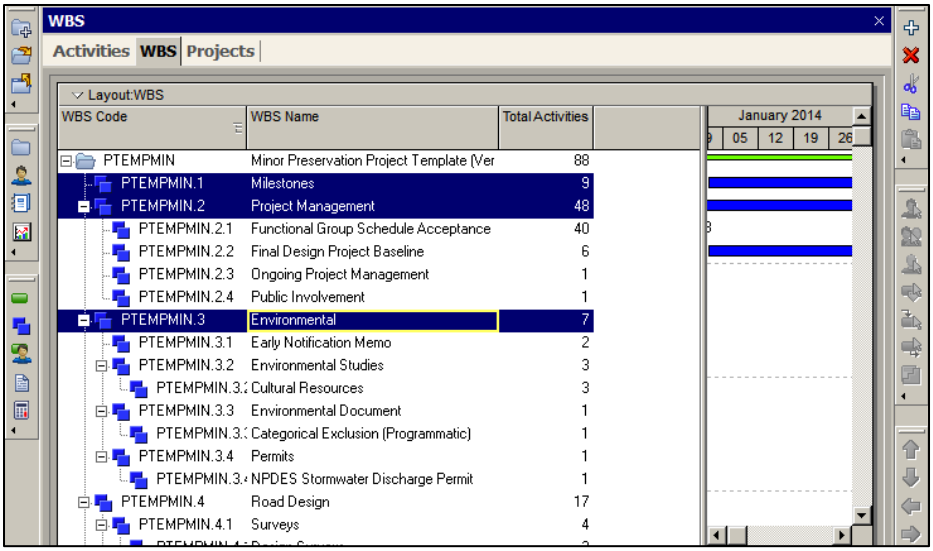
b) In the **WBS window**, copy and paste the necessary WBS elements from the template into the new project.

Note: Relationships between activities in different WBS elements will only be retained if copied and pasted together. Be sure to highlight all necessary WBS elements at the same time before copying into each project.

Multiple schedules may be created for the requirements below. It is necessary to open all schedules at the same time when copying templates.

- Scoping
- Design
- Bridge
- Right-of-way
- Construction Control

In the example below, all activities within Milestones, Project Management, and Environmental will retain their relationships when copied because they are being highlighted and copied together. If Road Design is copied separately, all relationships to activities in previously copied and pasted WBS nodes will be lost.



Remember, you <u>should not</u> copy the project level (top level shown in the WBS window), only second-tier and lower nodes.

In the example above, although Functional Group Schedule Acceptance, Final Design Project Baseline, Ongoing Project Management, and Public Involvement are not highlighted, they will be automatically copied with their parent node, Project Management. This includes the WBS structure and activities.

c) Review the schedule for missing relationships and make corrections as necessary.

d) Schedulers shall <u>NOT</u> remove empty WBS nodes from the project schedule. The empty WBS nodes can be hiden by clicking hide if emapty in the review and sort screen. The nodes will be left in place in case activities need to be added or adjusted in the project schedule.

<u>Using Dissolvable Milestones</u>

a) Link predecessors and successors between the work package and the destination schedule using activities in the Dissolvable Milestone WBS:

i) Select each temporary activity in the Dissolvable Milestone WBS,

ii) Add the logic between the temporary activity and the destination schedule by closing the open end. Link the predecessor or successor of the temporary activity to the activity in the schedule with similar Activity ID excluding the "ZZZ" leading text.

iii) Revise relationship type if needed.

iv) Repeat for all temporary activities in the Dissolvable Milestone WBS.

Hydraulics Design Recommendations			
Dissolvable Milestone (Dissolve after relationship Linked & remove node from WBS)			
	ам in Activity Steps)	PLN9000	HPR1020
		HPR1020	TUR1010
		TUR1010	HPR1030
	pecs	HPR1040	TUR1040
Hydraulics Plan Review			
HPR1020	Review WRE 90% Plan	ZZZPLN9000	ZZZTUR1010-1
HPR1030	Check WRE Redlines 100% Plan Review	ZZZTUR1010-2	HPR1040
HPR1040	Sign WRE Plan	HPR1030	ZZZTUR1040

b) Once all of the relationships are linked, dissolve all activities under WBS "Dissolvable Milestone (Dissolve after relationship Linked & remove node from WBS)". .

c) Final work package linked to destination schedule:

yout: 1-MnDOT - Gantt Chart Layout | Filter: All Activities

Activity ID	Activity Name	Predecessors	Successors
Hydraulics Design Recommendations			
Hydraulics Plan Review			
HPR1020	Review WRE 90% Plan	PLN9000	TUR1010
HPR1030	Check WRE Redlines 100% Plan Review	TUR1010	HPR1040
HPR1040	Sign WRE Plan	HPR1030	TUR1040

Confirming MnDOT Project Codes and UDFs

Project Codes assignments are required for proper reporting. The project code directory is available at RD-00-06_Project Code Dictionary. The Project Code Dictionary defines which codes are assigned by SSC and Admin staff.

Updating Activity Owners

Activity owner assignments will be reviewed by the PM and Functional Groups. Activity owners from some functional groups are provided in RD-00-09_WBS_Work Package Dictionary.xlsx.

8. Confirm that there are no open ends or logic issues by scheduling the project and viewing the log.
9. Work with the PM to refine the preliminary schedule.
10. Receive notification from the PM that the Preliminary Project Schedule is acceptable and is ready to be routed to functional groups for review.
11. Update MnDOT Status to Under Review (P6 Status will remain at Planned).

    For an Under Review Schedule (P6 Status Planned) the project status codes will be:
    a. Planned Status (P6 Project Status) until functional groups buy-in to work packages, activities, relationships (logic), durations, role hours, and activity owners. This does not include the schedule dates (date in time when the activities will occur).
    b. Planned or Programmed (MnDOT Project Status)

12. Confirm that there are no open ends or logic issues by scheduling the project and viewing the log.
13. Email Under Review Schedule (P6 Status Planned) to the PM so the PM can obtain acceptance on the Under Review (P6 Status Planned) Schedule from the Functional Groups working on the project. Provide the following reports to the PM for routing to the Functional Groups:

    1. Gantt Chart Report (in the Activities screen as a global layout)

2. MnDOT Activity Logic Report (in the P6 Reports screen as a global report)
3. Role Review by Activity (in the Resource Assignments screen as a global layout)
4. Role Review by Role (in the Resource Assignments screen as a global layout)

14. Work with PM to update Under Review Schedule (P6 Status Planned) to incorporate Functional Group comments.
15. Receive notification from the PM that the Under Review Schedule (P6 Status Planned) has been accepted by the Functional Groups and is ready to become active in Team Member.
16. Update MnDOT Status to Under Review Schedule (P6 Status Active)

    For an Under Review Schedule (P6 Status Active) the project status codes will be:
    - Active Status (P6 Project Status) when PM obtains function group buy-in.
    - Planned or Programmed (MnDOT Project Status)

    The schedule is available in Team Member for activity owner updates.
17. Review the Under Review Schedule (P6 Status Active) for analysis of project settings and defaults, appropriate KPIs, project codes, activity codes, proper logic sequence (Circular loops, reduction of open-ended activities), logic ties, roles, durations, functional group codes, activity owners, activity calendars, and float before returning it to the PM.
18. Email the Under Review Schedule (P6 Status Active) to the PM for baselining (concurrence on schedule dates).

    Provide the following reports to the PM for routing to the Functional Groups.

    1. Gantt Chart Report (in the Activities screen as a global layout)
    2. MnDOT Activity Logic Report (in the P6 Reports screen as a global report)
    3. Role Review by Activity (in the Resource Assignments screen as a global layout)
    4. Role Review by Role (in the Resource Assignments screen as a global layout)
19. Work with the PM to incorporate changes needed for concurrence on schedule dates.
20. Receive notification from the PM that the dates in the Under Review Schedule (P6 Status Active) have been accepted by the Functional Groups and is ready to be baselined.
21. Update the MnDOT Status to Baselined.
    For Baselined Schedule the project codes will be:
    - Active Status (P6 Project Status)
    - Planned or Programmed (MnDOT Project Status)
22. Review the Baselined Schedule for activities, durations, logic, functional group codes, activity owners, role hours, activity start and finish dates.
23. Capture a Baseline Schedule in P6 and assign to current project.
    a. Capture baseline information using "Maintain Baselines" in P6 Client
    b. With the Project open; Select "Project" menu
    c. Select Maintain Baselines
    d. Highlight project and select "Add" to create a baseline copy
        i. Re-name project baseline to format of "**BL01-DD **/**/**** PROJECT NAME"** (Asterisk represents current data date of project)
        ii. Select Baseline Type to categorize phase of project
        iii. Current Baseline Types are:
            1. Construction Baseline
            2. Contract Time (CTD) Baseline
            3. Design Baseline
            4. Planning Baseline
            5. Revised Construction Baseline
    e. Select "Close" to complete addition of baseline

As the baseline has been created, it is required to assign the baseline to the project

a. Select "Project" menu
b. Select "Assign Baselines"
c. Verify the correct project is selected
d. Choose dropdown within "Project Baseline" and select newly created baseline
e. Select "Ok" to close window

24. Notify Admin that baselined schedule has been created and is ready for audit.
25. Work with Admin to resolve audit findings
26. Receive notification from Admin that Baseline Schedule has been approved and email the Baseline Schedule to PM. The PDF of the approved baseline schedule will be available on the Reports page of the P6 website.

3.3 ADMIN PROCESS DETAILS

1. Receive schedule initiation form from SSC.
2. Complete the Processing Info section of the schedule initiation form.

   Upon receipt of the Schedule Initiation Form, the Admin team shall review the fields to verify completeness. If there are noted discrepancies, Admin team will communicate with the SSC to obtain the correct information for schedule creation and security access to the project.

   Security Access to a schedule is granted only to users with a current P6 access. If users do not have access to P6, the SSC must submit FM-00-01_MnDOT Primavera Security Access Form to Admin.

   Multiple schedule modules will be created for a single project. Admin will create the appropriate shells based on the modules selected within the Schedule Initiation form.

3. Rejection or acceptance of the Project Initiation Form will be recorded in the Processing Info section of the form. See Admin step 9 for how to file initiation form.

PROCESSING INFO: *This area is to be populated by the EPMS Admin and saved per standards*			
DATE RECEIVED:		PROCESSED BY:	
APPROVED / REJECTED:		DATE COMPLETED:	

4. Create Organizational Breakdown Structure (OBS) element.

   An OBS element must be created to accommodate the securities to the projects within the appropriate EPS nodes down to the PUMA Element.

   Based on the access required, the users will be assigned to the newly created OBS. Admins will also verify the district of the project and add any additional users that require full district access. SSC's shall be notified if requested users were not listed on the form. Admin will maintain a list of P6 Client users for each district (see Appendix item 4.5).

   To create the OBS element:

   a) Go to the Administer tab → User Access

b) Create a new **OBS element** to allow proper assignment of the responsible manager to the project.

c) Populate the **OBS Name** for both the PUMA element and its child. The PUMA element is on the Project Initiation form.

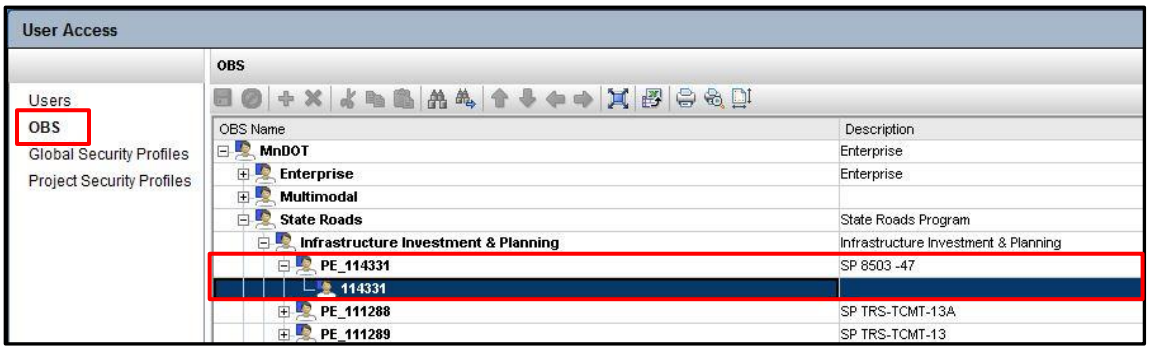
PUMA Element: "PE_"[PE#]

PUMA Element Child (indented in the hierarchy): [PE#]

Note: This should be indented under the PUMA element

d) Populate the **Description** field for only the PUMA element.

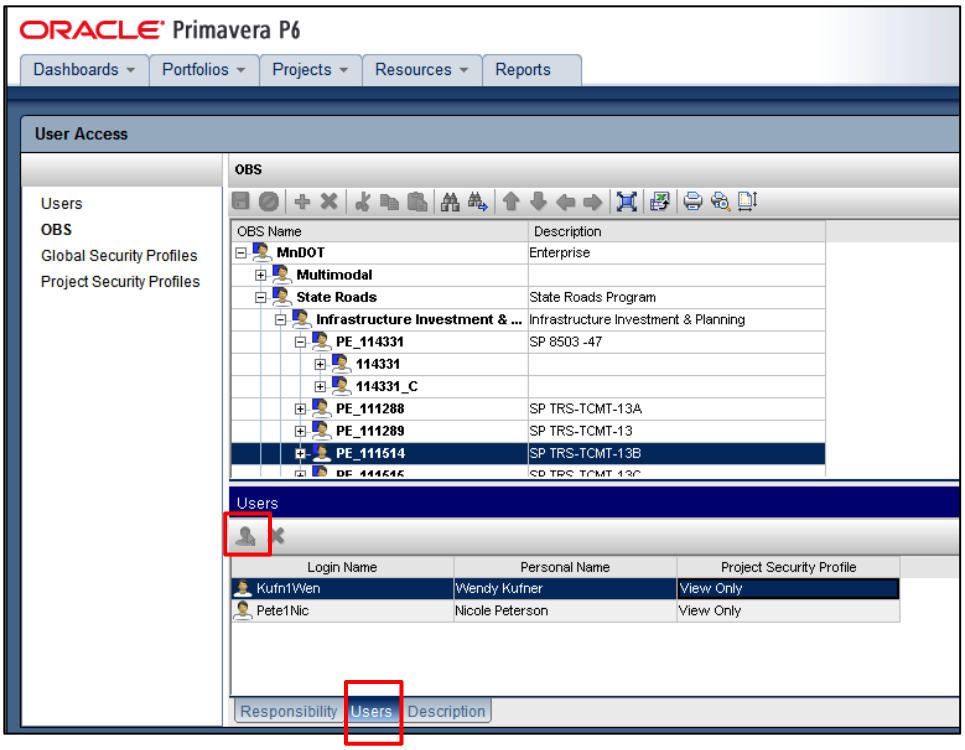
Enter the appropriate **SP#** aligned with the **PE_#**.



Assign the appropriate users to the new OBS element. This allows the specific assigned user to login, view, and/or edit the project accordingly. See Appendix for security profile information.

a) In the **Users tab**, select the add user icon and select the appropriate new user(s).

b) Select appropriate Project Security Profile for each user(s).

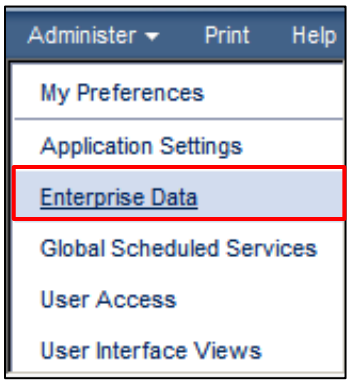


5. Create new project code values in P6 Web.

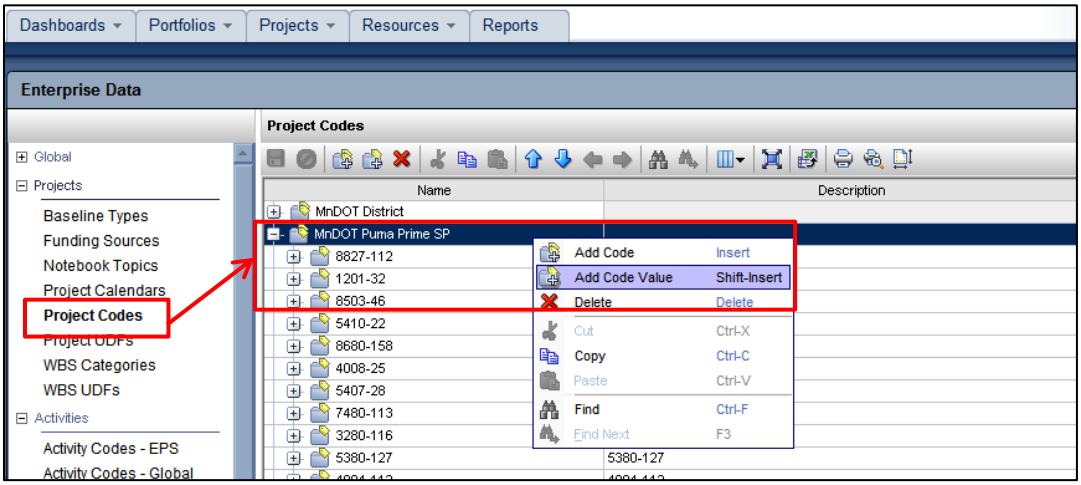
   Project Codes are based on the values entered in the Schedule Initiation form. Project Code Values that are created at this time are: PUMA Prime SP, PUMA SP, PUMA Bundle, PUMA Element ID & MnDOT Job Number. Additional code values may need to be created on a case-by-case basis.

   To enter Project Code Values:

   a) Go to the Administer tab → Enterprise Data → Projects → Project Codes



   b) Highlight the appropriate project code, right-click and select **Add Code Value.** See RD-00-06_Project Code Dictionary.xls for a list of all code values.

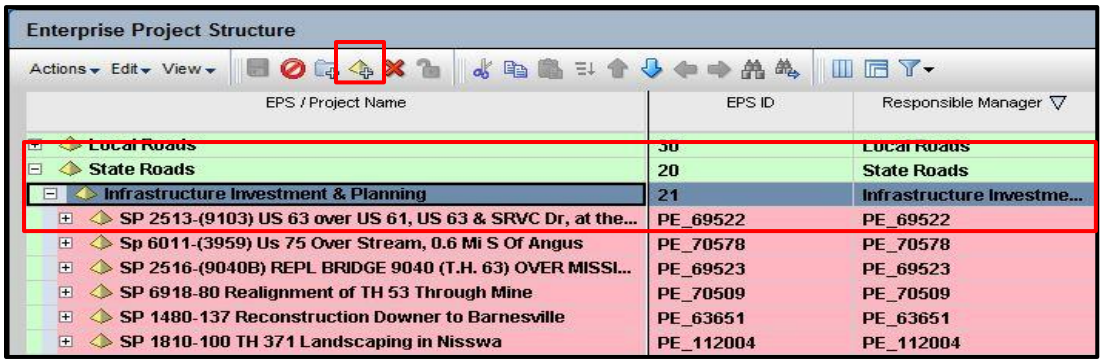


6. Create EPS Node.

   Admin shall build a new EPS node for placement of the new projects (modules). The EPS should reflect the same hierarchy as the newly created OBS.

   To build the EPS Node:

   a) Locate the appropriate hierarchy and select **Add Sibling EPS icon**  .



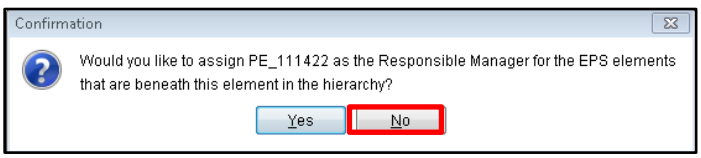
   In this example, the project will be added under State Roads → Infrastructure Investment & Planning.

   b) Use the following convention to assign the **EPS Name** and **EPS ID**. Character Limit is 120.

      EPS Name: [SP#][Route Type and #][Project Description]

      EPS ID: PE_[Element #]

   c) Assign the appropriate **PE_#** (created within the OBS) as the **Responsible Manager**. Select No when prompted by the following dialog box:



7. Create schedule shells in appropriate EPS node.

To generate each schedule (module):

a) Highlight the appropriate EPS node and select the **Add Project** icon  .

b) Populate the following information using the **Add Project dialog box**:

Field Name	Standard Convention
Project ID	■ Scoping Schedules – Element ID #_S ■ Right-Of-Way Schedules – Element ID #_R ■ Bridge Schedule(s) – Element ID #_B ■ Design Schedule – Element ID #_F ■ Construction Schedules – Element ID #_C
Project Name	■ [SP#][Route Type and #][Project Description] The Project Name should match the EPS Name.
EPS	[PE]_[Element ID #]
Responsible Manager	*Based on corresponding OBS element* ■ Preconstruction Schedules – [Element ID] ■ Contractors Construction Schedules – [Element ID]_C
Project Planned Start	Retain the default date that appears (the date the project is created)
Must Finish By Date	■ Preconstruction Schedules – Let date ■ Construction Schedules – None

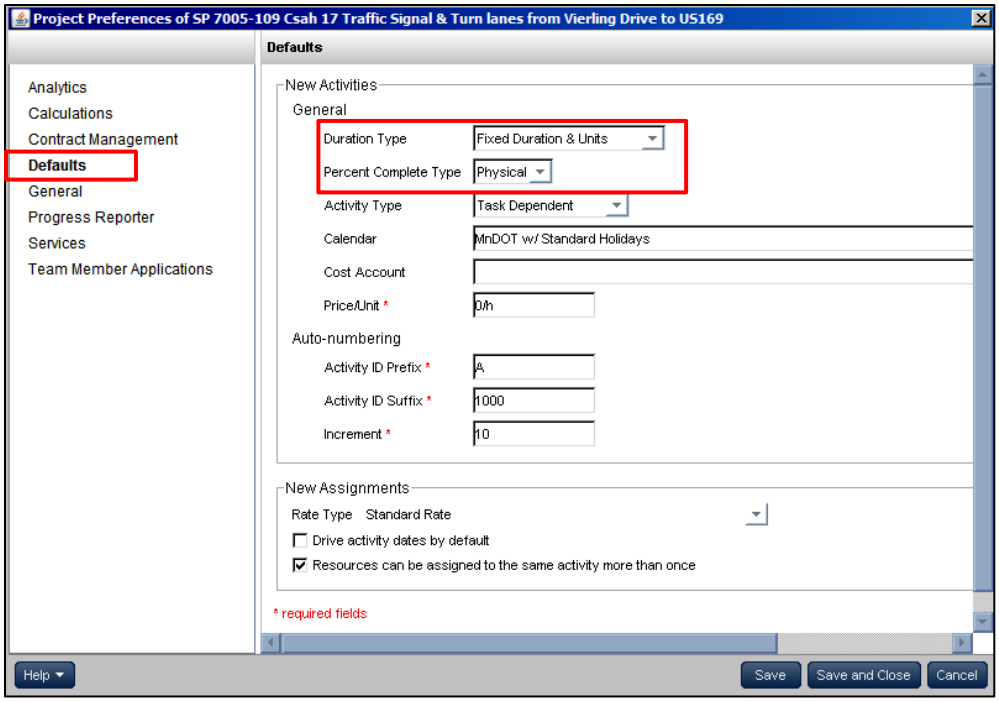
c) Click **Create**.

d) Apply **Project Preferences**.

Highlight the project, right-click and select **Project Preferences → Defaults**.

Duration Type: **Fixed Duration & Units**

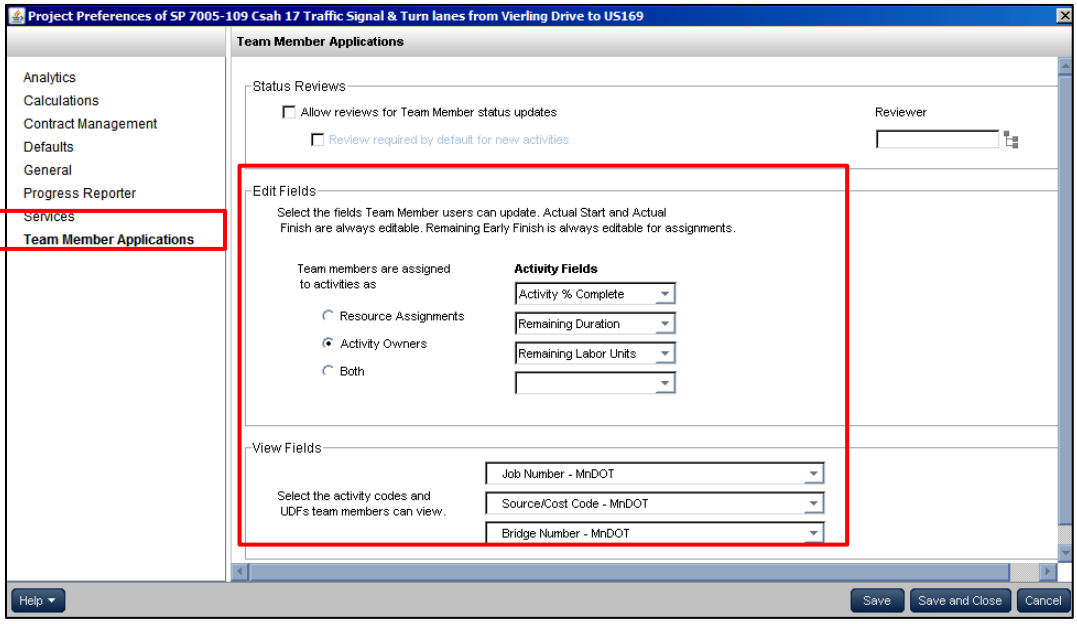
Percent Complete Type: **Physical % Complete**



e) Select the **Team Member Applications** and apply the following settings:

Edit Fields: **Activity Owners**; Activity Fields: **Activity % Complete**, **Remaining Duration,** and **Remaining Labor Units**

View Fields: **Job Number – MnDOT**, **Source/Cost Code – MnDOT**, and **Bridge Number – MnDOT (Be sure to select them in that order).**



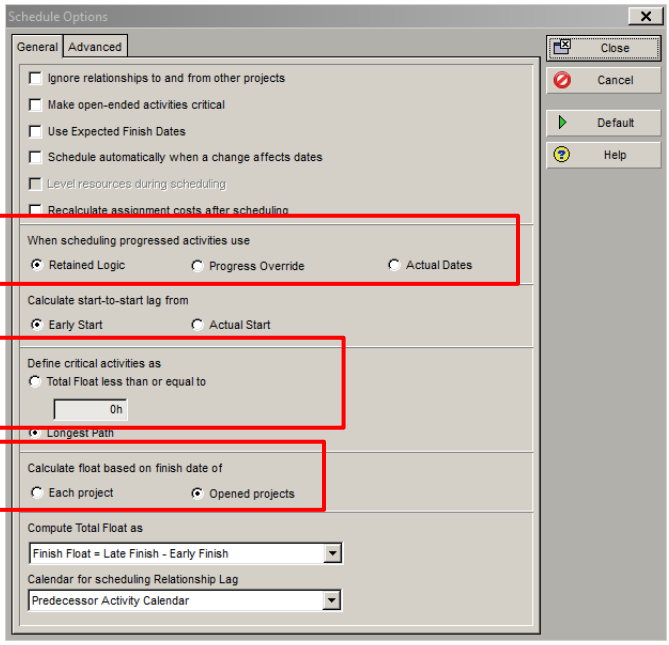
f) Select [F9] to review the settings **(DO NOT SCHEDULE THE PROJECT)**. It is important to verify the correct settings of a project for state project control uniformity. Ensure the following settings are selected:

Note: The screen shot shown below depicts how the screen should look for *all* projects. Always confirm the correct selections are made.

When scheduling progressed activities use: **Retained Logic**

Define critical activities as: **Longest Path**

Calculate float based on finish date of **Open Projects**



g) Populate all project codes that the EPMS is responsible for (use [MnDOT – New Project Creation Form] Layout in Client).

Update P6 Project status to "Planned" and set MnDOT Baseline Status Project Code to "Undeveloped".

Repeat steps a-g for each schedule (module) under the same PUMA Prime SP.

8. Apply project codes. See RD-00-06_Project Code Dictionary.xls
9. Confirm code and preference conformance.

P6 Admin will review the following items on the schedules (modules) (use [MnDOT – New Project Creation Form] Layout in Client):

a. MnDOT Project Codes

- PUMA Prime SP
- PUMA Bundle
- PUMA Element
- PUMA SP
- Job Number

- Job Phase
- MnDOT Project Status
- Products & Services
- Work Responsibility
- District
- Let Date

b. Responsible Manager for appropriate user access to individual schedules

c. Schedule default settings; fixed duration & units and physical % complete; team member settings.

d. Calendar setting is MnDOT w/ Standard Holidays (default)

e. Confirm Project Status & Must Finish By Date

10. File the schedule initiation forms.

    Schedule initiation forms will be retained for documentation and historical purposes using the following steps:

    a) Populate the **Date Completed** field with the date on which the schedule was initiated.

    b) Save the form to the N drive in the [N:\OPMTS Project Management\EPMS\Schedule Initiation Requests] folder with the following naming convention:

    [Project Name]_SIF_[YYYY_MM_DD], where date equals date of completion

    c) Save a pdf of the Header Info tab to the N drive in the [N:\OPMTS Project Management\EPMS\Schedule Initiation Requests] folder with the following naming convention:

    [Project Name]_HI_[YYYY_MM_DD], where date equals date of completion

11. Send an email notification to the SSC that the undeveloped schedule has been created in the EPS, but may still need additional project codes and template/work packages added. The pdf of the Header Info tab will be attached to the email.
12. Receive notification that the baselined schedule has been created from SSC.
13. Audit the Baseline Schedule for logic ties, coding and physical capture of baseline. See CS-00-XX_Baseline Audit Process for additional information. See CS-10-06_Baseline Audit Process.docx
    Upon receipt of the Baseline Schedule, the Admin team shall review the schedule to confirm schedule complies with MnDOT scheduling protocols.
    Items to be audited are as follows:
    a. Constraints and Lags: Confirm the schedule does not contain activity level constraints or lags
    b. Negative Float: Verify the schedule has a Float Value greater than 0 when the project is open
    c. Logic Ties: There should not be greater than (2) open-ended activities in the schedule. This can be verified in the schedule log file report.
    d. Project and Activity Level Coding: Verify the code values have been properly assigned at both the project level and activity level. Standard project and activity codes can be found in RD-00-06_Project Code Dictionary and RD-00-11_Activity Code Dictionary.
    e. Maintain Baselines and Assign Baselines: With the project open, verify the baseline has been captured and named properly within “Maintain Baselines”. Open “Assign Baselines” to verify the baseline has been assigned to the current project

14. Notify SSC of rejection or acceptance of the Baseline schedule.
15. Work with SSC to resolve audit findings.
16. Receive updated Baseline Schedule from SSC for approval.
17. File a pdf of the approved baseline schedule at N:\OPMTS Project Management\P6_Reports in the appropriate District. The file naming convention is XXXX-XX-BS-Y where XXXX-XX is the SP number and Y is the version control number.
18. Notify the SSC and the PM that the baseline schedule has been approved and will be posted to the P6 website.

4.0 APPENDIX

The following information is further guidance, protocols, and reference materials for creating and baselining a schedule.

4.1 ACTIVITIES

1. **Activity Definition:** It is generally encouraged to break activities at products and handoffs.
2. **Activity ID**: Activity IDs for a single work package should have a three letter prefix that coincides with the appropriate WBS node according to the Activity ID Prefix Dictionary. The prefix is followed by a four digit code that should progress in order by ten based on the general chronology of the activities (1000, 1010, 1020, etc.)
3. **Activity Description**: Activity descriptions should at minimum have verb, object, and (when applicable) location. Activities should clearly describe the work represented by the activity. Title capitalization should be used for descriptions; never all caps.
4. **Activity Duration**: Activities should generally be in the 5-20 day range. However, activities can fall outside of these thresholds as long as there is a clear deliverable represented and there is the appropriate amount of detail to manage the work.
5. **Activity Duration**: Activity duration on a work package should be based on the most likely number of days the activity would take on an average project. Durations can be scaled during the schedule concurrence process.
6. **Total Number of Activities**: Care should be taken that the total number of activities in a work package does not make it too cumbersome to update.
7. **Constraints/Lags/Leads**: Activity level constraints, lags, and leads are not allowed in the schedules.
8. **Calendars**: Seasonally or otherwise restricted activities should be placed on a calendar that appropriately reflects when that work can be performed.
9. **Activity Codes**: ALL ACTIVITIES should have the appropriate code value for MnDOT Functional Group.

4.2 KEY PERFORMANCE INDICATORS

Key Performance indicators are milestones used to measure key deliverables for a project.

Activity ID	Activity Description
MS_100	Project Initiated
MS_150	Environmental Document Approved
MS_170	Final Design Project Baselined
MS_175	Scoping Document Complete
MS_180	MDR Completed
MS_190	Utility Notice and Orders Sent
MS_200	Municipal Agreement Request Submitted

MS_210	Roadway Plans Ready
MS_230	Project Turned In
MS_240	Permits Acquired
MS_250	RW Title and Possession Obtained
MS_260	FHWA Authorization Received
MS_270	Letting Held

4.3 RELATIONSHIPS

1. Activities in a schedule must at minimum have a predecessor and a successor excepting the first and last activity in the schedule.
2. Start to Finish relationships are not to be used.
3. Lags and leads are not to be used.

4.4 CONSTRAINTS

Constraints are not to be used on the project excepting the following project-level constraints:

1. Project Start Date
   Used when project is identified but no work is anticipated prior to some future point.
2. Project Must Finish By
   Currently used to indicate letting date.

Activity level constraints must be approved by Admin staff

4.5 SECURITY PROFILES

User Category	Security Rights	P6 Profile Assigned
P6 Admin	• Access is determined on a case by case basis by the admin lead.	• Access is determined on a case by case basis by the admin lead.
SSC Lead	• Edit all design schedules in assigned districts • Create schedules in assigned sandboxes • Copy project templates and work packages into a schedule • View all contractor schedules in assigned districts	• *Scheduler 1* (all MnDOT highway design projects in assigned districts) • *Scheduler 2* (sandbox in assigned districts) • *View Only* (templates, work packages, contractor schedules in assigned districts, sandbox in unassigned districts)
SSC Scheduler	• Edit all design schedules in assigned districts • Copy project templates and work packages into a schedule	• *Scheduler 1* (all MnDOT highway design projects in assigned districts) • *View Only* (templates, work packages, sandbox in unassigned districts)
Project Manager	• Update activity progress in Team Member • View access to assigned projects in P6 can be granted by special request to the PMU office	• *Team Member* (all assigned activities) • *View Only* to assigned projects by special request
Activity Owner	• Update activity progress in Team	• *Team Member* (all assigned

	Member	activities)
Functional Group – CO	• Update activity progress in Team Member • View access to assigned projects in P6 can be granted by special request to the PMU office	• *Team Member* (all assigned activities) • *View Only* to assigned projects by special request
Functional Group - District	• Update activity progress in Team Member • View access to assigned projects in P6 can be granted by special request to the PMU office	• *Team Member* (all assigned activities) • *View Only* to assigned projects by special request