

WELCOME

UFGS Project Schedule Requirements
[Section 01 32 01.00 10]

Wed 0115 - 0230

by

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UFGS Project Schedule Requirements

[Section 01 32 01.00 10]



Disclaimer

The information contained in this presentation and discussion **is not a formal or official Government interpretation or enforcement policy** of the Project Schedule requirements (section 01 32 01.00 10) of the Unified Facilities Guide Specification (UFGS) and **should not be used as justification or defense for your Project Schedule structure, approach, or quality.** Each government Project Delivery Team (PDT) is unique in its make up and project management style, therefore, **will have differing interpretation, enforcement, and implementation of these requirements.** The intent of this presentation and subsequent discussion is to **provide some insight to developing an acceptable project schedule** based on 25+ years of experience with DOD and DOE environmental, construction, and design/build projects.

UFGS Project Schedule Requirements

[Section 01 32 01.00 10]

USACE / NAVFAC / AFCEC / NASA

UFGS-01 32 01.00 10 (February 2015)

Preparing Activity: USACE

Superseding
UFGS-01 32 01.00 10 (August 2008)

UNIFIED FACILITIES GUIDE SPECIFICATIONS

References are in agreement with UMRL dated January 2015

SECTION 01 32 01.00 10
PROJECT SCHEDULE

NOTE: This guide specification covers the requirements for the preparation and maintenance of the project schedule for construction projects or design-build construction projects.

UFGS Project Schedule Requirements

Schedule Specifications



- **Section 1.3 Project Scheduler Qualifications**
- **Section 2.1 Software**
- **Section 3.1 General Requirements**
- **Section 3.2 Basis of Payment and Cost Loading**
- **Section 3.3 Project Schedule Detail Requirements**

UFGS Project Schedule Requirements

2.1.1 Governments Default Software



The scheduling software utilized to produce and update the schedules required herein must be capable of meeting all requirements of this Specification (2.1). The Government intends to use Primavera P6 (2.1.1).

- **Whatever Scheduling Software you use it must meet or exceed these requirements.**
- **The Governments preferred Software is Primavera P6.**

UFGS Project Schedule Requirements

2.1.2 Contractor Software



...software used by the contractor must be commercially available... The software routine used to create the required sdef file must be created and supported by the software manufacturer (2.1.2). If Primavera P6 is selected for use, provide the "xer" export file in a version of P6 importable by the Government system (2.1.2.1). ...provide for the Government's use two licenses, two computers, and training for two Government employees in the use of the software. These computers will be stand-alone and not connected to Government network. Computers and licenses will be returned at project completion (2.1.2.2).

- **SDEF File generation needs to be software application supported (USACE only).**
- **From P6 use .XER file compatible to Government version.**
- **If not P6 provided the government 2 computers and stand-alone versions of the software w/training & maintenance.**

UFGS Project Schedule Requirements

3.1 General Requirements



Prepare for approval a Project Schedule, as specified herein, ... schedule the proposed sequence to perform the work and dates contemplated for starting and completing all schedule activities. ...including the design and construction sequences ...

- Provide a logical sequence of **ALL** planned work to accomplish the deliverable Scope or Work.
- Includes both the design and construction as one integrated schedule.

UFGS Project Schedule Requirements

3.1 General Requirements (cont)



... Contractor management must actively participate ... [and] subcontractors and suppliers **must** also contribute to in developing and maintaining an accurate Project Schedule. ... Provide a schedule that is a forward planning as well as a project monitoring tool. ...

- **Provide a Project Schedule Baseline and Progress schedule that accurately represents the Planned and Actual work.**
- **Contractor management, Subcontractors, and Supplies must actively participate.**

UFGS Project Schedule Requirements

3.1 General Requirements (cont)



... Use the **Critical Path Method** (CPM) of network calculation to generate all Project Schedules. Prepare each Project Schedule using the **Precedence Diagram Method** (PDM). (highlighting added)

- **Provide a time based network of activities based on predecessor (and successor) relationships (PDM).**
- **Provide a deterministic Longest Path and Total Float based on the network relationships (CPM).**

UFGS Project Schedule Requirements

3.2 Basis of Payment and Cost Loading



The schedule is the basis for determining contract earnings during each update period and therefore the amount of each progress payment. The aggregate value of all activities coded to a contract CLIN must equal the value of the CLIN.

- **The schedule is your Schedule of Value.**
- **Forms the basis of your progress payments**
- **Must roll up and equal to each awarded CLIN.**

UFGS Project Schedule Requirements

3.2.1 Activity Cost Loading



Activity cost loading must be reasonable and without front-end loading. Provide additional documentation to demonstrate reasonableness if requested by the Contracting Officer.

- **Cost loading needs to be at the activity level.**
- **Cost loaded activities must have a **measureable** and **deliverable** value to the Government.**
- **All activities must be coded to a CLIN and roll up to each current approved CLIN value.**

UFGS Project Schedule Requirements

3.2.2 Withholdings / Payment Rejection



Failure to meet the requirements of this specification may result in the disapproval of the preliminary, initial or periodic schedule updates and subsequent rejection of payment requests until compliance is met.

Meet these schedule requirements OR No \$\$\$.

UFGS Project Schedule Requirements

3.2.2 Withholdings / Payment Rejection (cont)



In the event that the Contracting Officer directs schedule revisions and those revisions have not been included in subsequent Project Schedule revisions or updates, the Contracting Officer may withhold 10 percent of pay request amount from each payment period until such revisions to the project schedule have been made.

KO (Gov't PDT) directed schedule revisions not included = 10% withholdings on payments.

UFGS Project Schedule Requirements

3.3 Project Schedule Detail Requirements – Part 1



Part 1 – Activity Requirements

- Level of Detail Required (3.3.1)
- Activity Structures (3.3.2 to 3.3.6)
- Activity Coding Dictionary (3.3.7)

Part 2 – Network Requirements

- Contract Milestones and Constraints (3.3.8)
- Network Structure (3.3.9 to 3.3.18)
- Cost Loading of Closeout Activities (3.3.19)
- Adverse Weather (3.3.20)
- Early Completion Schedule (3.3.21)

UFGS Project Schedule Requirements

3.3.1 Level of Detail Required



Develop the Project Schedule to the appropriate level of detail to address major milestones and to allow for satisfactory project planning and execution. Failure to develop the Project Schedule to an appropriate level of detail will result in its disapproval. ...

- **“...appropriate level of detail. ... as determined by the Contracting Officer”**
- **Work with the Gov’t PDT to establish an**
 - **“appropriate level of detail” for progress payment, and**
 - **a working schedule for your project team.**
- **Network of activities must:**
 - **Cover the entire scope of work,**
 - **provide definitive tasks with a clear deliverable value, &**
 - **in a definitive sequence of performance.**

UFGS Project Schedule Requirements

3.3.1 Level of Detail Required (cont)



The Contracting Officer will consider, but is not limited to, the following characteristics and requirements to determine appropriate level of detail:

- **3.3.2 Activity Duration**
- **3.3.3 Design and Permit Activities**
- **3.3.4 Procurement Activities**
- **3.3.5 Mandatory Tasks**
- **3.3.6 Government Activities**
- **3.3.7 Activity Coding**

UFGS Project Schedule Requirements

3.3.2 Activity Durations



Reasonable activity durations are those that allow the progress of ongoing activities to be accurately determined between update periods. Less than 2 percent of all non-procurement activities shall have Original Durations (OD) **greater than 20 work days or 30 calendar days.** (highlighting added)

- **No more than 2% of non procurement activities can have an OD greater than 1 reporting cycle.**
- **Use documented *Rules of Credit (RoC)* to define % complete for resource / cost (revenue) loaded activities.**

UFGS Project Schedule Requirements

3.3.3 Design and Permitting Activities



...design and permit activities with the necessary conferences and follow-up actions and design package submission dates. ...showing the sequence of events involved in carrying out the project design tasks ... sufficient to identify all major design tasks, ... control[s] the flow of work. ...include review and correction periods associated with each item.

Each Design Package(s) should include, but not limited to:

- **Prepare Design**
 - **Internal Review and QA Process**
 - **Government Review Period (as specified)**
 - **Resolution Conference (as specified)**
 - **Incorporation of Review Comments**
 - **NTP for construction and/or Procurement or next design phase.**

UFGS Project Schedule Requirements

3.3.3 Design and Permitting Activities (cont)

...design and permit activities with the necessary conferences and follow-up actions and design package submission dates. ...showing the sequence of events involved in carrying out the project design tasks ... sufficient to identify all major design tasks, ... control[s] the flow of work. ...include review and correction periods associated with each item.

Design package submissions, reviews, and corrections requirements are typically defined in the RFP or SOW under “Design After Award.” May include (or some sub set of) the following phases:

- **Initial Design Conference (10% or Design Charrette)**
 - **Preliminary Design (35%)**
 - **Pre-Final Design (65%)**
 - **Final Design (100%)**
 - **Corrected Final Design (IFC)**

UFGS Project Schedule Requirements

3.3.3 Design and Permitting Activities (cont)

...design and permit activities with the necessary conferences and follow-up actions and design package submission dates. ...showing the sequence of events involved in carrying out the project design tasks ... sufficient to identify all major design tasks, ... control[s] the flow of work. ...include review and correction periods associated with each item.

Design fast tracking requirements are also defined in the RFP or SOW under “Design After Award.” Typically the following is allowed:

- **Civil/Utilities can go from Charrette to Pre-final or Final**
- **Foundation and Structural can go from Charrette to Pre-final or from Preliminary to Final.**
- **Architectural, Mechanical, Electrical, Plumbing, and Life Safety must proceed through each required submission.**

UFGS Project Schedule Requirements

3.3.4 Procurement Activities



Include activities associated with the **critical submittals** and their **approvals, procurement, fabrication, and delivery** of long lead materials, equipment, fabricated assemblies, and supplies. **Long lead procurement activities are those with an anticipated procurement sequence of over 90 calendar days. (highlighting added)**

- **Include key (critical) deliverable materials and equipment.**
- **Include activities to secure Sub/Vendor and receive Government approval on Submittals.**
- **Include procure/fabrication/delivery activities**
 - **as a predecessor to all appropriate installation tasks**
 - **cost load with deliverable value to the Government.**

UFGS Project Schedule Requirements

3.3.5 Mandatory Tasks



Include the following activities/tasks in the initial project schedule and all updates.

As part of the design phase:

- **Submit/Review/Acceptance for each design package submission**
- **Submit/Review/Acceptance of MEP layout drawings (w/pre-final)**
- **Submission/Acceptance of TAB Specialist design review reports.**
- **Submission/Approval of Fire Protection Specialist.**

UFGS Project Schedule Requirements

3.3.5 Mandatory Tasks (cont)



Include the following activities/tasks in the initial project schedule and all updates.

Building Automation Systems commissioning consistent with the contract commissioning requirements, including at a minimum the following:

- **TAB Plan and Results**
- **Air and Water Balancing**
- **Building Commissioning**
- **Controls and Testing Plan Submission**
- **Controls Testing (including PVT & FVT) such as:**
Fire Alarm, Access Controls, Mass Notification, Elevator Certification, Energy Management, and any other building systems that links to the HVAC and Life Safety systems.

Applicable for each phased turnover

UFGS Project Schedule Requirements

3.3.5 Mandatory Tasks (cont)



Include the following activities/tasks in the initial project schedule and all updates.

As part of **each construction turnover (Red Zone)**:

- Submit/acceptance–O&M Manuals
- Submit/acceptance–As-built Drawings (after submit, review, and acceptance of redline drawings)
- Submit/Approval – Form DD 1354 (Transfer of Property)
- Contractor's Pre-Final Inspection → Punchlist corrections
 - Government's Pre-final Inspection → Punchlist corrections
 - Government's Final Inspection
 - Government's acceptance (BOD)

Applicable for each phased turnover

UFGS Project Schedule Requirements

3.3.6 Government Activities



Show Government and other agency activities that could impact progress. These activities include, but are not limited to: approvals, design reviews, environmental permit approvals by State regulators, inspections, utility tie-in, Government Furnished Equipment (GFE) and Notice to Proceed (NTP) for phasing requirements.

Show all Government or other agencies activities that could impact or constrain the schedule, such as:

- State / Local / Base permitting requirements
- **Interim Gov't inspections (rebar and in-beds/above ceiling & in-wall MEP)**
- Utility Tie-in/road closures notification & inspections
- Government furnished and/or installed materials or equipment (GFE/GIE).

UFGS Project Schedule Requirements

3.3.7 Standard Activity Coding



Use the activity coding structure defined in the Standard Data Exchange Format (SDEF) in ER 1-1-11. This exact structure is mandatory. All Activity Codes shall be developed and assigned to activities as detailed herein. The SDEF format is as follows:

<u>Field</u>	<u>Activity Code</u>	<u>Code Length</u>	<u>Description</u>	<u>Comments</u>
1	WRKP	3	Workers per Day	(See 3.3.7.1)
2	RESP	4	Responsible Party	(See 3.3.7.2)
3	AREA	4	Area of Work	(See 3.3.7.3)
4	MODF	6	Modification/RFP/REA	(See 3.3.7.4)
5	BIDI	6	Bid Item (CLIN or SubCLIN)	(See 3.3.7.5)
6	PHAS	2	Phase of Work	(See 3.3.7.6)
7	CATW	1	Category of Work	(See 3.3.7.7)
8	FOW	20	Feature of Work	(See 3.3.7.8)

[NOTE: Required for USACE – Modified for NAVFAC – Typically not required by AFCEC]

UFGS Project Schedule Requirements

3.3.7.1 Workers Per Day (WRKP)



Assign Workers per Day for all field construction or direct work activities, if directed by the Contracting Officer. Workers per day shall be the average number of workers expected each day to perform a task for the duration of that activity.

Typically not requested, but If requested, Code all field construction or direct work activities with the average number (0 – 999) of workers per day to accomplish the task.

UFGS Project Schedule Requirements

3.3.7.2 Activity Responsibility Coding (RESP)



Assign responsibility Code for all activities to the Prime Contractor, Subcontractor or Government agency responsible for performing the activity. ... Activities shall not have more than one Responsibility Code. ...

Unacceptable code values are abbreviations of the names of subcontractors.
(highlighting added)

Code all activities; examples of acceptable code values are:

- **GOVT - Government's PDT activities (USACE, NavFac, AFCEC, Etc.)**
- **DOR - Designer of Records**
- **ELEC - Electrical Sub/Vendors**
- **MECH - Mechanical Sub/Vendors**
- **FIRE - Fire Alarm and Suppression Sub/Vendors**
- **CIPC - Cast in place Concrete Sub/Vendors**

[NOTE: Subcontractor abbreviations are not acceptable. If you need this define a Sub-contract code (SUBC)]

UFGS Project Schedule Requirements

3.3.7.3 Activity Work Area Coding (AREA)



Assign Work Area code to activities based upon the work area in which the activity occurs. ... Not all activities are required to be Work Area coded. A lack of Work Area coding will indicate the activity is not resource or space constrained.

➤ Define area with respect to:

- space and/or trade constraints, and/or
- specific phased turnover, and/or
- construction/design groupings.

➤ NAVFAC uses LOC1 and LOC2 in addition to AREA

[NOTE: Not required to code every activity, however, if structured compatible with the PHAS code and the RESP Code and assigned to all activities it can provide a variety of alternate WBS or groupings for your Design, Procurement, and Construction team members as well as for your Sub/Vendors and Government's PDT.]

UFGS Project Schedule Requirements

3.3.7.4 Modification Number (MODF)



Assign a Modification Number Code to any activity or sequence of activities added to the schedule as a result of a Contract Modification, when approved by Contracting Officer. Key all Code values to the Government's modification numbering system. An activity can have only one Modification Number Code..

- **Should be keyed (equal) to the PDT's Modification / RFP / RFI numbering system.**
- **Assign a MODF code value 000000 to every original contract award scope activity.**
- **Added appropriately coded marker and work activities for changed conditions / delays with potential cost/schedule impact (see BIDI).**
- **Not typically called out for NAVFAC contracts.**

UFGS Project Schedule Requirements

3.3.7.5 Bid Item Coding (BIDI)



Assign a Bid Item Code to all activities using the Contract Line Item Schedule (CLIN) to which the activity belongs, even when an activity is not cost loaded. An activity can have only one BIDI Code.

- **Should be keyed (equal) to the PDT's CLIN numbering system.**
- **Code all activities (forms the SOV for Payment)**
- **Code all RFP or RFI marker activities to the appropriate CLIN potentially affected**
 - Do not assign a GOVT RESP Code Value or cost value until an approved modification is issued.**
- **Not typically called out for NAVFAC contracts**

UFGS Project Schedule Requirements

3.3.7.6 Phase of Work Coding (PHAS)



Assign Phase of Work Code to all activities based upon the phase of work in which the activity occurs. ... [design/construction] phases proposed by the Contractor to allow [grouping] by fast track design and construction Packages ... separately defined performance periods ... Each activity shall be identified with a single project phase and have only one Phase of Work code.

- **Code all activities**
- **Use to group design, procurement, construction, turnover, fast track design, and construction element as proposed or required by the contract.**
- **Align with the AREA Code – alternate grouping for design and construction team and the PDT.**

UFGS Project Schedule Requirements

3.3.7.7 Category of Work Coding (CATW)



Assign a Category of Work Code to all activities. Category of Work Codes Include [see below]. Each activity can have no more than one Category of Work Code.

- **Code all activities; including but not limited to:**
Design, Design Submittals, Design Reviews, Review Conferences, Permits, Construction Submittals, Construction Submittal approvals, Acceptance, Procurement, Fabrication, Delivery, Weather Sensitive Installation, Non-weather Sensitive Installation, Start-up, and Test and Turnover.
- **These code values in connection with RESP are used by the Government to help schedule their resources.**
- **Weather Sensitive and Non-sensitive helpful to align activities with a weather based calendar.**
- **Not required for NAVFAC**

[See also 3.3.20 – Anticipated Adverse Weather]

UFGS Project Schedule Requirements

3.3.7.8 Feature of Work Coding (FOW)



Assign a Feature of Work Code to appropriate activities based on the Definable Feature of Work to which the activity belongs based on the approved QC plan. ... An activity can have only one Feature of Work Code.

- **Code appropriate deliverable activities of value to the Government.**
- **Must align with the FOW as defined in the Quality Control Plan (Typically in line with the Submittal Register which is often based on the CSI Format 2004.)**
- **NAVFAC: Work Item Code instead of FOW**
- **P6 use FOW and limit the code value description to 30 characters.**
- **P3 and MS Project use FOW1, FOW2, FOW3 and enter code values up to 10 characters for each.**

UFGS Project Schedule Requirements

3.3 Project Schedule Detail Requirements – Part 2



Part 1 – Activity Requirements

- Level of Detail Required (3.3.1)
- Activity Structures (3.3.2 to 3.3.6)
- Activity Coding Dictionary (3.3.7)

Part 2 – Network Requirements

- Contract Milestones and Constraints (3.3.8)
- Network Structure (3.3.9 to 3.3.18)
- Cost Loading of Closeout Activities (3.3.19)
- Adverse Weather (3.3.20)
- Early Completion Schedule (3.3.21)

UFGS Project Schedule Requirements

3.3.8 Contract Milestones & Constraints



Milestone activities are to be used for significant project events including, but not limited to, project phasing, project start and end activities, or interim completion dates. The use of artificial float constraints such as "zero free float" or "zero total float" are prohibited.

- **Use milestones to show a summary of key contractual and project phases start/finish.**
- **Ask if they will allow “zero free float” or “zero total float” or “as late as possible” constraints.**

UFGS Project Schedule Requirements

3.3.8 Contract Milestones & Constraints (cont)



Mandatory constraints that ignore or effect network logic are prohibited. No constrained dates are allowed in the schedule other than those specified herein. Submit additional constraints to the Contracting Officer for approval on a case by case basis.

- **Hard constraints are not allowed.**
 - No Mandatory Start or Finish constraints**
 - No Start-on or Finish-on constraints**
- **Do not use soft constraints unless specifically:**
 - specified in the RPF/SOW, or**
 - authorized, in writing, by the KO.**

UFGS Project Schedule Requirements



3.3.8.1 Project Start Date Milestone & Constraints

The first activity in the project schedule must be a start milestone titled "NTP Acknowledged," which must have a "Start On" constraint date equal to the date that the NTP is acknowledged.

- **“Start Project” or “Contract NTP” milestone shall be constrained to the NTP date and is the only activity with no predecessor.**
- **First work (deliverable) activity shall start on NTP.**

UFGS Project Schedule Requirements



3.3.8.2 Project Finish Date Milestone & Constraints

The last activity in the schedule shall be a finish milestone titled "End Project." ... must be constrained to the Contract Completion Date in such a way that if the schedule calculates an early finish, then the float calculation ... reflects positive float on the longest path. If the project schedule calculates a late finish, then the ... float calculation reflects negative float on the longest path. The Government is under no obligation to accelerate Government activities to support a Contractor's early completion.

The "End Project" Milestone shall be

- The only activity with no successor,
- driven by the longest path, and
- constrained to the Contract Completion date such that the float calculations:
 - Early Finish = Positive Float
 - Late Finish = Negative Float

UFGS Project Schedule Requirements

3.3.8.3 Interim Completion Dates and Constraints

Constrain contractually specified interim completion dates to show negative Float ... Include as the first activity for a project phase an activity called "Start Phase X" ... Include as the last activity for a project phase an activity called "End Phase X" where "X" refers to the phase of work.

- **Identify all contractual defined project phases or hard interim milestones.**
- **Each phase shall have a start and finish milestone.**
- **Start / Finish shall be constrained contractually specified so a positive/negative float for the phase is calculated.**

UFGS Project Schedule Requirements

3.3.9 Calendars



Schedule activities on a calendar to which the activity logically belongs. ...
Develop the default Calendar to match the physical work plan with non-work periods identified including weekends and holidays. ...

- **Schedule activities on the calendar you plan to work the task.**
- **On-site work should be scheduled on a 5 day/week, normal work hours, with federal holidays.**
- **Off-site work should be schedule on a 5 day/week, normal work hours, with company holidays.**

UFGS Project Schedule Requirements

3.3.9 Calendars (cont)



... Develop calendars to accommodate any contract defined work period such as a 7-day calendar for Government Acceptance activities, concrete cure times, etc. ... Develop Seasonal Calendar(s) and assign to seasonally affected activities as applicable.

- **Unless otherwise stated use a 7 day No Holiday (calendar day) calendar for:**
 - **Government Activities**
 - **Contract specified non-work periods**
 - **Time base non-cost activities**

- **Use Seasonal Calendars as appropriate.**

UFGS Project Schedule Requirements

3.3.9 Calendars (Weather Sensitive)



If an activity is weather sensitive it should be assigned to a calendar showing non-work days on a monthly basis, with the non-work days selected at random across the weeks of the calendar, using the anticipated days provided in the contract clause TIME EXTENSIONS FOR UNUSUALLY SEVERE WEATHER. **The assignment of the non-work days should be over a seven-day week since weather records are compiled on seven-day weeks, which will cause some of the weather related non-work days to fall on weekends.** (highlight added).

Develop a Weather Sensitive Activity Calendar that:

- Accounts for “anticipated adverse weather” inclusive of default calendar non-work days.
- Assign to Weather Sensitive activities.
- For each default work calendar.

[see 3.3.20 Anticipated Adverse Weather]

UFGS Project Schedule Requirements

3.3.8.10 Open Ends



Only two open ended activities are allowed: the first activity "NTP Acknowledged" must have no predecessor logic, and the last activity -"End Project" must have no successor logic. Predecessor open ended logic may be allowed in a time impact analyses upon the Contracting Officer's approval.

- **Open Ended activities not allowed unless:**
 - **It is the first activity**
 - **It is the last activity**
 - **Or approved by the KO as part of a TIA**
- **Avoid virtual open ended activities – i.e., an activity without any **FS or FF successor** or **FS or SS Predecessor****

UFGS Project Schedule Requirements

3.3.11 Default Progress Data Disallowed



... Updating of the percent complete and the remaining duration of any activity shall be independent functions. Disable program features which calculate one of these parameters from the other. [Activity AS and AF dates] assigned during the updating process shall match those dates provided from Contractor Quality Control Reports. ...

- **Use Physical % Complete and manually enter Remaining Durations, Actual Start / Finish Dates.**
- **The Contractor's Daily Quality Control Reports (not the schedule) are the basis of your schedule progress dates.**
- **Failure to match can result in rejection of you progress schedule and payment.**

UFGS Project Schedule Requirements

3.3.12 Out-of-Sequence Progress



Activities that have progressed before all preceding logic has been satisfied (Out-of-Sequence Progress) will be allowed only on a case-by-case basis subject to approval by the Contracting Officer. ... corrections to eliminate or justify not changing the sequencing for approval prior to submitting an updated project schedule. Address out of sequence progress or logic changes in the Narrative Report and in the periodic schedule update meetings.

- **Either fix or justify all Out-of-Sequence conditions.**
- **Document all such changes or justification in the Schedule Narrative Report (3.5.2) for approval by KO.**

UFGS Project Schedule Requirements

3.3.13 Added & Deleted Activities



Do not delete activities from the project schedule or add new activities to the schedule without approval from the Contracting Officer. Activity ID and description changes are considered new activities and cannot be changed without Contracting Officer approval.

- **Do not delete or add activities to the schedule without PDT Approval (as authorized by KO).**
- **Do not change Activity ID or Descriptions without PDT Approval (as authorized by KO).**
- **Document changes in the Schedule Narrative Report (3.5.2).**

UFGS Project Schedule Requirements

3.3.14 Original Duration



Activity Original Durations (OD) must be reasonable to perform the work item. OD changes are prohibited unless justification is provided and approved by the Contracting Officer.

- **OD must be reasonable and achievable**
- **Baseline OD should not be changed in the progressed schedule.**
- **Document and Justify any changes in the Schedule Narrative Report (3.5.2) and approved by the PDT (as authorized by the KO).**

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3.3.15 Leads, Lags, and SF Relationships

Lags must be reasonable as determined by the Government and not used in place of realistic original durations, must not be in place to artificially absorb float, or to replace proper schedule logic.

- a. Leads (negative lags) are prohibited.
- b. Start to Finish (SF) relationships are prohibited.

- **Negative Lag (Leads) are not allowed.**
- **Start to Finish Relationships not allowed.**
- **Limit the use of Lags:**
 - **Split the Predecessor active using FS relationship instead of SS relationship with a large lag.**
 - **Use a non-deliverable time based activity as a predecessor in place of a Lag.**

UFGS Project Schedule Requirements

3.3.16 Retained Logic



Schedule calculations must retain the logic between predecessors and successors ("retained logic" mode) even when the successor activity(s) starts and the predecessor activity(s) has not finished (out-of-sequence progress). ... ("progress override") are not be allowed.

- **Use retained logic mode only**
- **Correct Out-of-Sequence Progress as necessary to maintain schedule (see Out-of-Sequence above).**
- **Take advantage of this to push the completion of an activity out.**

UFGS Project Schedule Requirements

3.3.17 Percent Complete



Update the percent complete for each activity started, based on the realistic assessment of earned value. Activities which are complete but for remaining minor punch list work and which do not restrain the initiation of successor activities may be declared 100 percent complete to allow for proper schedule management.

- **Define and document a Rule of Credit (RoC) for each activity.**
- **Use the RoC to support (justify) the % complete of physical work performed to date.**
- **Unlink Remaining Duration from % Complete**
- **Substantially Complete = 100% if minor punch list items are documented and agreed to (see 3.3.19)**

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3.3.18 Remaining Duration



Update the remaining duration for each activity based on the number of estimated work days it will take to complete the activity. Remaining duration may not mathematically correlate with percentage found under paragraph entitled Percent Complete.

- **Remaining Duration not linked to % Complete.**
- **Estimate the Remaining Duration to complete task.**
- **Document basis of Remaining Duration.**
- **Substantially Complete = 0 Remaining Duration if minor punch list item are documented (see 3.3.19).**

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3.3.19 Cost Loading of Closeout Activities



Cost load the "Correction of punch list from Government pre-final inspection" activity(ies) not less than 1 percent of the present contract value. Activity(ies) may be declared 100 percent complete upon the Government's verification of completion and correction of all punch list work identified during Government pre-final inspection(s).

- **Value of Punch-list activity >1% of Contract Value.**
- **100% Complete upon Gov't Acceptance that **all** Punch-list Corrections are complete.**
- **Remaining Duration = realistic estimate of when **all** punch-list correction item to be completed.**

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3.3.19.1 As-Built Drawings



If there is no separate contract line item (CLIN) for as-built drawings, cost load the "Submission and approval of as-built drawings" activity not less than \$35,000 or 1 percent of the present contract value, which ever is greater, up to \$200,000. Activity will be declared 100 percent complete upon the Government's approval.

- **Cost Load Government's Review and Acceptance of As-Built Drawings Activity.**
- **Deliverable Value = 1% of Contract Value, but not less than \$35K nor greater than \$200K.**
- **0% Complete until accepted by the Government.**
- **Remaining Duration should be based on realistic estimate of when As-Built Drawing Accepted.**

UFGS Project Schedule Requirements

3.3.19.2 O&M Manuals



Cost load the "Submission and approval of O & M manuals" activity not less than \$20,000. Activity will be declared 100 percent complete upon the Government's approval of all O & M manuals

- **Cost Load Government's acceptance of O&M Manuals (and may include O&M Training) Activity.**
- **Deliverable Value = estimated/proposed cost but not less than \$20K.**
- **100% Complete upon accepted by the Government.**
- **Remaining Duration should be based on realistic estimate of when O&M Manuals / Training Accepted.**

UFGS Project Schedule Requirements

3.3.20 Anticipated Adverse Weather



Paragraph applicable to contracts with clause entitled TIME EXTENSIONS FOR UNUSUALLY SEVERE WEATHER. Reflect the number of anticipated adverse weather delays allocated to a weather sensitive activity in the activity's calendar.

- **See also: 3.3.9 – Calendars, and 3.3.7.7 - CATW Coding.**
- **In addition - any day in any calendar not designated as a non-workday is viewed by the Government as a workday.**
[i.e., if you schedule it on a 7 day no holiday calendar they expect you to work it 7 days per week and holidays. If you do not use it you lose it in an TIA or justification for a schedule extension.]

UFGS Project Schedule Requirements

3.3.21 Early Project Completion



[If the Preliminary or Initial project schedule] that indicates all scope of the required contract work will be completed before the contractually required completion date ... will [not] be accepted without being fully resource-loaded (including crew sizes and man-hours) and the Government agreeing that the schedule is reasonable and achievable. The Government is under no obligation to accelerate work items it is responsible for [or modify funding] to ensure that the early completion is met

Your Initial Project Schedule (proposed) schedule shall not show a negative float but can show a positive float, However, the Government;

- **must agree the schedule is achievable based on resource loading,**
- **an early completion schedule shall show a positive float, and**
- **is under no obligation to accelerate their activities or modify funding to ensure the early completion.**

UFGS Project Schedule Requirements

3.12 Primavera P6 Mandatory Requirements



If Primavera P6 is being used, request a backup file template (.xer) from the Government, if one is available, prior to building the schedule. The following settings are mandatory and required in all schedule submissions to the Government:

- a) **Activity Codes must be at Project Level.**
- b) **Calendars must be at Project Level.**
- c) **Activity Duration Types must be “Fixed Duration & Units”**
- d) **Percent Complete Type must be “Physical”**
- e) **Time Period Admin Preferences must remain at the Primavera default**
- f) **Set Schedule Option to:**
 - ✓ **“Longest Path” for defining Critical Activities**
 - ✓ **“Retained Logic” for defining progressed activities**
- g) **Set up Cost Loading using a single lump sum resource.**
- h) **Activity ID’s must not exceed 10 characters.**
- i) **Activity Names must have the most defining and detailed description within the first 30 characters.**

UFGS Project Schedule Reporting Requirements

Next Session Wed 0245 – 0400



- **Section 3.4 Project Schedule Submissions**
- **Section 3.5 Submission Requirements**
- **Section 3.6 Periodic Schedule Update**
- **Section 3.7 Weekly Progress Meetings**
- **Section 3.8 Request for Time Extensions**
- **Section 3.9 Failure to Achieve Progress**
- **Section 3.10 Ownership of Float**
- **Section 3.11 Transfer of Schedule Data into RMS/QCS**
[Covered in “How to Cost Load a schedule for USACE’s QCS/RMS”]

Construction

Thank-you

Q & A

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