

Engineering Standards Update

News from Engineering Standards Program

Sep 4, 2024



[Standards are serious business](#) but this newsletter isn't always.

Topics this month:

- [Introducing Revit Training Tool: ProductivityNOW](#)
- [CPS Parking Lot Repaving](#)
- [Training & Qualification](#)
- [LANL Engineering Standards Issued in August](#)
- [LANL Engineering Processes Changes](#)
- [National Standards Action](#)
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- [When Good Conduct of Engineering Isn't Followed](#)

Get ready for end of the FY!



INTRODUCING REVIT TRAINING TOOL: PRODUCTIVITYNOW

Engineering Services is pleased to introduce a new self-paced training tool called *ProductivityNOW*, which is the industry standard training asset centered around *Autodesk Revit*. *Autodesk Revit* is the standard BIM Authoring tool that LANL is adopting. These assets range from topics supporting fundamentals in *Autodesk Revit* to Advance workflows, focusing on discipline-specific best practices, tips and tricks, and enhanced BIM concepts. The assets are made up of Learning Paths of Videos, workflows, and written content.

Assets can be self-assigned by enrolling in a full Learning Path or individual topics. Each asset provides an estimated time to complete so you can manage training time effectively. Another important aspect of *ProductivityNOW* is the self-assessment. When enrolling in an asset topic you may get the option to select *My Learning*, which will assign you an assessment or test. The assessment includes a series of questions about the asset topic and depending on your responses, it will assign training and enroll you in the appropriate asset topic(s). Note, you will need *Autodesk Revit* installed on your machine. If you already have some *Autodesk Revit* skills, *My Learning* assessments tailor the training to your needs saving you time! Finally, *ProductivityNOW* is designed to support on-the-job learning. As you work on projects in *Autodesk Revit* and need to understand or need a refresher on a specific topic, *ProductivityNOW* has a robust search and filter tool to narrow your search quickly and efficiently, providing you the information you need to quickly get back to your work.

While *ProductivityNOW* is being used to support our transition to *Autodesk Revit*, it also includes asset topics on other Autodesk products such as *Autodesk AutoCAD*, *Autodesk Civil 3D*, *Autodesk Navisworks*, *Autodesk Recap*, *Autodesk Construction Cloud*, *Autodesk Dynamo*, *Autodesk Twinmotion*, and *Autodesk Vault*. There are also other programs available such as *Bluebeam*, *Esri*, and *Principles in BIM and Project Management*.

For more information on training, visit the [VBEO web portal](#), and select the *Revit Training* button. To gain access to *ProductivityNOW*, please send a request to bgunderson@lanl.gov and include your name, group, and discipline. *Happy Learning!*

CPS PARKING LOT REPAVING

On September 11th, repaving of the north parking lot at Central Park Square (CPS) will begin. The project will be done in two phases: Phase 1 is scheduled from September 11th - 16th on the west half of the lot and Phase 2 is scheduled from September 17th - 21st on the east half of the lot. Note that the dates are weather dependent. Please ensure that no cars are parked in the lot overnight on September 10th. All government vehicles need to be relocated from the north parking lot by end of day, September 9th. Please do not enter the area being worked on; it will be flagged and roped off.



TRAINING & QUALIFICATION

Courses, Seminars, Programs

Note on Training Registration emails: When you sign up for a class in UTrain, you will receive an email that is generated by UTrain upon registration and again on the day of or before the class which will include the link to join the Teams meeting (for classes hosted online). **WARNING: To get the Teams link email you must register in UTrain. The email will NOT automatically enter an event on your calendar in Outlook. Please block your own calendar.** To receive credit for the course, you are required to log into the Teams meeting using a computer that has voice and chat capabilities (for classes hosted online). Do not use a mobile device to join the class; if you do so you will not be able to receive credit. For any questions, please email the Training team at es-do-tng@lanl.gov.

ES-DO: Lightning Protection (Electrical Design Engineer), #58735 – Sep 5, 9:00-10:00 am, Teams
This training, led by Eric Stromberg, covers lighting protection systems.

CoE Building Systems B31.9, #56239 – Sep 16-19, 23-26 (M-Tr, must attend all 8 sessions), 2:00-3:30 pm, Teams

Ari Swartz is leading this instructor-led course to familiarize participants with ASME B31.9 Building Services Piping Code and its real applications.

CoE: Design Engineer Voltage Drop Duty Area 9, #58421 – Sep 19, 9:00-11:00 am, Teams

Eric Stromberg is leading this instructor-led course. It is required for completion of Duty Area 9 for DE qualification of Electrical Engineers (per UTrain curricula 14186).

CoE Commercial Grade Dedication (CGD) - Preparers Course #30727 - Sep 25, 8:00 am - 4:00 pm, Teams

For those of you who will serve as LANL CGD Preparers including Procurement engineers, select CSEs and Quality SMEs, Course #30727 is required (#30726 is a prerequisite). **NOTE: Historically, this course is only offered twice a year, so plan accordingly!**

For any questions, contact instructor John Lamendola.

CoE Engineering Ethics, #59909 - Oct 15, 11:00 am - 12:00 pm, Teams

This course is designed to help professional engineers fulfill their professional development hour requirement. This interactive session will cover key ethical principles and real-world scenarios relevant to our work, ensuring that we uphold the highest standards of professionalism and integrity in all that we do.

Onboarding Training Courses by CoE Office, Teams:

- COE ES LANL Organization and Engineering Divisions Introduction #54659, Sep 11, Sep 25, Oct 9, Oct 23, 10.30 - 11.30 am
- COE Engineering Initial Onboarding #54864, Sep 18, Oct 2, 10 - 10.30 am.

T&Q Admin matters

E-mail for CoE Training: es-do-tng@lanl.gov

Click e-mail address above for help with COE training issues like getting registered, missing credit, etc. Goes to the whole team: Stan Hayes, Nick Jones, Sadonna Tapia, Santana Quintana, and Chris Martinez. Alternatively, visit the Engineering Services Training and Qualifications webpage by clicking the button "[Email The Training Team](#)". The Training and Qualifications webpage contains information and tools on training requirements and copies of the various Qualification Standards maintained by the COE office.

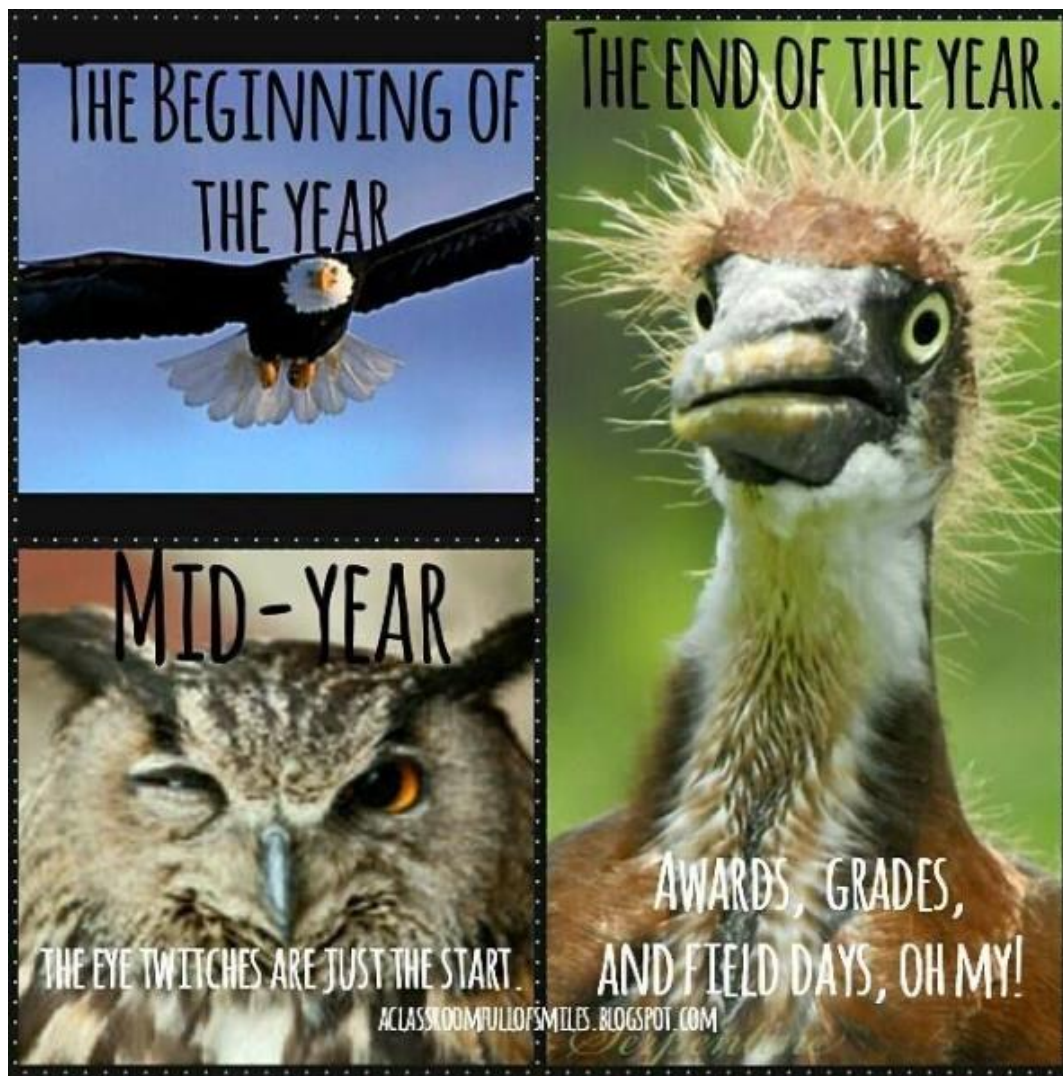
E-mail for CoE Qual Program: COEQuals@lanl.gov

Click e-mail address above for any help with COE quals such as CSE, PrE, Design, Project, PSO, FDAR, and other qualified positions (and also SHR matters for CSEs). Goes to Deb Cushner, Jess Blea, and Barb Dela Cruz.

Instructor-Led Course Request/Registration Guide

For live courses without a session in UTrain, there's a [step-by-step guide](#) posted to the CoE T&Q "Resources" page on how to request a course. This places the requestor on the waitlist and notifies the training team of interest for the said live course.

The beginning - the middle - the end.



LANL ENGINEERING STANDARDS ISSUED IN AUGUST

LANL Master Specifications [STD-342-200](#)

Section Number	Rev.	Section Title	Effective	Comments
23 8123	2	Computer Room Air Conditioners	8/26/2024	Includes updated manufacturer names, refrigerant types, updated code/standard references, streamlined submittals and minor editorial updates. Thanks to Mechanical POC Michael Ladach and Alt Mechanical POC Todd Smith.
26 0533	10	Raceway and Boxes for Electrical Systems	8/26/2024	Includes replacement of RNC with PVC or RTRC, removed inspections by the AHJ, and

				minor editorial changes. Thanks to Electrical POC Eric Stromberg.
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LANL Engineering Standards Admin matters

E-mail for COE Eng Stds: engstandards@lanl.gov

Click e-mail address above for any general questions. Goes to the whole team: Tobin Oruch, Alan Yaeger, Neha Gidwani and Christina Salazar-Barnes. Alternatively, visit the [CoE](#) or [Engineering Standards](#) webpage and click on the email under the Engineering Standards team. Of course, if your need is discipline-specific, then it's best to contact the Standards POC for the corresponding ESM chapter shown on that [webpage](#).

LANL ENGINEERING PROCESSES CHANGES

No updates this month.

LANL Engineering Processes Admin matters

E-mail for COE Eng Processes: COE-APs@lanl.gov

Click e-mail address above for any questions related to Administrative Procedures. Goes to Azupuri Kaba (Kaba), Gabriel Herrera, Beau Portillo, and Christina Salazar-Barnes. Alternatively, visit the [CoE](#) or [Engineering Procedures](#) webpage and click on the email under the Engineering Processes team.

NATIONAL STANDARDS ACTION

[Online National Codes & Standards](#) (Accuris Eng Workbench [EWB], formerly IHS)

ISA 5.1, Instrumentation and Control Symbols and Identification

Publication Date: **7/17/2024**

Type of Change: **Complete Revision**

DOE TECHNICAL STANDARDS ACTION

[Tech Stds Program postings](#) are listed on the [Technical Standards Portal](#).

No updates this month.

We're almost there!



MSS DOCUMENT ACTION

[Operation and Maintenance Criterion and related Preventative Maintenance Instructions](#) (PMI) are standards with which system and plant engineers should be familiar. Implementation is required 30 days from issue date for non-nuclear facilities, 60 days for nuclear facilities. Questions? Contact the document author shown on its approval page.

Below are recent changes issued by Maintenance and Site Services Division per Jeremy Vonharders. Click [here](#) to access. If you have issues with SharePoint sites, use a Microsoft browser (e.g., Edge) to access them.

O&M 403 Rev 11: Boilers

- Added safety shutoff gas valve leakage testing requirements.
- Added additional section to Section 6.2 to accommodate the Annual Gas Valve Leakage Testing recommendations and its basis in NFPA 85.
- Removed Section 7.0, Maintenance Recommendations, and transferred content to Section 6.0, Maintenance Requirements, to establish LANL-specific requirements.
- Added definition for temporary/mobile boiler.

O&M 507 Rev 12: Lightning Protection Systems

- Updated document to the current O&M template, including removing the "Required Documentation" section.
- Removed the recommended maintenance that was in Section 7.
- Removed requirement to check systems against drawings. Only check is to check against NFPA 780.
- Moved requirement that "LPS inspections shall be based on the current NFPA 780 requirements" to the scope.
- Changed "conventional" facilities to "non-explosive" facilities.
- Added section for steel buildings that are at least 3/16 inch thick. These buildings do not need air terminals per NFPA 780, Chapter 8.
- Added definitions for "Lightning Protection" and "Rolling Ball."

PMI 410-B Rev 1: Air Moving Equipment Yearly Preventative Maintenance

- Added Section 17.0, *Fan and Casing*, and Section 18.0, *Air Handling System Ductwork*.

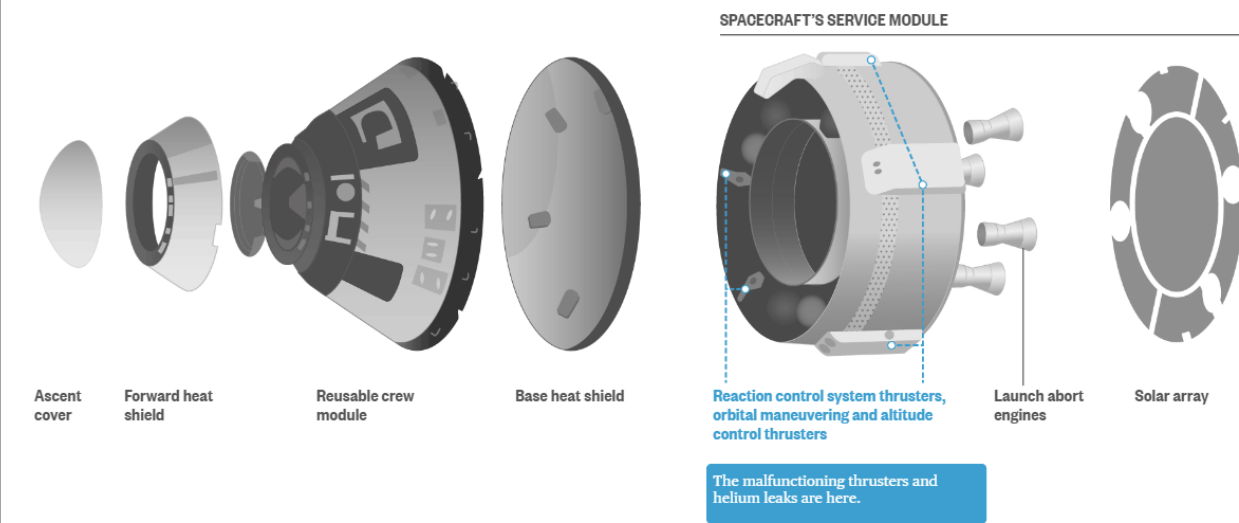
- Changed maintenance coordinator to maintenance coordinator/building manager (MC/BM).
- Separated multi-action steps into separate steps.
- Reorganized attachments 410-B.003 through 410-B.006 to follow order of callouts.

PMI 410-C Rev 1: Air Filter Replacement

- Added Section 3.0, *Outdoor Air Intake Louvers*.
- Changed maintenance coordinator to maintenance coordinator/building manager (MC/BM).
- Added wet/dry vacuum in the special tools/supplies needed list.
- Separated multi-action steps into separate steps.
- Changed procedure number 410-C.001 to 410-C and changed title from “Air Filter Replacement Checklist” to “Air Filter Replacement”.

WHEN GOOD CONDUCT OF ENGINEERING ISN'T FOLLOWED

[What really went wrong with the Boeing Starliner? We may never know \(msn.com\)](https://www.msn.com)



Source: Boeing

Graphic: JoElla Carman and Jiachuan Wu / NBC News

Source: <https://www.nbcnews.com/science/space/boeing-spaceship-what-went-wrong-nasa-astronauts-rcna167163>

NASA and Boeing encountered two main problems with the Starliner capsule: thruster malfunctions and helium leaks in the propulsion system. What was originally an eight-day mission at the International Space Station (ISS) will now turn into an eight-month stint for the two astronauts, Butch Wilmore and Suni Williams.

The problems began the day after the astronauts lifted off aboard the Starliner on June 5. As the Starliner approached the ISS, five of its 28 reaction control system thrusters failed, delaying docking by nearly an hour. Four thrusters were later restored, allowing the docking to proceed, but NASA started an investigation into the failures. Engineers have been testing the thrusters at NASA's White Sands Test Facility in New Mexico, simulating the conditions the capsule experienced. A “hot fire test” in space revealed that a tiny Teflon seal might swell under high temperatures, blocking propellant flow and causing the thruster issues. Now it's emerged that the capsule's thrusters will burn up upon re-entry into earth's atmosphere, which means that Boeing may never truly find out what went wrong with the Starliner. This failure further adds to the woes of embattled Boeing, the aerospace company and highlights the importance of the smallest component on the safety of systems.

LAST MONTH'S UPDATE TOPICS

[Miss an issue? The archive is at "Monthly Update" on the Standards homepage. Last month's topics:](#)

- CUI Resources Now Available
- AI Research Guides at Research Library
- ServiceNow Request Forms Available for EDRMS/ERMS and Aproove Applications
- Training & Qualification
- LANL Engineering Standards Issued in July or so
- LANL Engineering Processes Changes
- National Standards Action
- DOE Technical Standards Action
- MSS Document Action
- When Good Conduct of Engineering Isn't Followed

The views expressed in this email are not necessarily those of the Engineering Standards Team's employer.

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