National Institutes of Health/Office of Extramural Research

Electronic
Research
Administration

Exchange Services
Notes, Tips and Validations
(with changes tracked)
For Grants.gov Components

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Version 2.1

Table of Contents

Filling Out an Application for NIH Grants

How applicant institutions submit a grant application to the National Institutes of Health (NIH) is changing from mailing in a paper PHS 398 application to submitting the application electronically through Grants.gov using the new SF424 (R&R) application. For information about the timetable for each mechanism's conversion to electronic submission and other information, go to http://era.nih.gov/ElectronicReceipt/.

For electronic submission, applicant institutions can submit applications on PureEdge™ forms downloaded from Grants.gov, build a system-to-system interface with Grants.gov or work with a commercial service provider. Regardless of submission method, Grants.gov electronically performs a simple validation against the application. If it passes inspection, the application is put in a queue, which the National Institutes of Health (NIH) then pulls into its system.

The NIH performs a more specific and detailed electronic check of the application against the instructions in the application guide and funding opportunity announcements. If the application passes the validation check without errors, the NIH sends an email to the Authorized Organization Representative (AOR)/ Signing Official (SO) and Project Director (PD)/Principal Investigator (PI). The email includes the NIH application tracking number and notification that both the SO and PI have two days to view the application image on the eRA Commons before the application automatically moves to Receipt and Referral.

If the application doesn't pass the validation check—usually because NIH instructions are not being followed—NIH sends the AOR/SO and PD/PI an email saying there are error messages and/or warnings:

- **Error message:** All errors must be fixed to complete the submission process. Once all errors are addressed, the applicant organization must submit the entire corrected application through Grants.gov as a changed/corrected application.
- **Warning:** Warnings do not stop the application from being accepted by the eRA System; however, each warning should be looked at carefully to avoid delays or issues later on in the peer review process.

The AOR/SO and PD/PI can log onto the eRA Commons to view the error codes and warnings. **Note:** since email can be unreliable, it is the applicant's responsibility to periodically check the eRA Commons for the status of the application after notification is received that NIH has pulled it from the Grants.gov queue.

So how can one be sure that the application passes all validation checks and results in no error messages or warnings? Carefully read and follow the application guide and announcement-specific instructions. Be sure that you fill out all sections to the best of your ability and that you include all attachments. NIH requires that all text attachments be in PDF format. Be clear about what is required for the type of application you are submitting. Make sure you observe the page limits for the different attachments as defined in the application and announcement. Confirm that you haven't exceeded direct cost limitations. Don't take shortcuts.

Here are some tips for filling out each section of the application. The NIH requires that applications be submitted using the SF424 (R&R) package, as well as supplemental, agency-specific forms identified as Public Health Service (PHS) application forms. Note that included in each funding opportunity announcement is the complete application forms package and guide.

After the application package is submitted, the eRA system will assemble the grant image, generate a table of contents and include headers (PI's name) and footers (page numbers) on all pages.

The following notes, tips, validations and errors/warnings address SF424 Research & Related (R&R) and PHS 398 specific components of an NIH application package.

Revision Summary

Version Number	Revision Date	Summary of Changes
2.1	July 31, 2006	• September release (200609): • Modified validations and added new validation to reflect new policy: Modular budgets not allowed for foreign application • Modified error messages • Degree warning message should pull in Commons degrees instead of Commons credential • Store disclosure permission code for SBIR/STTR applications
	August 9, 2006	• Store all data from SBIR/STTR component questions
	August 30. 2006	• Added error message for new policy on foreign apps (error message mistakenly omitted earlier)

Key

	Green cell shading indicates "not accepted at this time"
	Red text indicates new information since the last version.
	Strike-through red text indicates deleted information.

Truncated Items: Where items are truncated, grant image should display value as submitted through Grants.gov, unless otherwise indicated.

Validations at Schema Level—The implementation of some validation requirements may be done at the schema level rather than at the application validation level. The validation requirement does not change; however, in some cases, the error message may be different. The error messages in this table apply only in those cases where the validation is done at the application validation level.

Attachment Validations—A validation needs to be done on all attachments (including appendices) to make sure they are in .pdf format. If an attachment is not in .pdf format, the following error should be returned: "The <attachment> attachment is not in PDF format, or the filename is invalid. All attachments must be provided to the agency in PDF format; filenames must be included with no spaces or special characters (including brackets), and a .pdf extension must be used."

If an attachment is empty (0 bytes), the following error should be returned: "The <attachment> attachment was empty. PDF attachments cannot be empty attachments. Please submit a changed/corrected application with the correct PDF attachment."

If editable PDFs are included, the Exchange software should 'flatten' the PDF so that it can be processed. If Exchange Services detects that the flattening process did not work, the following error should be returned: "The <attachment> attachment contained formatting or features not currently supported by NIH. Help with PDF attachments can be found at http://era.nih.gov/ElectronicReceipt/pdf_guidelines.htm."

If a PDF with password protection has been included, the following error should be returned: "The <attachment> attachment has password protection. PDF attachments must not include password protection. Help with PDF attachments can be found at http://era.nih.gov/ElectronicReceipt/pdf_guidelines.htm.

If there is a processing error on an attachment (other than errors listed here), the following error should be returned: "There was a processing error on page <page number> of the <attachment> attachment. This prevented successful processing of the application. Please contact the eRA Help Desk for assistance."

Trimming Spaces—For all validations where a comparison is being made on text entry (or dropdown) fields against the eRA database, trim spaces at the end before making the comparison.

Limited Validations and Opting Out—For some mechanisms, there is a set of limited validations that will apply to all PAs and PASs, and to any PARs and RFAs that don't 'opt out'. Limited validations have been indicated where applicable below by 'LV'.

The 'opt out' indicator will need to be added for each announcement stored in the database, defaulting to 'opt in'. For now, data will be updated manually to set the indicator for specific records to 'opt out'; eventually, this will become part of the Receipt and Referral RFA/PA Maintenance screen.

If an announcement is 'opt out', *none* of the limited validations for the corresponding mechanism will be performed for applications submitted in response to that announcement. However, PARs and RFAs that opt out of the limited validations will get a generic warning message if they exceed the threshold for the corresponding validation. In each case, the specific generic message is included in the table below.

PARs and RFAs that opt out of the limited validations are still subject to the validations that have not been identified as limited validations.

Identifying a Combined Mechanism—A Combined Mechanism identifier needs to be added to the information for each announcement stored in the database. This will be used to identify any allowable pairs of mechanisms for an announcement. The identifier can be used in conjunction with the activity code to indicate which combined mechanism is being represented. For now, the only allowable pair that will be identified with the identifier is R21/R33; an activity code of R21 plus this indicator will indicate a combined R21/R33.

Identifying Small Business Type—An indicator for whether an announcement is an SBIR or an STTR needs to be added to the information for each small business announcement stored in the database.

SF424 (R&R)

Component	Field	Validation	Error Message	Notes & Tips
SF424 (R&R)	**Type of Submission (Pre-App, App, Changed App)**	For non-X02 submissions, do not accept 'Pre-application' as submission type	'Pre-application' (SF 424 RR cover page, Type of Submission) is not a recognized submission type for these applications.	NIH is not accepting "pre-applications" unless specifically noted in the Funding Opportunity Announcement.
		For X02 submissions, do not accept 'Application' as submission type	'Application' is not a recognized submission type for X02 applications. Please select 'pre-Application' as the type of submission on the SF 424 RR Cover page.	
		Do not accept 'Application' submission type if there is an associated prior submission. Find associated prior submission by matching on PI Commons account, institution, and project title for the same council round.	This application is a duplicate of a previous submission for the same council round. Please submit again using the 'Changed/Corrected Application' Type of sSubmission on the SF 424 RR cover page.	Don't submit duplicate applications for the same council round. If you are submitting corrections to a previously-submitted application, submit it as a "Changed/ Corrected Application."
		Do not accept X02 pre-application submission type if there is an associated prior submission. Find associated prior submission by matching on PI Commons account, institution, and project title for the same council round.	This application is a duplicate of a previous submission for the same council round. Please resubmit using the 'Changed/Corrected Application' Type of Submission on the SF 424 RR cover page.	
SF424 (R&R)	**Date Submitted**	If Phase II SBIR/STTR, and Phase I identified as NIH grant, provide warning if date submitted is more than 2 years after Phase I project period end date	Phase II SBIR/STTR applications should be submitted within 6 receipt dates after the expiration of the Phase I budget.	
SF424 (R&R)	**Applicant Indentifier**			
SF424 (R&R)	**Date Received by State**			
SF424 (R&R)	**State Application Identifier**			
SF424 (R&R)	**Date Received by Grants.gov**			

Component	Field	Validation	Error Message	Notes & Tips
SF424 (R&R)	**Federal Identifier**	If a resubmission, revision, or renewal, this component is mandatory	For resubmissions (amended applications) and renewals (competing continuations), the Federal Identifier must be included. Please include the IC and serial number of the prior grant number in the Federal Identifier field on the S 424 RR Cover page (e.g., CA123456).	You must include the prior grant number here if you are submitting a revised application (resubmission), a competing continuation (renewal), or a new Phase II SBIR/STTR. The IC and serial number of the prior grant number will be checked for accuracy.
			For revisions, the Federal Identifier must be included. Please include the IC and serial number of the parent grant number in the Federal Identifier field on the SF242 (R&R) Cover page (e.g., CA123456).	Schema must parse out the components of the grant number.
		If a new Phase II SBIR/STTR, this component is mandatory	For Phase II SBIR/STTR submissions, the Federal Identifier must be included. Please include the IC and serial number of the prior grant number in the Federal Identifier field on the SF424 RR Cover page (e.g., CA123456).	
		If a renewal Phase II SBIR/STTR, this component is mandatory	For Phase II SBIR/STTR submissions, the Federal Identifier must be included. Please include the IC and serial number of the prior grant number in the Federal Identifier field on the SF424 RR Cover page (e.g., CA123456).	
		If Phase II SBIR/STTR, and Phase I grant number is found in NIH database, provide warning if Phase I grant has not been awarded.	Phase II SBIR/STTR applications may be submitted only if the Phase I grant has been awarded.	

Component	Field	Validation	Error Message	Notes & Tips
		If a resubmission, revision, or renewal, or a new Phase II SBIR/STTR, components of grant number must be 'parsable'. Components are <application_type> <mechanism> <institute> <serial number>-<support year><suffix code) (example: 1R01GM072828-01A1) −Application Type is a one-digit number. −Mechanism is a letter followed by a two-digit number. −Institute (IC) consists of two characters. −Serial number is a number that has been assigned sequentially within an IC (must be followed by a dash). −Support year is anywhere from 1 to 99. −Suffix code will start with an 'A' or an 'S'. −At least the IC and serial number must be included.	Federal Identifier format (SF 424 RR Cover page) is not valid. Please include the IC and serial number of the prior grant (e.g., CA123456).	
		If a resubmission, revision, or renewal, or a new Phase II SBIR/STTR, the prior grant number must exist in the NIH system. Matching is performed against NIH Institute/ Center and Serial Number.	The Federal Identifier that you have entered (SF 424 RR Cover page) is not a grant number that has been previously assigned.	
		If a resubmission, revision, or renewal, or a new Phase II SBIR/STTR, mandatory components are IC and serial number.	You must include the <missing component> of the prior grant in the Federal Identifier field on the SF 424 RR Cover Page.	

Component	Field	Validation	Error Message	Notes & Tips
		If PIChangeIndicator not set, check if PI on this submission has same Commons Account as PI assigned to the prior grant. If not, provide warning if last name of PI on prior grant matches last name for PI on current application. Provide error if Commons Account doesn't match and last name of PI on prior grant doesn't match last name for PI on current application.	The prior grant entered as the Federal Identifier (SF 424 RR Cover page) is not associated with the eRA Commons account for this PI. If this application involves a change of PI, please indicate 'Change of PI' on the PHS 398 Checklist page. If this is not a change of PI, this application will be received by the agency, but may be returned after internal processing.	
		Ignore case, spaces, and punctuation on match.	The prior grant that has been entered as the Federal Identifier (SF 424 RR Cover page) is not associated with this PI.	
		For a resubmission, a summary statement must have been mailed for the prior grant, unless the prior grant has been withdrawn.	A resubmission (an amended application) cannot be submitted until the Summary Statement for the previous application has been released by the agency.	
		For a resubmission, the prior grant must not have been awarded, unless it has been identified as interim funding.	A resubmission (an amended application) cannot be submitted if a prior version in the same support year has been awarded.	
		For a resubmission, if the prior grant suffix code = 'A2', display a warning (default for mechanisms not otherwise defined).	The number of resubmissions for an application is normally limited to two. This application will be received by the agency, but may be returned after internal processing.	
		For a resubmission, of an R36 application (activity code on funding opportunity = 'R36'), prior grant suffix code must not = 'A2'.	This application has exceeded the number of resubmissions permitted and cannot be accepted.	
		For a resubmission, prior grant suffix code must not = 'A3'.	This application has exceeded the number of resubmissions permitted and cannot be accepted.	
		For a revision, the parent grant must be awarded.	The parent grant for a revision must be awarded. The parent grant for this submission is not a funded grant.	

Component	Field	Validation	Error Message	Notes & Tips
		For a 'Phase II' SBIR/STTR, validations on parsing Federal Identifier, requiring IC and serial number, and identifying the number as existing in the NIH system are *warnings* only.	Error message text is the same as the items above.	These need to be warnings, since it is possible to submit a phase II application where the phase I was funded externally (or funded as an NIH contract, not a grant).
SF424 (R&R)	**Applicant Information, Organization al DUNS**	Must match DUNS recorded for IPF in Commons. Validate the leftmost 9 characters only, discarding any characters submitted in places 10-13. For comparison purposes, treat trailing zeroes after leftmost 9 characters as blanks.	The DUNS number you have provided in the SF 424 RR Cover page (item 5), Applicant Information) does not match the number in the eRA Commons profile for your organization. The SO/AOR should make sure the correct DUNS number has been entered in the eRA Commons. Instructions on editing institutional profiles are available at https://commons.era.nih.gov/commons-help/189.htm.	If application is from domestic institution of higher education, set appls_t.external_org_WIP_flag='Y'; if not, set appls_t.external_org_WIP_flag='N'. Domestic institution is country_seq_num in external_org_addresses_t =231 (for the external_org_id where addr_type_code='MLG'). Higher education is external_orgs_t.org_type_code=10.
		For a revision, provide a warning if it doesn't represent the same organization as the parent grant.	The parent grant may be associated with a different organization (based on the Organization DUNS provided on the SF 424 RR Cover page). Revisions should only be submitted for the same organization as the parent grant. This application will be accepted by the agency, but may be delayed in the peer review process.	
SF424 (R&R)	**Applicant Information, Legal Name**	None		Display in grant image as submitted; store in database as reflected in IPF associated with PI Commons account and org. DUNS. Long-term, change length in eRA db to 120 characters.
SF424 (R&R)	**Applicant Information, Department**	None		
SF424 (R&R)	**Applicant Information, Division**	None		
SF424 (R&R)	**Applicant Information, Street 1 and 2**	If either line>50 characters, truncate.		Long-term, change eRA db to 55 chars.
SF424 (R&R)	**Applicant Information, City**	None		

Component	Field	Validation	Error Message	Notes & Tips
SF424 (R&R)	**Applicant Information, County**	None		
SF424 (R&R)	**Applicant Information, State**	Required if country is US.	The Applicant Information State on the SF 424 RR Cover page must be supplied for US addresses.	
		If country not US must be blank.	The Applicant Information State on the SF 424 RR Cover page should be blank for all countries other than the United States.	
		Transform to 2-char abbreviation before validating and storing. If state name can't be transformed, give error.	The Applicant Information State on the SF 424 RR Cover page is not a valid state name.	
SF424 (R&R)	**Applicant Information, Province**	Required if country is Canada.	The Applicant Information province on the SF 424 RR Cover page must be supplied for Canadian addresses	Province should be mapped into the same database location as state.
		If country not Canada, must be blank.	The Applicant Information Province on the SF 424 RR Cover page should be blank for all countries other than Canada	
		Transform to 2-char abbreviation before validating and storing. If province name can't be transformed, give error.	The Applicant Information Province on the SF 424 RR Cover page is not a valid province name.	
SF424 (R&R)	**Applicant Information, Zip Code**	Required if country is US.	The Applicant Information Zip Code on the SF 424 RR Cover page was not entered.	Long-term, change in eRA db to 13 characters.
		Must be 5 or 9 numeric digits if country is US.	The Applicant Information Zip Code on the SF 424 RR Cover page must be entered in 5-digit or 9-digit format.	
		If >9 characters, truncate (remove any dashes before truncating).		
SF424 (R&R)	**Applicant Information, Country**	For an R13 application (activity code on funding opportunity = 'R13' or 'U13'), provide a warning if country is not US	The Applicant Organization for a Conference Grant should be located in the US. This application will be accepted by the agency, but may be delayed in the peer review process.	
		For an R15 application (activity code on funding opportunity = 'R15') return an error if country is not US	The Applicant Organization for an AREA Grant must be located in the US.	

Component	Field	Validation	Error Message	Notes & Tips
		For an S10, C06, UC6, or G20 application, return an error if country is not US	The Applicant Organization for this application must be located in the US.	
		For an R25 (LV) application, return a warning if country is not US	The Applicant Organization for this application is usually located in the US. This application will be accepted by the agency, but may be delayed in the peer review process to determine the eligibility of a foreign Applicant Organization.	
		For an R18 (LV) or U18 (LV) application, return a warning if country is not US	The Applicant Organization for this application should be located in the US. This application will be accepted by the agency, but may be delayed in the peer review process.	
		Must be a valid ISO 3166-1 alpha-3 country code.	The Applicant Information country code provided (<Country>) on the SF 424 RR Cover page is not a valid ISO 3166-1 alpha-3 country code.	
SF424 (R&R)	**Person to be Contacted**	If the combination of all items in this component is more than 30 characters, truncate. Display in grant image as submitted.		Long-term, change in eRA db for Contact Name to accommodate the way it is submitted through Grants.gov.
SF424 (R&R)	**Person to be Contacted, Phone Number**	None		
SF424 (R&R)	**Person to be Contacted, Fax Number**	None		
SF424 (R&R)	**Person to be Contacted, e-mail**	e-mail is required	The e-mail address for the Person to Be Contacted, listed on the SF 424 RR Cover page, is required.	
		Must contain a '@', with at least 1 and at most 64 chars preceding and following the '@'. Control characters (ASCII 0 through 31 and 127), spaces and special chars < > ( ) [ ] \ , ; : are not valid.	The submitted e-mail address for the Person to Be Contacted, (listed on the SF 424 RR Cover page,) <Email>, is invalid. Please enter email addresses in the format username@domainname.com	
SF424 (R&R)	**Employer Identification**	If >12 characters, truncate (no warning).		

Component	Field	Validation	Error Message	Notes & Tips
SF424 (R&R)	**Type of Applicant (other, woman owned, disadvantaged)**	For an SBIR/STTR application, must be 'Small Business'.	For an SBIR/STTR application, the Type of Applicant (SF 424 RR Cover page, item 7) must be 'Small Business'.	Design/mapping note: when the applicant type is "O - Small Business", set small_business_code to 'N', but do not supersede any value that is the result of mapping the women-owned or socially-economically-disadvantaged qualifiers. In other words, default when applicant type is "O" should be 'N'' instead of "null". This should be overwritten if the women-owned and socially-economically-disadvantaged indicators need to record either a W, M, or B in this field.
SF424 (R&R)	**Type of Application (New, Resub, Renewal, Contin, Revision)**	Must be either New, Revision, Resubmission, or Renewal	<Type of Application> (SF 424 RR Cover page, item 8) is an invalid Type. The Type must be New, Revision (for supplements), Resubmission (for amended applications), or Renewal (for competing continuations).	• You must select one of the following: **New**, **Amended, Resubmission** (for revisions/amendments) or **Renewal** (for competing continuations). **Note**: *Renewal* is not valid for Phase I SBIR/STTR applications.
		Renewal is not a valid type for a Phase I SBIR/STTR, X01, X02, R03, R21, R34, C06, UC6 or G20 application.	A renewal (competing continuation) cannot be submitted for **this** application.	• A **Continuation** is equivalent to a Progress Report. However, NIH and other PHS agencies will not use the Continuation box.
		Provide warning if renewal is submitted for an R21/R33 combination.	Renewal (competing continuation) applications are accepted if specifically allowed in the Funding Opportunity Announcement (FOA). If the FOA does not explicitly allow renewals, this application may be delayed in the review process or rejected.	• A **Amended** is somewhat equivalent to a Competing Supplement.

Component	Field	Validation	Error Message	Notes & Tips
		Revision is not a valid type for an S10, X01, or an X02 application.	A revision (supplement) cannot be submitted for this application.	• If you are submitting an SBIR/STTR application, select "Small Business." • For a revision, define parent grant by finding the most recent type 1, type 2, or type 9 that matches on the IC and serial number provided in the Federal Identifier, where the Project Start Date on the parent is earlier than or equal to the revision's Project Start Date, and the Project End Date on the parent is later than or equal to the revision's Project End Date. Subprojects and other revisions should be excluded from consideration as parent grants. • Map type of application to database.
SF424 (R&R)	**If revision, increase award, decrease, etc.**	None		
SF424 (R&R)	**Name of Federal Agency**			
SF424 (R&R)	**Catalog of Federal Domestic Assistance Number**			The CFDA number and title are filled in based on the specific announcement.
SF424 (R&R)	**Submitted to other agencies?**			
SF424 (R&R)	**Descriptive Title**	Truncate if >81 characters		Long-term, expand eRA db to 200 chars
		For a revision, must be the same as the project title on the parent grant. Do not include leading or trailing spaces or any punctuation in the comparison.	The project title for this revision (SF 424 RR Cover page, item 11) is not the same as the project title on the parent grant. For a revision, the project title must be the same as the project title on the parent grant.	
SF424 (R&R)	**Areas Affected by Project**			

Component	Field	Validation	Error Message	Notes & Tips
SF424 (R&R)	**Proposed project start date**	Must be later than current date	The Proposed Project Start Date (SF 424 RR cover page, item 13) must be later than the Proposed Project Start Date.	
SF424 (R&R)	**Proposed project ending date**	Must be later than ProjectStartDate	The Proposed Project Ending Date (SF 424 RR cover page, item 13) must be later than the Proposed Project Start Date	
		For an R03 (LV), R21 (LV), or R36 application, return warning if project period is more than two years long. Define project period by time span between project period start date and project period end date as entered on the SF424 (R&R) Face Page.	The project period for this application is limited to two years.	
			Warning message for 'opt out' announcements: Be sure that you have complied with the allowable project period limitations for this FOA. Otherwise, your application may be delayed and rejected in the review process.	
		For an R15, R33 (LV), or R34 (LV) application, return warning if project period is more than three years long. Define project period by time span between project period start date and project period end date as entered on the SF424 (R&R) Face Page.	The project period for this application is limited to three years. The application will be accepted, but may be delayed in the peer review process.	
			Warning message for 'opt out' announcements: Be sure that you have complied with the allowable project period limitations for this FOA. Otherwise, your application may be delayed and rejected in the review process.	
		For an R01 (LV) or R21/R33 pair (LV) application, return warning if project period is more than five years long. Define project period by time span between project period start date and project period end date as entered on the SF424 (R&R) Face Page.	The project period for this application is limited to five years. The application will be accepted, but may be delayed in the peer review process.	
			Warning message for 'opt out' announcements: Be sure that you have complied with the allowable project period limitations for this FOA. Otherwise, your application may be delayed and rejected in the review process.	

Component	Field	Validation	Error Message	Notes & Tips
SF424 (R&R)	**Congressional districts of applicant**	Must be a valid congressional district code (after truncating). Truncation logic: Parse from left to right, and take the first two digits encountered, skipping leading zeroes (return error if no digits are encountered, but no error if only zeroes are encountered). Before validating, pad out with a leading zero if less than 2 digits are extracted in this way. Display in grant image as truncated.	Congressional district <Congressional District> (SF 424 RR Cover page, item 14) is invalid. If the applicant organization is a foreign institution, enter all zeros. To locate your district visit http://congress.org/congressorg/dbq/officials/?lvl=L.	Long-term, expand eRA database to 6 chars.
	Congressional districts of project			
SF 424 (R&R)	**PD/PI Contact Information, name (prefix, first name, middle name, last name, suffix)**	Required.		
		If only a Commons Account is supplied, display a *warning* to pay attention to the name that is generated in the grant image, since this will appear exactly as it is represented in the Commons.	On the SF 424 RR Cover, no name was provided for the PD/PI identified on the Senior/Key Person Profile with eRA Commons Username: <Credential>. The name listed on this person's eRA Commons account, <Commons profile name components>, will be used for this submission.	
		If this *and* Commons Account provided, provide warning if last name or first name on account doesn't match provided last name or first name, and/or if the first initial of the middle name on the account doesn't match the first initial of the middle name that has been provided. Comparison to ignore case and embedded spaces, but not embedded punctuation.	The name provided for the PD/PI, <First name, middle initial, last name>, listed on the SF 424 RR Cover, does not match the name listed on the eRA Commons account: <First name, middle initial, last name>. The grant image will display the name as submitted here. If the name listed in the eRA Commons is not current, please update it in the eRA Commons. Instructions on updating profile information are available at https://commons.era.nih.gov/commons-help/216.htm.	Post-testing solution: If validation fails, provide warning that the Commons name (or position title) is *xxxx* and the name submitted through grants.gov is *yyyy* and we will be displaying the Commons data. Provide ability for the submitter to update their Commons account and to regenerate the image to display the updated information from the Commons account.

Component	Field	Validation	Error Message	Notes & Tips
SF 424 (R&R)	**PD/PI Contact Information, Position/Title**	If title doesn't appear on an employment record for this person and organization in Commons, provide warning message and display the submitted position/title in the grant image.	The PD/PI position/title, <Position/title>, listed on the SF 424 RR Cover, does not match those listed on the eRA Commons account: <position titles, separated by commas>. The grant image will display the position/title as submitted here. If the position/title on the eRA Commons account is not current, please update it in the eRA Commons by editing the appropriate employment record in the PI's Personal Profile. Instructions on updating profile information are available at https://commons.era.nih.gov/commons-help/216.htm.	
		Truncate if greater than 40 characters, before comparing to title stored in database. No warning message is needed to the submitter.		
SF 424 (R&R)	**PD/PI Contact Information, Organization Name**			
SF 424 (R&R)	**PD/PI Contact Information, Department**	Provide a warning if not entered.	If appropriate for your organization, please supply a department for the PD/PI on the SF 424 RR Cover.	
SF 424 (R&R)	**PD/PI Contact Information, Division**	Provide a warning if not entered.	If appropriate for your organization, please supply a division for the PD/PI on the SF 424 RR Cover.	
SF 424 (R&R)	**PD/PI Contact Information, Street 1 and 2, city, state, province, zip, country, phone number, fax number, e-mail**	Transform province name to 2 char. abbreviation before storing. If province name can't be transformed, give an error.	The PD/PI Profile Province on the SF 424 RR Cover is not a valid province name.	Long-term, change in ERA db for zip code to 13 characters
		Transform state name to 2 char. abbreviation before storing. If state name can't be transformed, give an error.	The PD/PI Profile State on the SF 424 RR Cover is not a valid state name.	

Component	Field	Validation	Error Message	Notes & Tips
SF 424 (R&R)	**PD/PI Contact Information, County**			
SF 424 (R&R)	**Total estimated project funding**	For an S10 application, display a warning if this is greater than 500k.	The direct cost request found on item 16 of the SF 424 RR Cover page is greater than 500k. The application will be processed, but a concern may be raised during review.	Design note: mapping for S10s and X02 for budget figures should come from this element instead of from budget components. It should be mapped to appl_periods_t and to the following columns in appls_t: direct_cost_requested_amt, total_cost_requested_year1_amt, total_cost_requested_amt. (indirect_cost_requested_amt should be 0). For X02, all values will be zero.
		Required for a C06, UC6, or G20 application.	Total Estimated Project Funding (SF 424 RR Cover, item 16a) is required for this application.	
		Must be non-zero for a C06, UC6, or G20 application.	Total Estimated Project Funding (SF 424 RR Cover, item 16a) cannot be zero.	
		For an X01 or X02 application, provide an error if non-zero values are entered.	Total Estimated Project Funding in section 16 on the SF 424 RR Cover page must be zero.	
SF 424 (R&R)	**Total federal and non-federal funds**	For an X01 or X02 application, provide an error if non-zero values are entered.	Total Federal and non-Federal Funds in section 16 on the SF 424 RR Cover page must be zero.	
		Required for a C06, UC6, or G20 application.	Total Federal & Non-Federal Funds (SF 424 RR Cover, item 16b) is required for this application.	
		Must be non-zero for a C06, UC6, or G20 application.	Total Federal & Non-Federal Funds (SF 424 RR Cover, item 16b) cannot be zero.	
SF 424 (R&R)	**Estimated program income**	For an X01 or X02 application, provide an error if non-zero values are entered.	Total Estimated Program Income in section 16 on the SF 424 RR cover page must be zero.	
		Required for a C06, UC6, or G20 application.	Estimated Program Income (SF 424 RR Cover, item 16c) is required for this application.	
SF 424 (R&R)	**Subject to state executive order review?**	For C06, UC6, or G20 applications, a response is required in either 17a or b.	A response must be included to the question 'Is application subject to review by state executive order 12372 process' (SF 424 RR Cover page, item 17)	
SF 424 (R&R)	**State executive order review date**	Required if answer to 'Subject to state executive order review' is 'Yes'	A date must be entered on the SF 424 RR Cover page, item 17, if the answer to the 'Subject to state executive order review' is 'Yes'.	
SF 424 (R&R)	**Agreement and certification**			

Component	Field	Validation	Error Message	Notes & Tips
SF 424 (R&R)	**Authorized representative name**	Truncate if first or last name>30 chars, or if suffix>5 chars. Display warning.	The Authorized Representative <element name> (SF 424 RR Cover page, item 19) exceeds the agency character limit. The grant image will display the name as submitted;-the agency will store the first <database length> characters in the eRA database.	Long-term, change in eRA db to 60 chars for last name, 35 for first name, 10 for suffix (all names in db)
SF 424 (R&R)	**Authorized representative position/title**	Truncate if >30 chars. Display warning.	The Authorized Representative position/title (SF 424 RR Cover page, item 19) exceeds the agency character limit. The grant image will display the name as submitted; the agency will store the first 30 characters in the eRA database.	Long-term, change in eRA db to 45 chars
SF 424 (R&R)	**Authorized representative organization**			
SF 424 (R&R)	**Authorized representative department**			
SF424 (R&R)	**Authorized representative division**			
SF424 (R&R)	**Authorized representative street 1 & 2, city, state, province, zip code, country, phone number, fax, e-mail**	If either line 1 or 2 >50 characters, truncate.		Long-term, change in eRA db for zip code to 13 characters
		Transform province to 2 char. abbreviation for province before validating and storing. If province can't be transformed, give error.	The Authorized Representative Province (SF 424 RR Cover page, item 19) is not a valid province name.	Province should be mapped into same database location as state.
		If zip>9 characters, truncate. Remove dashes before truncating and/or storing		
		Transform state to 2 char. abbreviation for state before validating and storing. If state name can't be transformed, give error.	The Authorized Representative State (SF 424 RR Cover page, item 19) is not a valid state name.	
SF424 (R&R)	**Authorized representative county**			
SF424 (R&R)	**Authorized representative signature and date**			

Component	Field	Validation	Error Message	Notes & Tips
SF424 (R&R)	Pre-application attachment			
SF424 (R&R)	Project Congressional District Attachment			

R&R Personal Data Component

Not used by NIH. Information is pulled from PD/PI Commons contact information.

Research & Related: Project/Performance Site Location(s)

Component	Field	Validation	Error Message	Notes & Tips
Project/ Performance Site (R&R)	**Primary Location, Organization Name**	Allow applications to come in without this component.		
Project/ Performance Site (R&R)	**Primary Location, Street 1 and 2**			
Project/ Performance Site (R&R)	**Primary Location, City**			
Project/ Performance Site (R&R)	**Primary Location, County**			
Project/ Performance Site (R&R)	**Primary Location, State**			
Project/ Performance Site (R&R)	**Primary Location, Province**			Province should be mapped into same database location as state.
Project/Perform ance Site (R&R)	**Primary Location, Zip code**			
Project/Perform ance Site (R&R)	**Primary Location, Country**			
Project/ Performance Site (R&R)	**Location 1, Organization Name**			
Project/ Performance Site (R&R)	**Location 1, Street 1 and 2**			

Component	Field	Validation	Error Message	Notes & Tips
Project/ Performance Site (R&R)	**Location 1, City**			
Project/ Performance Site (R&R)	**Location 1, County**			
Project/Perform ance Site (R&R)	**Location 1, State**			
Project/Perform ance Site (R&R)	**Location 1, Province**			Province should be mapped into same database location as state.
Project/Perform ance Site (R&R)	**Location 1, Zip code**			
Project/Perform ance Site (R&R)	**Location 1, Country**			
Project/Perform ance Site (R&R)	**Additional Location(s)**			

Research & Related: Other Project Information

Component	Field	Validation	Error Message	Notes & Tips
Other Project Info (R&R)	**Human Subjects Involved?**	Either ExemptionNumber or AssuranceNumber must be specified if HumanSubjectsUsedQuestion is true.	Either Exemption Number or Assurance Number must be provided if Human Subjects is "Yes" (Other Project Information, item 1).	• If you click **Yes** that ***human subjects*** are involved, you must provide either an exemption number or assurance number. • If you click **Yes** that ***vertebrate animals*** are involved, you must provide one of the following: − Assurance number AND IACUC approval date − Assurance number AND IACUC approval pending − IACUC approval pending
		If HumanSubjectsUsedQuestion is false, ExemptionNumber must not be specified	When Human Subjects is "No", Exemption Number must not be specified (Other Project Information, item 1).	
		If HumanSubjectsUsedQuestion is false, provide a warning if AssuranceNumber is specified.	When Human Subjects is "No", Assurance Number does not apply (Other Project Information, item 1).	
		Must be true if Human Subjects Clinical Trial question is true.	The 'Human Subjects Involved' question (Other Project Information, item 1) must be "Yes" if the Human Subjects Clinical Trial question on the PHS 398 Cover Page Supplement is "Yes".	
		For S10 application, display a warning if this is true.	The answer to the Human Subjects involved question (Other Project Information, item 1) should be 'No'. The application will be processed, but a concern may be raised during review.	
Other Project Info (R&R)	**IRB review pending?**			
Other Project Info (R&R)	**IRB approval date**	Date can't be in the future (but can be blank)	The IRB approval date (Other Project Information, item 1a) cannot be in the future.	
Other Project Info (R&R)	**Exemption number**	Must be "E1" through "E6"	The Exemption Number (Other Project Information, item 1a) must be within the range of E1 to E6.	

Component	Field	Validation	Error Message	Notes & Tips
Other Project Info (R&R)	**Human subject assurance number**	Provide warning if it doesn't match IPF human subject assurance number for this organization. Match should be on the last 11 characters of the IPF assurance number. If the Assurance Number that is receive is exactly eight characters long and consists of all numeric digits, prefix the string with 'FWA' before validating and storing in the database.	The human subject assurance number entered in Other Project Information, item 1a, does not match what is in the eRA Commons profile for your organization. There are rare cases where this is permissible. Please make sure that the correct number is entered on the Other Project Information page. If not, correct and resubmit.	
Other Project Info (R&R)	**Vertebrate animals used?**	If this is 'Y', then ONE of the following must be provided: • Assurance Number + IACUC Approval Date • Assurance Number + IACUC Approval Pending • The word 'None' (case insensitive, don't validate on punctuation)	When Vertebrate Animals is "Yes", you must provide either (1) animal welfare assurance number + IACUC approval date, (2) animal welfare assurance number + an indication that IACUC approval is pending OR (3) the word 'None' (Other Project Information, item 2).	
		For S10 application, display a warning if this is true.	The answer to the Vertebrate Animals Used question in Other Project Information, item 2, should be 'No'. The application will be processed, but a concern may be raised during review.	
Other Project Info (R&R)	**IACUC review pending?**	Provide a warning if Vertebrate Animals Used is 'N'	When Vertebrate Animals is "No", IACUC Approval Pending indicator does not apply (Other Project Information, item 2).	
Other Project Info (R&R)	**IACUC approval date**	Provide a warning if VertebrateAnimalsUsedQuestion is false	When Vertebrate Animals is "No", IACUC Approval Date does not apply (Other Project Information, item 2).	
		The date can't be in the future	The IACUC Approval Date (Other Project Information, item 2) cannot be in the future.	
Other Project Info (R&R)	**Animal Welfare Assurance #**	Provide a warning if VertebrateAnimalsUsedQuestion is false	When Vertebrate Animals is "No", Assurance Number does not apply (Other Project Information, item 2).	

Component	Field	Validation	Error Message	Notes & Tips
		If an animal welfare assurance number is entered, provide a warning if it doesn't match animal welfare assurance number for this organization. Match needs to be on the last 9 characters of the IPF assurance number. This validation should not be done if the field is left blank or if the word 'None' is entered.	The Animal Welfare Assurance Number entered in Other Project Information, item 2, does not match what is in the eRA Commons profile for your organization. There are rare cases where this is permissible. Please make sure that the correct number is entered on the Other Project Information page. If not, correct and resubmit.	
Other Project Info (R&R)	**Proprietary or privileged info?**			
Other Project Info (R&R)	**Impact on environment?**			
Other Project Info (R&R)	**Activities outside US?**			
Other Project Info (R&R)	**Project Summary**	For non-C06, UC6, or G20 applications, limited to one page	The Project Summary/Abstract in Other Project Information, item 6 is limited to 30 lines of text.	
Other Project Info (R&R)	**Project Narrative**	For non-S10 and non-C06, UC6, or G20 applications, limit to 1 page	The Public Health Relevance Statement (labeled 'Project Narrative' in Other Project Information, item 7) should be no longer than 2 or 3 sentences.	The project narrative should be used for the Public Health Relevance Statement and should be no longer than 2 or 3 sentences.
		Required for C06, UC6, or G20 applications.	Please attach the Program Narrative as the Project Narrative attachment on the Other Project Information component.	
		Limited to 40 pages for C06, UC6, or G20 applications.	The Program Narrative (Other Project Information, Project Narrative attachment) is limited to 40 pages.	
Other Project Info (R&R)	**Bibliography and References**			
Other Project Info (R&R)	**Facilities and other resources**			
Other Project Info (R&R)	**Equipment**	Required for S10 applications.	The Equipment Attachment on the Other Project Information page is required for S10 applications.	

Component	Field	Validation	Error Message	Notes & Tips
Other Project Info (R&R)	**Other attachments**	For S10 applications, provide warning if at least one attachment has not been included for this.	At least one attachment should be provided as an 'Other Attachment' on the Other Project Information page. Please consult the funding opportunity announcement to which you are responding, for the type(s) of information to be attached. The application will be processed if you have not included an 'Other Attachment', but a concern may be raised during review.	Note that multiple attachments may be received with Other Attachments. They should all be processed.

Research & Related: Senior/Key Person Profile

Component	Field	Validation	Error Message	Notes & Tips
Senior/Key Person (R&R)	**PD/PI Profile Information**	Pulled from SF 424 RR Cover component		Note: identify this Senior/Key Person as the contact PI if multiple PI roles are defined.
Senior/Key Person (R&R)	**PD/PI Profile, credential**	Must be specified for the PD/PI	The eRA Commons Username must be submitted for the PD/PI in the PD/PI Credential field on the Senior/Key Person page.	
		Truncate if greater than 30 characters, before comparing to account stored in database. No warning message is needed to the submitter.		
		If specified, must be a valid Commons account.	The eRA Commons Username <Credential> in the PD/PI Credential field on the Senior/Key Person page is not a recognized eRA Commons account.	
		For the PD/PI, this account must be affiliated with the organization submitting the application and have the PI role	The eRA Commons account indicated for the PD/PI in the Credential field on the Senior/Key Person page, is not affiliated with the applicant organization. Check with your eRA Commons Account Administrator to make sure you have been affiliated with the applicant organization.	

Component	Field	Validation	Error Message	Notes & Tips
		For a revision, the PI should be assigned to the parent grant. If the person profile for this Commons account is not the same person profile assigned as the PI to the parent grant, and the last name of the PI assigned to the parent grant matches the last name that is submitted for the PI on the current application, provide the indicated warning. This match must not be case-sensitive, and should compare only the non-blank, non-punctuation characters that appear in the last name. If neither the profile nor the last name match, provide the indicated error.	Warning: The eRA Commons account for the PI in the Credential field on the Senior/Key Person page does not include the parent grant of this submission in its support history. Error: The parent grant that has been entered is not associated with this PI.	
		Provide a warning if there is both an SO and a PI role associated with the Commons account.	The eRA Commons account has 'SO' and 'PI' roles. Please create a separate eRA Commons account for the SO/AOR, then delete the 'SO' role from the account included in the submission. You do not need to send a changed/corrected application.	
		Provide a warning if the single role associated with the Commons account is an SO role.	The eRA Commons account is for an SO/AOR. Please add a PI role to this account, create a separate 'SO' eRA Commons account for the SO/AOR, and delete the 'SO' role from the original account. You do not need to send a changed/corrected application.	
Senior/Key Person (R&R)	**PD/PI Profile, other project role category**			
Senior/Key Person (R&R)	**Biosketch**	Limited to four pages	The Senior/Key Person Biosketch for the PD/PID, <first name last name>, is longer than four pages.	
Senior/Key Person (R&R)	**Current and Pending Support**			

Component	Field	Validation	Error Message	Notes & Tips
Senior/Key Person (R&R)	**Profile, senior & key person *x*, name**	Truncate if first or last name>30 chars, or suffix>5 chars. Display warning.	The Senior/Key Person <element name> for <first name last name> (Senior/Key Person page) exceeds the agency limit. The grant image will display the name as submitted; the agency will store the first <database length> characters only.	Long-term, change in eRA db to 60 chars for last name, 35 for first name, 10 for suffix (all names in db) *("nth" indicates the relative order of this KeyPerson element)*
		If this *and* Commons Account provided, provide warning if any component of name on account doesn't match provided name. Comparison to ignore case and embedded spaces, but not embedded punctuation.	The name provided for Key Person <submitted name components> on the Senior/Key Person page does not match the eRA Commons account name (<Commons profile name components>). The grant image will display the name as submitted.	Post-testing solution: If validation fails, provide warning that Commons name is *xxxx* and name submitted through grants.gov is *yyyy* and we will be displaying the Commons data. Provide ability for the submitter to update their Commons account and to regenerate the image to display the updated information from the Commons account.
		For S10 applications, provide warning if there are not at least two senior/key persons (other than the PD/PI), with project role of 'Other (specify)'.	Less than 2 senior/key person entries have been included with a project role of 'Other (specify)' on the Senior/Key Person page to represent the major user group cohort. The application will be processed, but a concern may be raised during review.	
Senior/Key Person (R&R)	**Profile, senior & key person *x*, position title**	Truncate if greater than 40 characters. No warning message is needed to the submitter.		
Senior/Key Person (R&R)	**Profile, senior & key person *x*, organization name**	Needs to be enforced as mandatory.	The organization name for Key Person <Key Person First Name Last Name> must be provided on the Senior/Key Person page.	
Senior/Key Person (R&R)	**Profile, senior & key person *x*, department**			
Senior/Key Person (R&R)	**Profile, senior & key person *x*, division**			
Senior/Key Person (R&R)	**Profile, senior & key person *x*, street 1 and 2**			
Senior/Key Person (R&R)	**Profile, senior & key person *x*, city**			

Component	Field	Validation	Error Message	Notes & Tips
Senior/Key Person (R&R)	**Profile, senior & key person** *x*, **county**			
Senior/Key Person (R&R)	**Profile, senior & key person** *x*, **state**			
Senior/Key Person (R&R)	**Profile, senior & key person** *x*, **province**			
Senior/Key Person (R&R)	**Profile, senior & key person** *x*, **zip code**			Long-term, change in eRA db to 13 characters.
Senior/Key Person (R&R)	**Profile, senior & key person** *x*, **country**			
Senior/Key Person (R&R)	**Profile, senior & key person** *x*, **phone**			
Senior/Key Person (R&R)	**Profile, senior & key person** *x*, **fax**			
Senior/Key Person (R&R)	**Profile, senior & key person** *x*, **e-mail**			
Senior/Key Person (R&R)	**Profile, senior & key person** *x*, **credential**	If specified for a key person with a PD/PI role, must be a valid Commons account.	The eRA Commons Username <Credential>, specified on the Senior/Key Person page, for PD/PI <First Name Last Name>, is not a recognized eRA Commons account.	
		Truncate if greater than 30 characters, before comparing to account stored in database. No warning message is needed to the submitter.		
		Must be specified if project role is 'PD/PI'.	The eRA Commons Username has not been specified in the 'Credential' field on the Senior/Key Person page for PD/PI <First Name Last Name>	

Component	Field	Validation	Error Message	Notes & Tips
Senior/Key Person (R&R)	**Profile, senior & key person *x*, project role**	For an R36 application (activity code on funding opportunity = 'R36'), there must be at least one key person included in addition to the PD/PI identified in the PD/PI component.	A mentor must be identified for an R36 application. List the mentor as a key person on the Senior Key Person page.	
		For a C06, UC6, or G20 application, there must be at least one key person identified with a project role of 'Other' or 'Other Professional'.	A Facilities Person must be identified for this application. Please provide the information for this person after the PD/PI on the Senior/Key Person page. Specify a project role of 'Other' or 'Other Professional', and an Other Project Role Category of 'Facilities Person'.	
		Provide an error if project role is 'PD/PI' and credential is the same as the PD/PI credential.	PD/PI <First Name Last Name> has been identified in both the PD/PI portion and in the Senior/Key Person Profile portion of the Senior/Key Person page.	
		For non-Opdiv applications, provide a warning if the 'Co-PI' role has been indicated	A role of 'Co-PI' has been indicated for PD/PI <First Name Last Name> on the Senior/Key Person page. NIH does not use this role. The application will be processed, but may be delayed in the peer review process.	
		If project role is 'PD/PI', identify in database as Multiple PI.		Need to create role record for multiple PIs. Also need to set multi_pi_indicator_code in appls_t. Populate affiliation data in person_involvements_t.external_org_id with the org identified as the default account affiliation. Should be indicated in mapping document.
Senior/Key Person (R&R)	**Profile, senior & key person *x*, other project role category**	Accept "Other Project Role Category" only when "Project Role" is "Other" or "Other Professional"	For key person <First Name Last Name> on the Senior/Key Person page, an 'Other Project Role Category' was submitted for a project role of <project role>. This can be used only when Project Role is "Other" or "Other Professional".	
Senior/Key Person (R&R)	**Senior & key person *x*, Biosketch**	Limited to four pages	The Biosketch for Senior/Key Person <first name last name> on the Senior/Key Person page is longer than four pages.	

Component	Field	Validation	Error Message	Notes & Tips
Senior/Key Person (R&R)	**Senior & key person x, Current and Pending Support**	For S10 applications, provide warning if no attachment is provided for any three senior/key persons with project role of 'Other (specify)' or with project role of 'PD/PI'.	Less than 3 Current and Pending Support attachments have been included for the major user group cohort on the Senior/Key Person page. The application will be processed, but a concern may be raised during review.	This attachment can be received for a PD/PI, or for a senior/key person with a role of 'Other (specify)'. We need to make sure that at least 3 of these attachments are submitted, whether 1 is submitted for the PD/PI and 2 for the senior/key person (with role of 'Other (specify)'), or 3 are submitted for the senior key person (with role of 'Other (specify)').
Senior/Key Person (R&R)	**Additional Senior/Key Person Profiles**	For version 1.0 of Key Person component, accept only if eight key personnel have been submitted on the Senior/Key Person page.	An Additional Senior/Key Person Profiles attachment may be submitted only if eight senior/key person profiles have been submitted on the Senior/Key Person page.	Additional Senior/Key Person profiles can be submitted only if you've submitted eight key personnel in the Senior/Key Person Profile section.
		For the Research & Related Senior/Key Person Expanded version of Key Person component, accept only if 40 key personnel have been submitted on the Senior/Key Person page.	An Additional Senior/Key Person Profiles attachment may be submitted only if 40 senior/key person profiles have been submitted on the Senior/Key Person page.	
Senior/Key Person (R&R)	**Additional Senior/Key Person Biosketch**	Accept only if an Additional Senior/Key Person Profiles attachment has been submitted and accepted.	An Additional Senior/Key Person Biosketch attachment may be submitted on the Senior/Key Person page only if an Additional Senior/Key Person Profiles attachment has been submitted and accepted.	
Senior/Key Person (R&R)	**Additional Senior/Key Person Current and Pending Support**	Accept only if an Additional Senior/Key Person Profiles attachment has been submitted and accepted.	An Additional Senior/Key Person Current and Pending Support attachment may be submitted on the Senior/Key Person page only if an Additional Senior/Key Person Profiles attachment has been submitted and accepted.	

Research & Related Budget: Section A & B, Budget Period 1

Component	Field	Validation	Error Message	Notes & Tips
Budget, A&B, Year x (R&R)		Accept submission of modular budget or detailed budget, but not both	Both a modular and a detailed budget have been included with this submission on the 424 RR Budget page. One or the other may be submitted.	Budget information is necessary for all applications. Some applications will list both the modular and detailed budget components as "optional". This is to allow the appropriate component to be chosen. Choose one or the other, but not both.
		Allow a submission with neither a modular budget nor a detailed budget component.		
		An application in response to an R03, R15, R21, or R34 opportunity (but not R21/R33) must be submitted with a modular budget. OPDIVs and 'opt out' announcements are exempt from this validation. Applications where the applicant organization is foreign also are exempt from this validation.	R03, R15, R21, and R34 applications must use the PHS 398 Modular Budget Form and not the SF 424 R&R Budget Form.	In mapping, assign a budget period ID based on the year of the budget. If you are submitting an STTR application, you must include a Research Institution Budget page for each year of the project (submitted using the Subaward budget type on the budget page).
		For a revision, if the parent grant budget is modular, only a modular budget component may be submitted.	The parent grant for this revision uses the modular format; therefore, this application may include a modular budget only.	
		For an STTR submission, there must be at least one budget included with budget type of subaward/ consortium for each year of the STTR (project) budget.	A Research Institution Budget page must be included for each year of an STTR submission	
Budget, A&B, Year x (R&R)	**Organizational DUNS**	Required for budget type 'Subaward/Consortium'	The Organizational DUNS has not been included for Sections A&B for <name of organization> on the 424 RR Budget page.	
		One and only one budget should contain the DUNS of the applicant organization.	The Project budget must contain the DUNS number for the applicant organization on the 424 RR Budget page.	
		This must be a budget that has been identified as 'Project'	A Subaward budget has been identified for the applicant organization. Budgets for the applicant organization should have the 'Project' budget type.	

Component	Field	Validation	Error Message	Notes & Tips
Budget, A&B, Year x (R&R)	**Budget type (project, subaward/ consortium)**	If a detailed budget is included, there must be one and only one occurrence with a value of 'Project'.	Only one budget with a budget type of 'Project' for Sections A&B may be submitted on the 424 RR Budget page.	You can submit only one budget with the budget type "Project" for Sections A&B.
Budget, A&B, Year x (R&R)	**Name of organization (for subaward/ consortium)**	If multiple detailed budgets have been included in the submission, all budget and warning messages should include the name of the organization for which the budget validation has failed.		Since there is a limit of 250 characters for the error message, put the organization name at the end of the message, and truncate if necessary.
Budget, A&B, Year x (R&R)	**Start Date**	For budget year 1, for Budget Type 'Project', for new applications and resubmissions, must be the same as the Proposed Project Start Date listed on the SF 424 RR Face Page.	For new applications and resubmissions, the start date for the first budget year on the 424 RR Budget page-must be the same as the proposed project start date listed on the SF424 RR Cover page.	Remember to check start and end dates. For new applications and revisions/amendments to new applications, the start date for the first budget year on the 424 RR Budget page-must be the same as the proposed project start date listed on the SF424 (R&R) Cover page.
		For budget years after budget year 1, must be greater than or equal to the Proposed Project Start Date listed on the SF 424 RR Face Page.	The start date for budget year <budget year> must be equal to or later than the proposed project start date listed on the SF 424 RR Cover page.	
Budget, A&B, Year x (R&R)	**End Date**			
Budget, A&B, Year x (R&R)	**Senior/Key Person Name (prefix, first name, middle name, last name, suffix)**	Truncate if first or last name>30 chars, or if suffix>5 chars. Display warning.	The <order in list (first, second)> Senior/Key Person <element name> for budget year <budget year> on the 424 RR Budget page (section A&B) exceeds the agency character limit. The grant image will display the name as submitted; the agency will store the first <database length> characters in the eRA database.	Long-term, change in eRA db to 60 chars for last name, 35 for first name, 10 for suffix (all names in db)
		For Project Role of PD/PI (for the PI listed on the SF 424 RR Cover only), must match Senior/Key Person form last name and first name.	The <name> given for the PD/PI for budget year <budget year> on the 424 RR Budget page (section A&B) does not match the name given for the PD/PI on the SF 424 RR Cover.	
Budget, A&B, Year x (R&R)	**Senior/Key Person Project Role**	For budgets of type 'Project', there must be at least one record for the budget year with a project role of PD/PI. Validation does not apply to STTR submissions.	There must be a Personnel entry listed for the PI or PD on the 424 RR Detailed Budget Page (Section A&B) for budget year <budget year>.	For an STTR submission, the PI/PD could be on the Research Institution Budget.

Component	Field	Validation	Error Message	Notes & Tips
Budget, A&B, Year x (R&R)	**Senior/Key Person Base Salary**			
Budget, A&B, Year x (R&R)	**Senior/Key Person Cal. Mos**	For non-R13 submissions, a non-zero value for calendar months, academic months, or summer months is required for each senior/key person.	Senior/Key Person <First name Last name>, listed on the 424 RR Detailed Budget Page for budget year <budget year>, must include effort of a value greater than zero in calendar months, academic months, or summer months. **Note:** use either calendar months or a combination of academic and summer months.	
		For an R13 submission, a value for calendar months, academic months, or summer months is required for each senior/key person. The value may be zero.	Senior/Key Person <First name Last name>, listed on the 424 RR Detailed Budget Page for budget year <budget year>, must include effort (zero or greater) in calendar months, academic months, or summer months. **Note:** use either calendar months or a combination of academic and summer months	Need to confirm that a zero is treated differently from a null value, also that a system to system submission with an empty tag will not result in a zero value being inserted in that element
Budget, A&B, Year x (R&R)	**Senior/Key Person acad. mos**	Provide warning if both academic and calendar months have been provided for a person for a budget year.	Both academic and calendar months have been included for <Senior/Key Person First Name Last Name>, for budget year <budget year> on the 424 RR Budget page (section A&B). Please use either calendar months or a combination of academic and summer months. If effort does not change throughout the year, use the calendar months column. If effort varies between academic and summer months, leave the calendar months column blank and use only the academic and summer months' columns.	
Budget, A&B, Year x (R&R)	**Senior/Key Person summer mos**			
Budget, A&B, Year x (R&R)	**Senior/Key Person Requested Salary**			
Budget, A&B, Year x (R&R)	**Senior/Key Person Fringe benefits**			

Component	Field	Validation	Error Message	Notes & Tips
Budget, A&B, Year x (R&R)	**Senior/Key Person Funds Requested**	Must be equal to the sum of Requested Salary and Fringe Benefits for the Senior/Key Person for the budget year.	The Funds Requested for <Senior/Key Person First Name Last Name> on the 424 RR Budget page (section A&B) for Budget Year <Budget Year> does not equal the sum of the Requested Salary and the Fringe Benefits for the corresponding budget year.	
Budget, A&B, Year x (R&R)	**Total funds requested for Senior Key Persons in attachment**	Required if Additional Senior Key Persons Attachment is included.	If the Additional Senior Key Persons Attachment is included, the total funds that are requested in the attachment must be provided on the 424 RR Budget Page.	
Budget, A&B, Year x (R&R)	**Total Funds requested for all senior/key persons**	Must be equal to the sum of Funds Requested for the budget year.	The Total Funds Requested for Budget Year <Budget Year> on the 424 RR Budget page (section A&B) does not equal the sum of Funds Requested for all Senior/Key Persons for the corresponding budget year.	
Budget, A&B, Year x (R&R)	**Additional Senior Key Persons attachment**	Accept only if eight key personnel have been submitted on the budget page for this year.	An Additional Senior/Key Person attachment may be submitted on the 424 RR Budget page (section A&B) for budget year <budget year> only if eight senior/key persons have been submitted on the budget page.	
Budget, A&B, Year x (R&R)	**Other Personnel, (number of personnel)**			
Budget, A&B, Year x (R&R)	**Other Personnel (Project Role)**			
Budget, A&B, Year x (R&R)	**Other Personnel (Cal. Mos)**			
Budget, A&B, Year x (R&R)	**Other Personnel (acad.mos)**			
Budget, A&B, Year x (R&R)	**Other Personnel (summer mos)**			
Budget, A&B, Year x (R&R)	**Other Personnel (Requested salary)**			

Component	Field	Validation	Error Message	Notes & Tips
Budget, A&B, Year x (R&R)	**Other Personnel (Fringe benefits)**			
Budget, A&B, Year x (R&R)	**Other Personnel (Funds Requested)**	Must be equal to the sum of Requested Salary and Fringe Benefits for the project role for the budget year.	The Funds Requested for Other Personnel Project Role <Project Role> for Budget Year <Budget Year> on the 424 RR Budget page (section A&B) does not equal the sum of the Requested Salary and the Fringe Benefits for the corresponding budget year.	
Budget, A&B, Year x (R&R)	**Total number other personnel**	Must equal the sum of number of personnel for all project roles under Other Personnel.	The total number of Other Personnel on the 424 RR Budget page (section A&B) does not equal the sum of the number of other personnel for all project roles.	
Budget, A&B, Year x (R&R)	**Total Funds Requested other personnel**	Must be equal to the sum of Funds Requested for Other Personnel for the budget year.	The Total Funds Requested for Other Personnel for Budget Year <Budget Year> on the 424 RR Budget page (section A&B) does not equal the sum of Funds Requested for all Other Personnel for the corresponding budget year.	
Budget, A&B, Year x (R&R)	**Total salary, wages and fringe benefits**	Must equal the sum of Total Funds requested for all senior/key persons and Total Funds Requested other personnel	The Total Salary, Wages and Fringe Benefits for Budget Year <Budget Year> on the 424 RR Budget page (section A&B) does not equal the sum of Total Funds requested for all senior/key persons and Total Funds Requested for other personnel	

Research & Related Budget: Section C, D, & E, Budget Period 1

Component	Field	Validation	Error Message	Notes & Tips
Budget, C, D, E, Year x (R&R)	**Equipment description, equipment item**			
Budget, C, D, E, Year x (R&R)	**Equipment description, funds req**			
Budget, C, D, E, Year x (R&R)	**Equipment description, total funds requested in attachment**			
Budget, C, D, E, Year x (R&R)	**Equipment description, total equipment**	Must be equal to the sum of Funds Requested for equipment for the budget year.	The Total Funds Requested for Equipment for Budget Year < Budget Year> on the 424 RR Budget page (section C, D & E) does not equal the sum of Funds Requested for all Equipment Items for the corresponding budget year.	
Budget, C, D, E, Year x (R&R)	**Additional equipment attachment**			
Budget, C, D, E, Year x (R&R)	**Travel, domestic travel costs**			
Budget, C, D, E, Year x (R&R)	**Travel, foreign travel costs**			
Budget, C, D, E, Year x (R&R)	**Total travel cost**	Must be equal to the sum of domestic travel costs and foreign travel costs for the budget year.	The Total Travel Cost for Budget Year < Budget Year> on the 424 RR Budget page (section C, D & E) does not equal the sum of Domestic Travel Costs and Foreign Travel Costs for the corresponding budget year.	
Budget, C, D, E, Year x (R&R)	**Participant/ trainee support costs: tuition**			

Component	Field	Validation	Error Message	Notes & Tips
Budget, C, D, E, Year x (R&R)	**Participant/ trainee support costs: stipends**			
Budget, C, D, E, Year x (R&R)	**Participant/ trainee support costs: travel**			
Budget, C, D, E, Year x (R&R)	**Participant/ trainee support costs: subsistence**			
Budget, C, D, E, Year x (R&R)	**Participant/ trainee support costs: other**			
Budget, C, D, E, Year x (R&R)	**Participant/ trainee support costs: description of other**			
Budget, C, D, E, Year x (R&R)	**Participant/ trainee support costs: number of Participants/ Trainees**			
Budget, C, D, E, Year x (R&R)	**Participant/ trainee support costs: Total Participant/ Trainee Support Costs**	Must be equal to the sum of participant/trainee support costs for the budget year.	The Total Participant/Trainee Support Costs for Budget Year <Budget Year> on the 424 RR Budget page (section C, D & E) does not equal the sum of Participant/trainee support costs for the corresponding budget year.	

Research & Related Budget: Section F–K, Budget Period 1

Component	Field	Validation	Error Message	Notes & Tips
Budget, F-K, Year x (R&R)	**Other Direct Costs (materials & supplies)**			
Budget, F-K, Year x (R&R)	**Other Direct Costs (Publication Costs)**			
Budget, F-K, Year x (R&R)	**Other Direct Costs (Consultant Services)**			
Budget, F-K, Year x (R&R)	**Other Direct Costs (ADP/ Computer Services**			
Budget, F-K, Year x (R&R)	**Other Direct Costs (Subawards/ Consortium/ Contractual Costs)**			
Budget, F-K, Year x (R&R)	**Other Direct Costs (Equipment or Facility Rental/ User Fees)**			
Budget, F-K, Year x (R&R)	**Other Direct Costs (Alterations and Renovations)**			
Budget, F-K, Year x (R&R)	**Other Direct Costs (other description 1)**			

Component	Field	Validation	Error Message	Notes & Tips
Budget, F-K, Year x (R&R)	**Other Direct Costs (other1 funds requested)**			
Budget, F-K, Year x (R&R)	**Other Direct Costs (other description 2)**			
Budget, F-K, Year x (R&R)	**(other2 funds requested)**			
Budget, F-K, Year x (R&R)	**Other Direct Costs (other description 3)**			
Budget, F-K, Year x (R&R)	**(other3 funds requested)**			
Budget, F-K, Year x (R&R)	**Other Direct Costs, Total Other Direct Costs**	Must be equal to the sum of other direct costs for the budget year.	The Total Other Direct Costs for Budget Year <Budget Year> on the 424 RR Budget page (section F-K) does not equal the sum of other direct costs for all categories for the corresponding budget year.	
Budget, F-K, Year x (R&R)	**Total Direct Costs (A-F)**	Required.	The Total Direct Costs Funds Requested for Year *x* is required on the 424 RR Budget page (section F-K).	
		Must be equal to the sum of total salary, wages and fringe benefits, total funds requested for equipment, total travel cost, total participant/trainee support costs, and total other direct costs	The Total Direct Costs for A-F for Budget Year <Budget Year> on the 424 RR Budget page (section F-K) does not equal the sum of direct costs for Sections A-F.	
		For non-Opdiv R01, R03, R15, R21, and R34 submissions, provide warning if subtotal direct costs for *every* budget year is < = $250K. Applications where the applicant organization is foreign are exempt from this validation. Calculate subtotal direct costs as follows: Total Direct Costs (A-F) *minus* the sum of Total Indirect Costs for all budgets for the corresponding year with budget type 'subaward/consortium'.	R01, R03, R15, R21and R34 direct cost requests of $250K or less each year on the 424 RR Budget page (section F-K) must be in modules of $25K, using the PHS 398 Modular Budget Form and not the R&R Budget Form. Incorrect applications may be delayed in the peer review process or rejected.	

Component	Field	Validation	Error Message	Notes & Tips
		For non-SBIR/STTR submissions and for submissions that are not in response to an RFA, provide warning if subtotal direct costs for *any* budget year is >= 500K (LV for R01, R18, U18, R25).	Direct cost requests (on the 424 RR Budget page section F-K) >=$500k a year need agreement from ICs, except for RFAs or PAs with budgetary limits. Applications without such approval may be delayed in the peer review process or rejected.	Design note: RFA announcements have rfa_pa_notices_t.notice_type_code='R'
		Calculate subtotal direct costs as follows: Total Direct Costs (A-F) *minus* the sum of Total Indirect Costs for all budgets for the corresponding year with budget type 'subaward/consortium'.	Warning message for 'opt out' announcements: Be sure that you have complied with the allowable direct cost limitations for this FOA. Otherwise, your application may be delayed and rejected in the review process.	
Budget, F-K, Year x (R&R)	**Indirect Costs, Indirect Cost Type**	Allow submissions to come in with no indirect costs.		
Budget, F-K, Year x (R&R)	**Indirect Costs, Indirect Cost Rate**	Provide warning if less than 1.	The Indirect Cost Rate (on the 424 RR Budget page, section F-K) is less than 1 for budget Year <Budget Year>. Please note that this figure represents a percentage (e.g., '25.5', not '.255').	
Budget, F-K, Year x (R&R)	**Indirect Costs, Indirect Cost Base**			
Budget, F-K, Year x (R&R)	**Indirect Costs, Funds Requested**			
Budget, F-K, Year x (R&R)	**Indirect Costs, Cognizant Federal Agency**			
Budget, F-K, Year x (R&R)	**Total Indirect Costs**	Must be equal to funds requested for all indirect cost types	The Total Indirect Costs for Budget Year <Budget Year> on the 424 RR Budget page (section F-K) does not equal the sum of indirect costs for each indirect cost type.	
Budget, F-K, Year x (R&R)	**Total Direct and Indirect Costs**	Required	The Total Direct and Indirect Costs Funds Requested for Year *x* is required on the 424 RR Budget page (section F-K).	

Component	Field	Validation	Error Message	Notes & Tips
		Must be equal to the sum of Total Direct Costs and Total Indirect Costs	The Total Direct and Indirect Institutional Costs on the 424 RR Budget page (section F-K) is not equal to the sum of Total Other Direct Costs and Total Indirect Costs.	
Budget, F-K, Year x (R&R)	**Fee**	A fee cannot be entered for a subaward/consortium budget.	A fee has been entered for year <x> of the budget for <organization name> on the 424 RR Budget page (section F-K). Fees are not allowed for subaward/consortium budgets.	
Budget, F-K, Year x (R&R)	**Budget Justification**	If fee is requested, must not be blank or null	A fee has been entered for year <x> of the Project budget on the 424 RR Budget page (section F-K). A Budget Justification must be included if a fee has been entered.	
		If SBIR/STTR Phase I cost limitation is exceeded, must not be blank or null. Cost limitation is 100k, calculated as total cost (direct cost, indirect cost, and fee).	The Phase I cost limitation of 100k has been exceeded. Please explain the deviation in the Budget Justification on the 424 RR Budget page (section F-K).	
		If SBIR/STTR Phase II cost limitation is exceeded, must not be blank or null. Cost limitation is 750k, calculated as total cost (direct cost, indirect cost, and fee).	The Phase II cost limitation of 750k has been exceeded. Please explain the deviation in the Budget Justification on the 424 RR Budget page (section F-K).	
		If Fast-Track cost limitation is exceeded, must not be blank or null. Cost limitation is 850k, calculated as total cost (direct cost, indirect cost, and fee).	The Fast-Track cost limitation of 850k has been exceeded. Please explain the deviation in the Budget Justification on the 424 RR Budget page (section F-K).	
		If Phase I SBIR time limitation is exceeded, must not be blank or null. Time limitation is six months, calculated as the time between the start date of the first budget period and the end date of the last budget period.	The Phase I SBIR time limitation of six months has been exceeded. Please explain the deviation in the Budget Justification on the 424 RR Budget page (section F-K).	Since there is no cumulative budget justification, this validation will look at the Budget Justification for the first budget period. Instructions should include this.
		If Phase I STTR time limitation is exceeded, must not be blank or null. Time limitation is one year, calculated as the time between the start date of the first budget period and the end date of the last budget period.	The Phase I STTR time limitation of one year has been exceeded. Please explain the deviation in the Budget Justification on the 424 RR Budget page (section F-K).	Since there is no cumulative budget justification, this validation will look at the Budget Justification for the first budget period. Instructions should include this.

Component	Field	Validation	Error Message	Notes & Tips
		If Phase II SBIR/STTR time limitation is exceeded, must not be blank or null. Time limitation is two years, calculated as the time between the start date of the first budget period and the end date of the last budget period.	The Phase II SBIR/STTR time limitation of two years has been exceeded. Please explain the deviation in the Budget Justification on the 424 RR Budget page (section F-K).	Since there is no cumulative budget justification, this validation will look at the Budget Justification for the first budget period. Instructions should include this.

Research & Related Budget: Cumulative Budget

Component	Field	Validation	Error Message	Notes & Tips
Cumulative Budget (R&R)	**Section A, Senior/Key Person Total**	Must be equal to the sum of Total Funds Requested for all senior/key persons for every budget year for this budget.	The 424 RR Cumulative Budget Senior/Key Person Total does not equal the sum of Total Funds Requested for all senior/key persons for all budget years.	
Cumulative Budget (R&R)	**Section B, Other Personnel Total**	Must be equal to the sum of Total Funds Requested for Other Personnel for every budget year for this budget.	The 424 RR Cumulative Budget Other Personnel Total does not equal the sum of Total Funds Requested for Other Personnel for all budget years.	
Cumulative Budget (R&R)	**Total Number other personnel**	Must be equal to the sum of Total Number Other Personnel for every budget year for this budget.	The 424 RR Cumulative Budget Total Number Other Personnel does not equal the sum of Total Number Other Personnel for all budget years.	
Cumulative Budget (R&R)	**Total Salary, Wages, and Fringe Benefits**	Must be equal to the sum of Total Salary, Wages, and Fringe Benefits for every budget year for this budget.	The 424 RR Cumulative Budget Total Salary, Wages, and Fringe Benefits do not equal the sum of Total Salary, Wages, and Fringe Benefits for all budget years.	
Cumulative Budget (R&R)	**Section C, Equipment Totals**	Must be equal to the sum of Total Funds Requested For Equipment for every budget year for this budget.	The 424 RR Cumulative Budget Total Funds Requested For Equipment does not equal the sum of Total Funds Requested For Equipment for all budget years.	
Cumulative Budget (R&R)	**Section D, Travel, Total**	Must be equal to the sum of Total Travel Cost for every budget year for this budget.	The 424 RR Cumulative Budget Total Travel Cost does not equal the sum of Total Travel Costs for all budget years.	
Cumulative Budget (R&R)	**Section D, Travel, Domestic**	Must be equal to the sum of Domestic Travel Cost for every budget year for this budget.	The 424 RR Cumulative Budget Domestic Travel Cost does not equal the sum of Domestic Travel Costs for all budget years.	
Cumulative Budget (R&R)	**Section D, Travel, Foreign**	Must be equal to the sum of Foreign Travel Cost for every budget year for this budget.	The 424 RR Cumulative Budget Foreign Travel Cost does not equal the sum of Foreign Travel Costs for all budget years.	
Cumulative Budget (R&R)	**Section E, Participant/ Trainee, Total**	Must be equal to the sum of Total Participant/Trainee Support Costs for every budget year for this budget.	The 424 RR Cumulative Budget Total Participant/Trainee Support Costs does not equal the sum of Total Participant/Trainee Support Costs for all budget years.	

Component	Field	Validation	Error Message	Notes & Tips
Cumulative Budget (R&R)	**Section E, Participant/ Trainee, Tuition, Fees, Health Insurance**	Must be equal to the sum of Participant/Trainee, Tuition, Fees, Health Insurance Costs for every budget year for this budget.	The 424 RR Cumulative Budget Participant/Trainee, Tuition, Fees, Health Insurance Costs does not equal the sum of Participant/Trainee, Tuition, Fees, Health Insurance Costs for all budget years.	
Cumulative Budget (R&R)	**Section E, Participant/ Trainee, Stipends**	Must be equal to the sum of Participant/Trainee, Stipends Costs for every budget year for this budget.	The 424 RR Cumulative Budget Participant/Trainee, Stipends Costs does not equal the sum of Participant/Trainee, Stipends Costs for all budget years.	
Cumulative Budget (R&R)	**Section E, Participant/ Trainee, Travel**	Must be equal to the sum of Participant/Trainee, Travel Costs for every budget year for this budget.	The 424 RR Cumulative Budget Participant/Trainee, Travel Costs does not equal the sum of Participant/Trainee, Travel Costs for all budget years.	
Cumulative Budget (R&R)	**Section E, Participant/ Trainee, Subsistence**	Must be equal to the sum of Participant/Trainee, Subsistence Costs for every budget year for this budget.	The 424 RR Cumulative Budget Participant/Trainee, Subsistence Costs does not equal the sum of Participant/Trainee, Subsistence Costs for all budget years.	
Cumulative Budget (R&R)	**Section E, Participant/ Trainee, Other**	Must be equal to the sum of Participant/Trainee, Other Costs for every budget year for this budget.	The 424 RR Cumulative Budget Participant/Trainee, Other Costs does not equal the sum of Participant/Trainee, Other Costs for all budget years.	
Cumulative Budget (R&R)	**Section E, Participant/ Trainee, Number**	Must be equal to the sum of the Number of Participants/Trainees for every budget year for this budget.	The 424 RR Cumulative Budget Number of Participants/Trainees does not equal the sum of the Number of Participants/Trainees for all budget years.	
Cumulative Budget (R&R)	**Section F, Other Direct Costs, Total**	Must be equal to the sum of Other Direct Costs for every budget year for this budget.	The 424 RR Cumulative Budget Other Direct Costs does not equal the sum of Other Direct Costs for all budget years.	
Cumulative Budget (R&R)	**Section F, Other Direct Costs, Materials and Supplies**	Must be equal to the sum of Other Direct Costs, Materials and Supplies, for every budget year for this budget.	The 424 RR Cumulative Budget Other Direct Costs, Materials and Supplies, does not equal the sum of Other Direct Costs, Materials and Supplies, for all budget years.	
Cumulative Budget (R&R)	**Section F, Other Direct Costs, Publication Costs**	Must be equal to the sum of Other Direct Costs, Publication Costs, for every budget year for this budget.	The 424 RR Cumulative Budget Other Direct Costs, Publication Costs, does not equal the sum of Publication Costs for all budget years.	

Component	Field	Validation	Error Message	Notes & Tips
Cumulative Budget (R&R)	**Section F, Other Direct Costs, Consultant Services**	Must be equal to the sum of Other Direct Costs, Consultant Services, for every budget year for this budget.	The 424 RR Cumulative Budget Other Direct Costs, Consultant Services, does not equal the sum of Consultant Services for all budget years.	
Cumulative Budget (R&R)	**Section F, Other Direct Costs, ADP/ Computer Services**	Must be equal to the sum of Other Direct Costs, ADP/Computer Services, for every budget year for this budget.	The 424 RR Cumulative Budget Other Direct Costs, ADP/Computer Services, does not equal the sum of ADP/Computer Services for all budget years.	
Cumulative Budget (R&R)	**Section F, Other Direct Costs, sub, consortium, contractual**	Must equal the sum of Other Direct Costs, Subawards/Consortium/ Contractual Costs, for every budget year for this budget.	The 424 RR Cumulative Budget Section F, Other Direct Costs, Subaward/Consortium/ Contractual, does not equal the sum of Other Direct Costs, Subawards/Consortium/ Contractual Costs for all budget years.	
Cumulative Budget (R&R)	**Section F, Other Direct Costs, Equip or facility rental**	Must be equal to the sum of Other Direct Costs, Equipment or Facility Rental, for every budget year for this budget.	The 424 RR Cumulative Budget Other Direct Costs, Equipment or Facility Rental, does not equal the sum of Equipment or Facility Rental for all budget years.	
Cumulative Budget (R&R)	**Section F, Other Direct Costs, Alterations and Renovations**	Must be equal to the sum of Other Direct Costs, Alterations and Renovations, for every budget year for this budget.	The 424 RR Cumulative Budget Other Direct Costs, Alterations and Renovations, does not equal the sum of Alterations and Renovations for all budget years.	
Cumulative Budget (R&R)	**Section F, Other Direct Costs, other**	Must be equal to the sum of Other Direct Costs, Other, for every budget year for this budget.	The 424 RR Cumulative Budget Other Direct Costs, Other, does not equal the sum of Other Direct Costs, Other for all budget years.	
Cumulative Budget (R&R)	**Section G, Direct Costs (A-F), total**	Required.	The 424 RR Cumulative Budget Direct Costs is required.	
		Must be equal to the sum of Total Direct Costs for every budget year for this budget.	The 424 RR Cumulative Budget Total Direct Costs does not equal the sum of Total Direct Costs for all budget years.	
Cumulative Budget (R&R)	**Section H, Indirect Costs**	Must be equal to the sum of Total Indirect Costs for every budget year for this budget.	The 424 RR Cumulative Budget Total Indirect Costs does not equal the sum of Total Indirect Costs for all budget years.	
Cumulative Budget (R&R)	**Section I, Total Direct**	Required	The 424 RR Cumulative Budget Total Direct and Indirect Costs are required.	

Component	Field	Validation	Error Message	Notes & Tips
	and Indirect Costs	Must be equal to the sum of Total Direct and Indirect Costs for every budget year for this budget.	The 424 RR Cumulative Budget Total Direct and Indirect Costs do not equal the sum of Total Direct and Indirect Costs for all budget years.	
Cumulative Budget (R&R)	**Section J, Fee**	Must be equal to the sum of Fee for every budget year for this budget.	The 424 RR Cumulative Budget Fee does not equal the sum of the Fee for all budget years.	
Cumulative Budget (R&R)	**Budget Justification (attachment)**			

Construction Budget

Component	Field	Validation	Error Message	Notes & Tips
Construction Budget (R&R)	**Administration and Legal Expenses, Total Cost**			May occur up to 11 times These will have one budget period only. It should be mapped with the same start and end date as the project period.
Construction Budget (R&R)	**Administration and Legal Expenses, Costs Not Allowable for Participation**			May occur up to 11 times
Construction Budget (R&R)	**Administration and Legal Expenses, Total Allowable Costs**	Provide error if not equal to column A (Total Cost) minus column B (Costs Not Allowable for Participation).	The Total Allowable Costs for Administration and Legal Expenses (line <line number> of the Construction Budget) must be equal to the difference of columns A (Total Cost) and B (Costs Not Allowable for Participation)	May occur up to 11 times
Construction Budget (R&R)	**Subtotal 1, Total Cost**	Provide error if not equal to the sum of lines 1-11, Total Cost	The Total Cost Subtotal on the Construction Budget must be equal to the sum of total costs for all Administration and Legal Expenses entries	
Construction Budget (R&R)	**Subtotal 1, Costs Not Allowable for Participation**	Provide error if not equal to the sum of lines 1-11, Costs Not Allowable for Participation	The Costs Not Allowable for Participation Subtotal on the Construction Budget must be equal to the sum of all Administration and Legal Expenses entries	
Construction Budget (R&R)	**Subtotal 1, Total Allowable Costs**	Provide error if not equal to column A (Total Cost) minus column B (Costs Not Allowable for Participation).	The Total Allowable Costs Subtotal on the Construction Budget must be equal to the difference of columns A (Total Cost) and B (Costs Not Allowable for Participation)	
		Provide error if not equal to the sum of lines 1-11, Total Allowable costs	The Total Allowable Costs Subtotal on the Construction Budget must be equal to the sum of all Administration and Legal Expenses entries	
Construction Budget (R&R)	**Contingencies, Total Cost**			

Component	Field	Validation	Error Message	Notes & Tips
Construction Budget (R&R)	**Contingencies, Costs Not Allowable for Participation**			
Construction Budget (R&R)	**Contingencies, Total Allowable Costs**	Provide error if not equal to column A (Total Cost) minus column B (Costs Not Allowable for Participation).	The Total Allowable Costs for Contingencies on the Construction Budget must be equal to the difference of columns A (Total Cost) and B (Costs Not Allowable for Participation)	
Construction Budget (R&R)	**Subtotal 2, Total Cost**	Provide error if not equal to the sum of lines 12 and 13, Total Cost	The Total Cost Subtotal on the Construction Budget must be equal to the sum of Contingencies and the subtotal of all Administration and Legal Expenses entries	
Construction Budget (R&R)	**Subtotal 2, Costs Not Allowable for Participation**	Provide error if not equal to the sum of lines 12 and 13, Costs Not Allowable for Participation	The Costs Not Allowable for Participation Subtotal on the Construction Budget must be equal to the sum of Contingencies and the subtotal of all Administration and Legal Expenses entries	
Construction Budget (R&R)	**Subtotal 2, Total Allowable Costs**	Provide error if not equal to column A (Total Cost) minus column B (Costs Not Allowable for Participation).	The Total Allowable Costs Subtotal on the Construction Budget must be equal to the difference of columns A (Total Cost) and B (Costs Not Allowable for Participation)	
		Provide error if not equal to the sum of lines 12 and 13, Total Allowable Costs	The Total Allowable Costs Subtotal on the Construction Budget must be equal to the sum of Contingencies and the subtotal of all Administration and Legal Expenses entries	
Construction Budget (R&R)	**Project (Program) Income, Total Cost**			
Construction Budget (R&R)	**Project (Program) Income, Costs Not Allowable for Participation**			
Construction Budget (R&R)	**Project (Program) Income, Total Allowable Costs**	Provide error if not equal to column A (Total Cost) minus column B (Costs Not Allowable for Participation).	The Project (Program) Income, Total Allowable Costs on the Construction Budget must be equal to the difference of columns A (Total Cost) and B (Costs Not Allowable for Participation)	

Component	Field	Validation	Error Message	Notes & Tips
Construction Budget (R&R)	**Total Project Costs, Total Cost**	Provide error if not equal to line 14 minus line 15, Total Cost	The Total Project Costs, Total Cost on the Construction Budget must be equal to the subtotal minus the Project Income.	
Construction Budget (R&R)	**Total Project Costs, Costs Not Allowable for Participation**	Provide error if not equal to line 14 minus line 15, Costs Not Allowable for Participation	The Total Project Costs, Costs Not Allowable for Participation on the Construction Budget must be equal to the subtotal minus the Project Income.	
Construction Budget (R&R)	**Total Project Costs, Total Allowable Costs**	Provide error if not equal to column A (Total Cost) minus column B (Costs Not Allowable for Participation).	The Total Project Costs, Total Allowable Costs on the Construction Budget must be equal to the difference of columns A (Total Cost) and B (Costs Not Allowable for Participation)	Map to appls_t.total_period_amt and appl_periods_t.direct_cost_amt
		Provide error if not equal to line 14 minus line 15, Total Allowable Costs	The Total Project Costs, Total Allowable Costs on the Construction Budget must be equal to the subtotal minus the Project Income.	
Construction Budget (R&R)	**Federal Funding**			
Construction Budget (R&R)	**Federal Assistance Requested**			

SBIR/STTR Information

Component	Field	Validation	Error Message	Notes & Tips
SBIR/STTR (NIH)	**Program Type (SBIR, STTR, Both)**	One and only one choice may be made.	Please select one Program Type: SBIR or STTR on the SBIR/STTR Information page.	
		Choice must be consistent with the information stored for the announcement: if the announcement is indicated as 'SBIR', 'SBIR' must be selected; if announcement is indicated as 'STTR', 'STTR' must be selected.	You have selected a Program Type of <Program Type> on the SBIR/STTR component on the SBIR/STTR Information page. That is not the correct program type for this announcement. Please refer to the FOA for the correct program type for this application.	
		'Both' is not a valid choice.	For ~~agency~~ submissions to this agency, "Both" is not an acceptable value for the 'Program Type' field on the 424 RR SBIR/STTR Information Component.	
SBIR/STTR (NIH)	**SBIR/STTR Type (Phase I, Phase II, Fast-Track)**	One and only one choice may be made.	Please select one SBIR/STTR Type: Phase I, Phase II, or Fast-Track (424 RR SBIR/STTR Information Component).	
SBIR/STTR (NIH)	**Question 1. Small Business Eligibility (Y/N)**	Required.		Store response in database.
SBIR/STTR (NIH)	**Question 2. Are Subcontracts Included? (Y/N)**	Required.		Store response in database.
SBIR/STTR (NIH)	**Name of Labs/ Agencies For Subcontracts**	Required entry if response to 'Are Subcontracts Included?' is 'Yes'.	If Question 2 on the SBIR/STTR Information Component-indicates that subcontracts are included, the name(s) of labs or agencies for subcontracts must be included.	Store response in database.
		Cannot be included if response to 'Are Subcontracts Included?' is 'No'.	If Question 2 on the SBIR/STTR Information Component indicates that subcontracts are not included, the name(s) of labs or agencies for subcontracts cannot be included.	

Component	Field	Validation	Error Message	Notes & Tips
SBIR/STTR (NIH)	**Question 3. Located in HUBZone (Y/N)**	Required.		Store response in database.
SBIR/STTR (NIH)	**Question 4. Research to be Performed in US? (Y/N)**	Required.		Store response in database.
SBIR/STTR (NIH)	**Explanation of Foreign Performance**	Must be included if answer to 'work to be performed in US' question is 'no'.	If Question 4 on the SBIR/STTR Information Component indicates that research is not to be performed in the US, an explanation attachment must be provided.	
		Cannot be included if answer to 'work to be performed in US' question is 'yes'.	If Question 4 on the SBIR/STTR Information Component indicates that research is to be performed in the US, an explanation attachment cannot be provided.	
SBIR/STTR (NIH)	**Question 5. Equivalent Submissions (Y/N)**	Required.		Store response in database.
SBIR/STTR (NIH)	**Names of other Federal agencies for equivalent work**	Required entry if answer to 'submittal of equivalent work to other agencies' question is 'yes'.		Store response in database.
		Cannot be included if answer to 'submittal of equivalent work to other agencies' question is 'no'.		
SBIR/STTR (NIH)	**Question 6. Disclosure Permission Statement (Y/N)**	Required		Map response to appls_t, disclosure_permission_code
SBIR/STTR (NIH)	**Commercialization Plan Attachment**	Required for Phase II and Fast Track submissions	The Commercialization Plan is required on the SBIR/STTR Information Component for Phase II and Fast Track submissions	
		Cannot be submitted for anything other than Phase II or Fast Track submissions	A Commercialization Plan can only be submitted for Phase II and Fast Track submissions on the SBIR/STTR Information Component.	
		Limited to 15 pages.	The Commercialization Plan on the SBIR/STTR Information Component is limited to 15 pages	

Component	Field	Validation	Error Message	Notes & Tips
SBIR/STTR (NIH)	**Question 8. Receipt of Phase II SBIR Awards (Y/N)**	Required for SBIR		Store response in database.
SBIR/STTR (NIH)	**Company Commercialization History Attachment**			
SBIR/STTR (NIH)	**Question 9. SBIR PD/PI Primary Employment (Y/N)**	Required for SBIR		Store response in database.
SBIR/STTR (NIH)	**Question 10. STTR PD/PI Commitment (Y/N)**	Required for STTR		Store response in database.
SBIR/STTR (NIH)	**Question 11. STTR work percentages (Y/N)**	Required for STTR		Store response in database.

PHS 398 Cover Page Supplement

Component	Field	Validation	Error Message	Notes & Tips
Cover Page (NIH)	**PD/PI Information (prefix, first, middle, last, suffix)**	Read only, pulled from R&R		
Cover Page (NIH)	**PD/PI New Investigator Question**			
Cover Page (NIH)	**PD/PI Degrees**	Match against 4 character degree codes in PI's Commons account (ignore case, spaces, or punctuation). If it does not match anything on list, compare against any 'other degree text' degrees on Commons account. If degree not found on the degree list or on 'other degree text' entries for the PI, display a warning to the PI that the degrees did not match the Commons account, and that the submitted degrees will be displayed on the grant image. "The degrees that will be displayed on the grant image are x, y, and z". In db, save the top three Commons degrees instead of the submitted degrees in the role.	The PD/PI degree: <degree>, listed on the PHS 398 Cover Page, is not one of the degrees listed for the eRA Commons account: <~~Credential~~List of degrees in the profile, separated by commas>. The grant image will display the degrees as submitted. If the degrees listed in the eRA Commons are not current, please update them in the eRA Commons. ~~Instructions~~Updating profile information is available at https://commons.era.nih.gov/commons-help/216.htm.	Be sure to include your educational degrees (by code) as listed in the eRA Commons. The system will compare your application with the information in the eRA Commons profile. If the degrees don't match, the degrees you submit in the application will be displayed in the grant image but the top 3 degrees listed in the Commons account will be saved in the database. Post-testing solution: Provide warning that Commons degrees are *xxxx* and degrees submitted through grants.gov are *yyyy* and we will be displaying the top three Commons degrees. Provide ability for submitter to update the Commons account and to regenerate the image to display the updated information from the Commons account.
		Provide a warning if no degrees have been included.	No degrees have been submitted for the PD/PI. If you want the degrees to be displayed on the face page of the grant image, you should include them on the PHS 398 Cover Page Supplement.	
Cover Page (NIH)	**Human Subjects Clinical Trial (Y/N)**	An answer is required if the answer to 'Human Subjects Involved' is "Yes".	The Human Subjects Clinical Trial question on the PHS 398 Cover Page Supplement must be answered if the answer to 'Human Subjects Involved' on the Other Project information page is "Yes".	

Component	Field	Validation	Error Message	Notes & Tips
		If Human Subjects NIH-Defined Phase III Clinical Trial is true, must be true.	The Human Subjects Clinical Trial question on the PHS 398 Cover Page Supplement must be "Yes" if the answer to Human Subjects NIH-Defined Phase III Clinical Trial is "Yes".	
		For S10 application, provide a warning if this is true.	The answer to the Human Subjects Clinical Trial question on the PHS 398 Cover Page Supplement should not be 'Yes'. The application will be processed, but a concern may be raised during review.	
Cover Page (NIH)	**Human Subjects NIH-Defined Phase III Clinical Trial (Y/N)**	An answer is required if the answer to 'Human Subjects Clinical Trial' is "Yes".	The Human Subjects NIH-Defined Phase III Clinical Trial question on the PHS 398 Cover Page Supplement must be answered if the answer to the Human Subjects Clinical Trial question is "Yes".	
		If Human Subjects Clinical Trial is false, must be false	The Human Subjects NIH-Defined Phase III Clinical Trial on the PHS 398 Cover Page Supplement must be "No" if the answer to the Human Subjects Clinical Trial question is "No".	
Cover Page (NIH)	**Applicant Organization Contact Information**	Read only, pulled from R&R		
Cover Page (NIH)	**Applicant Organization Contact Title**			
Cover Page (NIH)	**Applicant Organization Contact Street Address (1 and 2)**	If either line>50 characters, truncate		
Cover Page (NIH)	**Applicant Organization Contact City**			
Cover Page (NIH)	**Applicant Organization Contact County**			
Cover Page (NIH)	**Applicant Organization Contact State**	Required if country is US	The Applicant Organization State on the PHS 398 Cover Page Supplement must be supplied for US addresses.	

Component	Field	Validation	Error Message	Notes & Tips
		If country is not US must be blank.	The Applicant Organization State on the PHS 398 Cover Page Supplement should be blank for all countries other than the United States	
		Transform state name to 2-char abbreviation before validating and storing. If state name can't be transformed, give error.	The Applicant Organization State on the PHS 398 Cover Page Supplement is not a valid state name.	
Cover Page (NIH)	Applicant Organization Contact Province	Required if country is Canada.	The Applicant Organization Province must be supplied for Canadian addresses.	Province should be mapped into same database location as state.
		If country is not Canada must be blank.	The Applicant Organization Province should be blank for all countries other than Canada.	
		Transform province name to 2 char. abbreviation before validating and storing. If province name can't be transformed, give error.	The Applicant Organization Province is not a valid province name.	
Cover Page (NIH)	**Applicant Organization Contact Zip Code**	Required if country is US.	The Applicant Organization Zip Code on the PHS 398 Cover Page Supplement must be entered for US addresses.	Long-term, change in eRA db to 13 characters.
		Must be 5 or 9 numeric digits if country is US.	The Applicant Organization Zip Code on the PHS 398 Cover Page Supplement must be entered in 5-digit or 9-digit format.	
		If >9 characters, truncate (remove any dashes before truncating).		
Cover Page (NIH)	**Applicant Organization Contact Country**	Must be a valid ISO 3166-1 alpha-3 country code.	The Applicant Organization country code provided (<Country>) on the PHS 398 Cover Page Supplement is not a valid ISO 3166-1 alpha-3 country code.	
Cover Page (NIH)	**HESC Involved (Y/N)**	For S10 application, display a warning if this is true.	The answer to the HESC Involved question on the PHS 398 Cover Page Supplement should be 'No'. The application will be processed, but a concern may be raised during review.	Change mapping: set Special Topic code to 13 if HESC Involved is 'yes'. This code is set in appl_special_topics_t.
		A response is required for this element.	A response of 'Yes' or 'No' is required for the HESC Involved (Y/N) element on the PHS 398 Cover Page.	Although the element is required by the PureEdge form, the schema does not currently require it for system to system submissions.

Component	Field	Validation	Error Message	Notes & Tips
Cover Page (NIH)	**HESC Cell Lines**	If HESC involved='Y', must include this or 'Can't be Referenced'	If the answer to 'HESC involved' is "Yes" on the PHS 398 Cover Page Supplement, HESC Cell Lines must be included or the 'Can't be Referenced' checkbox must be checked.	For the Human Embryonic Stem Cells (HESC) section, if you answer Yes, you must list the cell lines in the boxes provided or check the box "Specific stem cell line cannot be referenced at this time. One from the registry will be used."
		If HESC involved='N', can't include this or 'Can't be Referenced'	If the answer to 'HESC involved' is "No" on the PHS 398 Cover Page Supplement, HESC Cell Lines may not be included and the 'Can't be Referenced' checkbox must not be checked.	
		If specific stem cell line is included, must be a valid stem cell line in eRA database. Comparison should not be case-sensitive.	Stem cell line <Cell line number> on the PHS 398 Cover Page Supplement is not a valid stem cell line number.	
		If 'Can't Be Referenced' is checked, no other cell lines may be entered.	If the 'Can't be Referenced' checkbox is checked on the PHS 398 Cover Page Supplement, no other stem cell lines may be entered.	
Cover Page (NIH)	**HESC 'can't be referenced' checkbox**	If HESC involved='Y', must include this or 'HESC Cell Lines'	If the answer to 'HESC involved' is "Yes" on the PHS 398 Cover Page Supplement, HESC Cell Lines must be included or the 'Can't be Referenced' checkbox must be checked.	
		If HESC involved='N', can't include this or 'HESC Cell Lines'	If the answer to 'HESC involved' is "No" on the PHS 398 Cover Page Supplement, HESC Cell Lines may not be included and the 'Can't be Referenced' checkbox must not be checked.	

PHS 398: Modular Budget

Component	Field	Validation	Error Message	Notes & Tips
Modular Budget, Years 1-5 (NIH)		Accept submission of modular budget or detailed budget, but not both	Both a modular and a detailed budget have been included with this submission. One or the other may be submitted.	
		Do not accept a modular budget for R13 applications (activity code on funding opportunity = 'R13' or 'U13')	Modular budgets may not be submitted for Conference Grant applications.	
		Do not accept a modular budget for an application where the applicant organization is foreign.	Applications with modular budgets may not be submitted by a foreign applicant organization. Please submit using the 424 RR Budget component.	
		For a revision, if the parent grant budget is non-modular, only a detailed budget component may be submitted.	The parent grant for this revision uses the non-modular format; therefore, this application may include a detailed R&R budget component only.	
		For an R15 application (activity code on funding opportunity = 'R15'), return warning if more than one budget period has been included.	An AREA grant should be submitted for one budget period only (see the PHS 398 Modular Budget). This may delay the peer review process.	
		Do not accept a modular budget for SBIR/STTR applications	Modular budgets may not be submitted for SBIR/STTR submissions.	
Modular Budget, Years 1-5 (NIH)	**Start Date**	For budget period 1, for new applications and resubmissions to new applications, must be the same as the Project Start Date listed on the SF 424 RR Face Page	For new applications and resubmissions, the modular budget year 1 start date must be the same as the proposed project start date listed on the SF 424 RR Cover Page.	
		For budget years after budget year 1, if entered, must be greater than or equal to the Proposed Project Start Date listed on the SF 424 RR Face Page.	The start date for budget year <budget year> must be equal to or later than the proposed project start date listed on the SF 424 RR Cover page.	
Modular Budget, Years 1-5 (NIH)	**End Date**	Budget period end date must be greater than budget period start date.	The modular budget year <budget year> end date must be later than the modular budget year <budget year> start date.	

Component	Field	Validation	Error Message	Notes & Tips
Modular Budget, Years 1-5 (NIH)	**Direct Costs, Direct Cost Less Consortium, F&A**	Must be <= 250K, must be a multiple of 25K for each budget year	The total direct costs for modular budget year <budget year> are greater than $250K, or are not in increments of $25K.	
		For R15 submissions, provide warning if this value for *any* budget year is >= 150K.	Direct cost requests are limited to $150k a year for AREA grants (PHS 398 Modular Budget, Direct Costs, Direct Cost Less Consortium, F&A). Applications that exceed this limit may be delayed in the peer review process or rejected.	
		For R03 submissions, provide warning if this value for any budget year is >50K (LV).	Direct cost requests are limited to $50k a year for this application (PHS 398 Modular Budget, Direct Costs, Direct Cost Less Consortium, F&A9). Applications that exceed this limit may be delayed in the peer review process or rejected.	
			Warning message for 'opt out' announcements: Be sure that you have complied with the allowable direct cost limitations for this FOA. Otherwise, your application may be delayed and rejected in the review process.	
		For R21 submissions, provide warning if this value for any budget year is >200K (LV).	Direct cost requests are limited to $200k a year for this application (PHS 398 Modular Budget, Direct Costs, Direct Cost Less Consortium, F&A). Applications that exceed this limit may be delayed in the peer review process or rejected.	
			Warning message for 'opt out' announcements: Be sure that you have complied with the allowable direct cost limitations for this FOA (PHS 398 Modular Budget, Direct Costs, Direct Cost Less Consortium, F&A). Otherwise, your application may be delayed and rejected in the review process.	
		For R34 submissions, provide warning if this value for any budget year is >225K (LV).	Direct cost requests are limited to $225k a year for this application (PHS 398 Modular Budget, Direct Costs, Direct Cost Less Consortium, F&A). Applications that exceed this limit may be delayed in the peer review process or rejected.	

Component	Field	Validation	Error Message	Notes & Tips
			Warning message for 'opt out' announcements: Be sure that you have complied with the allowable direct cost limitations for this FOA. Otherwise, your application may be delayed and rejected in the review process.	
Modular Budget, Years 1-5 (NIH)	**Direct Costs, Consortium, F&A**	Must be less than 10,000,000,000	For NIH processing, the Consortium F&A amount on the PHS 398 Modular Budget must be less than 10,000,000,000.	Grants.gov accepts up to 14 bytes (including 2 decimal places); NIH accepts no more than 10. Long-term db change is recommended.
Modular Budget, Years 1-5 (NIH)	**Direct Costs, Total Direct Costs**	Must equal sum of Direct Cost Less Consortium, F&A and Consortium, F&A for the corresponding budget year (if both are submitted). If only Direct Cost Less Consortium, F&A is submitted for that budget year, must equal that.	The total direct costs for modular budget year <budget year> in the PHS 398 Modular Budget do not equal the sum of Direct Cost Less Consortium, F&A and Consortium, F&A	
		Must be less than 10,000,000,000	The Total Direct Costs amount must be less than 10,000,000,000 (PHS 398 Modular Budget).	Grants.gov accepts up to 15 bytes (including 2 decimal places); NIH accepts no more than 10. Long-term db change is recommended.
Modular Budget, Years 1-5 (NIH)	**Indirect Costs, Indirect Cost Type 1-4**			
Modular Budget, Years 1-5 (NIH)	**Indirect Costs, Indirect Cost Rate 1-4**	Provide warning if greater than 0 and less than 1.	Indirect Cost Rate is less than 1 for budget year <budget year> (PHS 398 Modular Budget). Please note that this figure represents a percentage.	
Modular Budget, Years 1-5 (NIH)	**Indirect Costs, Indirect Cost Base 1-4**	Must be less than 10,000,000,000	The Indirect Cost Base amount in the PHS 398 Modular Budget for budget year <budget year> must be less than 10,000,000,000.	Grants.gov accepts up to 14 bytes (including 2 decimal places); NIH accepts no more than 10. Long-term db change is recommended.
Modular Budget, Years 1-5 (NIH)	**Indirect Costs, Funds Requested 1-4**	Must be less than 10,000,000,000	The Funds Requested amount on the PH 398 Modular Budget must be less than 10,000,000,000.	Grants.gov accepts up to 14 bytes (including 2 decimal places); NIH accepts no more than 10. Long-term db change is recommended.
Modular Budget, Years 1-5 (NIH)	**Indirect Costs, Cognizant Agency**			

Component	Field	Validation	Error Message	Notes & Tips
Modular Budget, Years 1-5 (NIH)	**Indirect Costs, Indirect Cost Rate Agreement Date**			
Modular Budget, Years 1-5 (NIH)	**Indirect Costs, Total Indirect Costs**	Must equal sum of Indirect Costs, Funds Requested 1-4 for the corresponding budget year, if any Indirect Costs were entered.	The Total Indirect Costs do not equal the sum of Funds Requested for budget year <budget year> (PHS 398 Modular Budget).	
		Must be less than 10,000,000,000	The Total Indirect Costs amount must be less than 10,000,000,000 (PHS 398 Modular Budget).	Grants.gov accepts up to 15 bytes (including 2 decimal places); NIH accepts no more than 10. Long-term db change is recommended.
Modular Budget, Years 1-5 (NIH)	**Total Direct and Indirect Costs, Funds Requested**	Must be greater than 0 for first budget period.	For Modular Budget Year 1, Total Direct and Indirect Costs must be greater than zero (PHS 398 Modular Budget)	
		Must be equal to the sum of Total Direct Costs and Total Indirect Costs for the corresponding budget period.	For Modular Budget Year <budget year> (PHS 398 Modular Budget), the Total Direct and Indirect Costs must be equal to Total Direct Costs plus Total Indirect Costs requested for that budget year.	
		Must be less than 10,000,000,000	The Total Direct and Indirect Costs on the PHS 398 Modular Budget amount must be less than 10,000,000,000.	Grants.gov accepts up to 15 bytes (including 2 decimal places); NIH accepts no more than 10. Long-term db change is recommended.

PHS 398 Modular Budget: Period 5 and Cumulative

Component	Field	Validation	Error Message	Notes & Tips
Modular Budget, Cumulative (NIH)	**Total Direct Cost less Consortium F&A for Entire Project Period**	Must be equal to the sum of all Total Direct Cost less Consortium F&A values for all budget years	The Total Direct Cost less Consortium F&A for Entire Project Period in the PHS 398 Modular Budget must be equal to the sum of Total Direct Cost Less Consortium F&A values for all budget years.	
		For R03 submissions, provide warning if this value is >100K (LV).	Cumulative direct cost requests on the PHS 398 Modular Budget are limited to a total of $100k for this application. Applications that exceed this limit may be delayed in the peer review process or rejected.	
			Warning message for 'opt out' announcements: Be sure that you have complied with the allowable cumulative direct cost limitations for this FOA. Otherwise, your application may be delayed and rejected in the review process.	
		For R21 submissions, provide warning if this value is >275K (LV).	Cumulative direct cost requests on the PHS 398 Modular Budget are limited to a total of $275k for this application. Applications that exceed this limit may be delayed in the peer review process or rejected.	
			Warning message for 'opt out' announcements: Be sure that you have complied with the allowable cumulative direct cost limitations for this FOA. Otherwise, your application may be delayed and rejected in the review process.	
		For R34 submissions, provide warning if this value is >450K (LV).	Cumulative direct cost requests on the PHS 398 Modular Budget are limited to a total of $450k for this application. Applications that exceed this limit may be delayed in the peer review process or rejected.	
			Warning message for 'opt out' announcements: Be sure that you have complied with the allowable cumulative direct cost limitations for this FOA. Otherwise, your application may be delayed and rejected in the review process.	

Component	Field	Validation	Error Message	Notes & Tips
Modular Budget, Cumulative (NIH)	**Total Consortium F&A for Entire Project Period**	Must be equal to the sum of all Consortium F&A values for all budget years	The Total Consortium F&A for Entire Project Period must be equal to the sum of Consortium F&A values for all budget years (PHS 398 Modular Budget).	
		Must be less than 10,000,000,000	The Total Consortium F&A for Entire Project Period amount must be less than 10,000,000,000 (PHS 398 Modular Budget).	Grants.gov accepts up to 15 bytes (including 2 decimal places); NIH accepts no more than 10. Long-term db change is recommended.
Modular Budget, Cumulative (NIH)	**Total Costs, Total Direct Costs for Entire Project Period**	Must be equal to the sum of Total Direct Costs for all budget years	The Total Direct Costs for the Entire Proposed Project Period must be equal to the sum of the Total Direct Costs for all budget years (PHS 398 Modular Budget).	
		Must be less than 10,000,000,000	The Total Direct Costs for Entire Project Period amount must be less than 10,000,000,000 (PHS 398 Modular Budget).	Grants.gov accepts up to 15 bytes (including 2 decimal places); NIH accepts no more than 10. Long-term db change is recommended.
Modular Budget, Cumulative (NIH)	**Total Costs, Total Indirect Costs for Entire Project Period**	Must be equal to the sum of Total Indirect Costs for all budget years	The Total Indirect Costs Requested for Entire Project Period must be equal to the sum of Total Indirect Costs for all budget years (PHS 398 Modular Budget).	
		Must be less than 10,000,000,000	The Total Indirect Costs for Entire Project Period amount (PHS 398 Modular Budget) must be less than 10,000,000,000 .	Grants.gov accepts up to 15 bytes (including 2 decimal places); NIH accepts no more than 10. Long-term db change is recommended.
Modular Budget, Cumulative (NIH)	**Total Costs, Total Direct and Indirect Costs for Entire Project Period**	Must be equal to the sum of all Total Direct and Indirect Costs values for all budget years	The Total Direct and Indirect Costs for Entire Project Period must be equal to the sum of all Total Direct and Indirect Costs values for all budget years (PHS 398 Modular Budget).	
		Must be less than 10,000,000,000	The Total Direct and Indirect Costs for Entire Project Period amount must be less than 10,000,000,000 (PHS 398 Modular Budget).	Grants.gov accepts up to 15 bytes (including 2 decimal places); NIH accepts no more than 10. Long-term db change is recommended.
Modular Budget, Cumulative (NIH)	**Budget Justifications, Personnel Justification**	Provide a warning if this attachment hasn't been included with a modular budget.	In most cases, a Personnel Justification attachment should be included if a Modular Budget is being submitted. If this is not included, the application will be processed, but may be delayed in the Peer Review process.	
Modular Budget, Cumulative (NIH)	**Budget Justifications, Consortium Justification**			

Component	Field	Validation	Error Message	Notes & Tips
Modular Budget, Cumulative (NIH)	**Budget Justifications, Additional Narrative Justification**			

PHS 398 Checklist

Component	Field	Validation	Error Message	Notes & Tips
Checklist (NIH)	**Type of Application**	Read only, pulled from R&R		
		Allow a submission with no Checklist component.		
Checklist (NIH)	**Federal Identifier**	Read only, pulled from R&R		
Checklist (NIH)	**Change of Investigator/ Change of Inst.; Change of PI**	Not accepted for revisions.	A revision may not be submitted if a Change of PI has been indicated on the PHS 398 Checklist. Revisions must have the same PI as the parent grant.	
Checklist (NIH)	**Change of Investigator/ Change of Inst.: Name of former PI (Prefix, First Name, Middle Name, Last Name, Suffix)**	Must be included if application is for change of PI	The name of the former PI must be included if there has been a Change of PI indicated on the PHS 398 Checklist.	If there has been a change in the Principal Investigator, you must include the name of the former PI so that the grant can be matched correctly.
Checklist (NIH)	**Change of Investigator/ Change of Inst.: change of grantee inst.**			
Checklist (NIH)	**Change of Investigator/ Change of Inst.: name of former inst.**	If >40 characters, truncate.		Grants.gov length is 120, our db length is 40. Consider long-term db change.
Checklist (NIH)	**Inventions and Patents, Yes**			
Checklist (NIH)	**Inventions and Patents, No**			

Component	Field	Validation	Error Message	Notes & Tips
Checklist (NIH)	**Inventions and Patents, Previously Reported (Yes or No)**	Must be answered if response to Inventions and Patents is 'Yes'	Inventions and Patents, Previously Reported on the PHS 398 Checklist must be answered if the answer to Inventions and Patents is 'Yes.'	
		Should not be answered if response to Inventions and Patents is 'No'	Inventions and Patents, Previously Reported on the PHS 398 Checklist should not be answered if the answer to Inventions and Patents is 'No'	
Checklist (NIH)	**Program Income Anticipated (Y/N)**			
Checklist (NIH)	**Program Income, Budget Period 1-5**	Should only be completed if answer to Program Income Anticipated question was 'Y'.	If answer to Program Income Anticipated on the PHS 398 Checklist question is 'N', no program income detail may be entered.	
		Provide error if provided for S10 application.	No program income may be included on the PHS 398 Checklist for S10 applications.	
		The number of program income budget periods must be less than or equal to the number of budgets provided in the budget component.	Anticipated amount for program income has been provided for <x> budget years on the PHS 398 Checklist. Only <y> years of budgets were provided with this application.	
Checklist (NIH)	**Program Income, Anticipated Amount 1-5**	Must be less than 10,000,000,000	The Program Income Anticipated Amount (PHS 398 Checklist) for budget period <budget period> must be less than 10,000,000,000.	Grants.gov accepts up to 14 bytes (including 2 decimal places); NIH accepts no more than 10, with 2 decimal places. Long-term db change is recommended.
Checklist (NIH)	**Program Income, Sources 1-5**			
Checklist (NIH)	**Assurances/ Certification: Explanation**			

PHS 398 Research Plan

Component	Field	Validation	Error Message	Notes & Tips
Research Plan (NIH)	**Type of Application**	Read only, pulled from R&R		
		Allow applications to come in without this component.		
Research Plan (NIH)	**Research Plan Attachments: Introduction**	Required for resubmission for non-S10 applications.	An Introduction must be included for resubmissions on the PHS 398 Research Plan.	
		Required for revisions.	An Introduction must be included for revisions on the PHS 398 Research Plan..	
		Limited to 1 page for revisions.	The Introduction for a revision is limited to one page on the PHS 398 Research Plan..	
		Limited to 3 pages for non-SBIR/STTR and non-R36 resubmissions (except as explicitly listed below).	The Introduction is limited to three pages on the PHS 398 Research Plan.	
		Introduction limited to 1 page for Phase I SBIR/STTR, R03 (LV), R13, U13, R21 (LV), and R36 resubmissions.	The Introduction is limited to one page for this submission on the PHS 398 Research Plan.	
			Warning message for 'opt out' announcements: Be sure that you have complied with the allowable page limitations for the Introduction for this FOA (see PHS 398 Research Plan). Otherwise, your application may be delayed and rejected in the review process.	
		Introduction limited to 3 pages for Phase II and Fast Track SBIR/STTR, R01, R18, U18, R25, R33 , R21/R33, and R34 resubmissions.	The Introduction (see PHS 398 Research Plan) is limited to three pages for this submission.	
Research Plan (NIH)	**Research Plan Attachments: Specific Aims**	Provide warning if Research Plan Attachments 2-5 together are greater than 25 pages and less than or equal to 28 pages (applies to all applications not specifically listed below, including Fast Track) (LV) for R01, R18, U18, R25, R33, R21/R33, and R34).	The Research Plan is limited to 25 pages. This may span 28 pages due to page breaks. If the total space occupied by text does not exceed 25 pages then no action is needed.	
			Warning message for 'opt out' announcements: Be sure that you have complied with the allowable page limitations for the Research Plan for this FOA. Otherwise, your application may be delayed and rejected in the review process.	

Component	Field	Validation	Error Message	Notes & Tips
		Research Plan Attachments 2-5 together must be less than or equal to 28 pages (applies to all applications not specifically listed below, including Fast Track) ((LV) for R01, R18, U18, R25, R33, R21/R33, and R34)	The Research Plan is limited to 25 pages. This may span 28 pages due to page breaks. If the total space occupied by text does not exceed 25 pages then no action is needed.	
			Warning message for 'opt out' announcements: Be sure that you have complied with the allowable page limitations for the Research Plan for this FOA. Otherwise, your application may be delayed and rejected in the review process.	
		For SBIR/STTR Phase I and R21 (LV), provide warning if Research Plan Attachments 2-5 together are greater than 15 pages and less than or equal to 18 pages	The Research Plan is limited to 15 pages. This may span 18 pages due to page breaks. If the total space occupied by text does not exceed 15 pages then no action is needed.	
			Warning message for 'opt out' announcements: Be sure that you have complied with the allowable page limitations for the Research Plan for this FOA. Otherwise, your application may be delayed and rejected in the review process.	
		For SBIR/STTR Phase I and R21 (LV), Attachments 2-5 together must be less than or equal to 18 pages	The Research Plan f is limited to 15 pages. This may span 18 pages due to page breaks. If the total space occupied by text does not exceed 15 pages then no action is needed.	
			Warning message for 'opt out' announcements: Be sure that you have complied with the allowable page limitations for the Research Plan for this FOA. Otherwise, your application may be delayed and rejected in the review process.	
		For conference grant applications (activity code on funding opportunity = 'R13' or 'U13'), Research Plan Attachments 2-5 together must be less than or equal to 10 pages.	The Conference Plan for a Conference Grant application is limited to 10 pages (PHS 398 Research Plan).	Applicants will be instructed to submit one attachment only, in the Research Design and Methods attachment.
		For R13 or U13 applications submitted to AHRQ, Research Plan Attachments 2-5 together must be less than or equal to 15 pages	The Conference Plan for an AHRQ Conference Grant application is limited to 15 pages (PHS 398 Research Plan).	AHRQ applications can be identified by a value of 'HS' in rfa_pa_notices_t.phs_org_code.

Component	Field	Validation	Error Message	Notes & Tips
		For R36, X01, and R03 (LV) applications, provide warning if Research Plan Attachments 2-5 together are greater than 10 pages and less than or equal to 13 pages.	The Research Plan is limited to 10 pages. This may span 13 pages due to page breaks. If the total space occupied by text does not exceed 10 pages then no action is needed.	
			Warning message for 'opt out' announcements: Be sure that you have complied with the allowable page limitations for the Research Plan for this FOA. Otherwise, your application may be delayed and rejected in the review process.	
		For R36, X01, and R03 (LV) applications, Research Plan Attachments 2-5 together must be less than or equal to 13 pages.	The Research Plan is limited to 10 pages. This may span 13 pages due to page breaks. If the total space occupied by text does not exceed 10 pages then no action is needed.	
			Warning message for 'opt out' announcements: Be sure that you have complied with the allowable page limitations for the Research Plan for this FOA. Otherwise, your application may be delayed and rejected in the review process.	
Research Plan (NIH)	**Research Plan Attachments: Background and Significance**	.		.
Research Plan (NIH)	**Research Plan Attachments: Preliminary Studies/ Progress Report**	Must be included for renewals, revisions, and Phase II SBIR. Exceptions to this validation are S10 and R13.	A Progress Report attachment must be included for renewals (competing continuations), revisions (supplements), and Phase II SBIR/STTR applications (see the PHS 398 Research Plan).	For grant image, bookmark should be set based on whether this is a new (should show Preliminary Studies) or a resubmission, revision, or renewal (should show Progress Report)
Research Plan (NIH)	**Research Plan Attachments: Research Design and Methods**	Required for all submissions except S10.	The Research Design and Methods section of the PHS 398 Research Plan must be attached to the application.	

Component	Field	Validation	Error Message	Notes & Tips
Research Plan (NIH)	**Research Plan Attachments: Inclusion Enrollment Report**			Will only be included in Research Plan for versions 1.1 and forward
Research Plan (NIH)	**Research Plan Attachments: Progress Report Publication List**			Will only be included in Research Plan for versions 1.1 and forward
Research Plan (NIH)	**Research Plan Attachments: Protection of Human Subjects**	Required for non-S10 applications, if Human Subjects is 'yes'.	A Protection of Human Subjects attachment must be included on the PHS 398 Research Plan page if the response to the Human Subjects question on the Other Project Information page is 'Yes'.	
Research Plan (NIH)	**Research Plan Attachments: Inclusion of Women and Minorities**	Required for non-S10 applications if Human Subjects is true and Exemption is not E4	The Inclusion of Women and Minorities Attachment must be included on the PHS 398 Research Plan page if the response to the Human Subjects question on the Other Project Information Page is 'Yes' and if the Exemption Number is not 4.	
Research Plan (NIH)	**Research Plan Attachments: Targeted/ Planned Enrollment Table**	Required for non-S10 applications if Human Subjects is true and Exemption is not E4	The Targeted/Planned Enrollment Table Attachment must be included on the PHS 398 Research Plan page if the response to the Human Subjects question on the Other Project Information Page is 'Yes' and if the Exemption Number is not 4.	
Research Plan (NIH)	**Research Plan Attachments: Inclusion of Children**	Required for non-S10 applications if Human Subjects is true and Exemption is not E4	The Inclusion of Children Attachment must be included on the PHS 398 Research Plan page if the response to the Human Subjects question on the Other Project Information Page is 'Yes' and if the Exemption Number is not 4.	

Component	Field	Validation	Error Message	Notes & Tips
Research Plan (NIH)	**Research Plan Attachments: Data and Safety Monitoring Plan**	For schema version 1.0, required for non-S10 applications if Human Subjects is true and Clinical Trial question is true.	The Data and Safety Monitoring Plan Attachment must be included on the PHS 398 Research Plan if the response to the Human Subjects question is 'Yes' and the response to the Clinical Trial question is 'Yes'	Will not be included in Research Plan component for versions later than 1.0
Research Plan (NIH)	**Research Plan Attachments: Vertebrate Animals**	Required for non-S10 applications if VertebrateAnimalsUsedQuestion is Y	A Vertebrate Animals attachment must be included on the PHS 398 Research Plan page if the response to the Vertebrate/Animals Subject Used Question on the Other Project Information page is 'Yes'	
Research Plan (NIH)	**Research Plan Attachments: Select Agent Research**			Will only be included in Research Plan for versions 1.1 and forward
Research Plan (NIH)	**Research Plan Attachments: Multiple PI Leadership Plan**	Required if multiple PIs are included with the submission	The Multiple PI Leadership Plan attachment on the PHS 398 Research Plan must be included if multiple PIs have been included on the Senior/Key Person page.	Will only be included in Research Plan for versions 1.1 and forward
Research Plan (NIH)	**Research Plan Attachments: Consortium/ Contractual Arrangements**			
Research Plan (NIH)	**Research Plan Attachments: Letters of Support**	Required for an R36 application (activity code on funding opportunity = 'R36')	An R36 application must include a Letters of Support attachment on the PHS 398 Research Plan. Certification Letters should be included in this attachment.	
Research Plan (NIH)	**Research Plan Attachments: Resource Sharing Plan**			

Component	Field	Validation	Error Message	Notes & Tips
Research Plan (NIH)	**Research Plan Attachments: Appendix**	Limited to 10 appendixes	You have submitted more than 10 appendi~~x~~ces on the PHS 398 Research Plan. There is a limit of 10 appendix attachments allowed.	
		At least one appendix is required for an R36 application (activity code on funding opportunity = 'R36').	An R36 application must include at least one Appendix attachment in the PHS 398 Research Plan. Transcripts should be included in this attachment.	
		Appendixes are not allowed for SBIR or STTR Phase I applications, unless the application is in response to an RFA.	Appendi~~x~~ces may not be submitted for a Phase I SBIR or STTR application on the PHS 398 Research Plan.	
		Provide a warning if an appendix is submitted for an SBIR or STTR Phase I application that is in response to an RFA.	For most RFAs, the submission of appendices with a Phase I SBIR or Phase I STTR is not permitted. Be sure that you have complied with the guidance provided for appendices in this FOA. Otherwise, your application may be delayed or rejected in the review process.	

PHS 398 Cover Letter

Component	Field	Validation	Error Message	Notes & Tips
Cover Letter (NIH)	**Cover Letter attachment**	For an R13 application (activity code on funding opportunity = 'R13' or 'U13'), provide warning if the cover letter is not attached.	For NIH applications only, a cover letter should be attached in the PHS 398 Cover Letter section indicating NIH institute approval for a Conference Grant application.	