



Acquisition Management System Change Request Form

Change Request Number: (To be completed by secretariat)	24-65	
Description of the Change:	This change requires the service organization to acknowledge that the IGCE was developed independently and in accordance with Procurement Guidance T3.2.3A.2 Independent Government Cost Estimate and signed by the IGCE preparer. The change is in response to OIG Audit Report	
Select the type of Change Request: *Policy changes require FAE endorsement.	Guidance	
Section(s) impacted by CR:	Procurement Guidance Section T3.2.3	
PART 1: ENDORSEMENTS		
Manager, Acquisition Policy Branch Endorsement: AAP-110, Procurement Policy Branch	☒ Approved ☐ Disapproved	Electronic Signature/Date: STEPHEN BRENDAN MANGAN Digitally signed by STEPHEN BRENDAN MANGAN Date: 2024.06.20 15:16:28 -05'00'
Acquisition System Advisory Group (ASAG) Chairperson Endorsement:	☒ Approved ☐ Disapproved	Electronic Signature/Date: MICHELLE G BRUNE Digitally signed by MICHELLE G BRUNE Date: 2024.06.23 19:45:59 -04'00'
Acquisition Policy and Oversight (AAP) Director Endorsement:	☒ Approved ☐ Disapproved	Electronic Signature/Date: JAKE LENO LEWIS Digitally signed by JAKE LENO LEWIS Date: 2024.06.28 10:09:54 -04'00'
FAA Acquisition Executive (FAE) Endorsement: *Only required for Policy Changes	☐ Approved ☐ Disapproved	Electronic Signature/Date:

PART 2: GENERAL INFORMATION

Change Request (CR) Number: 24-65		Date Received: (To be completed by secretariat) 6/21/24
CR Title: T3.2.1 IGCE, UAS Coordination, and Admin Changes		
Summary and Reason for Change:		1) This change requires the service organization to acknowledge that the IGCE was developed independently and in accordance with AMS Guidance T3.2.3A.2 Independent Government Cost Estimate and signed by the IGCE preparer. The change is in response to OIG Audit Report ZA2024019; it addresses
Initiator Contact Information:	Name: Erica M. Conley	Phone: 202-267-7387
	Organization Name: Procurement Policy Branch	Routing Code: AAP-110
ASAG Member Contact Information	Name: Stephen Mangan	Phone: 405-954-4137
Development, Review, and Concurrence: AAP-110, AAQ, AJF, AGC		Target Audience: FAA Acquisition Workforce
ASAG Briefing: ☐ YES ☒ NO (To be completed by secretariat) Date:		ASAG Responsibilities: None.
AEB Briefing: ☐ YES ☒ NO (To be completed by secretariat) Date:		AEB Responsibilities: None.

PART 3: FAST PUBLICATION INFORMATION

Impacted AMS Section: NOTE: Please choose only one. If additional sections are impacted, submit a separate CR form for each.	Guidance
Validation of other impacted FAST locations: ☒ I confirm I have validated all other portions of the website and will submit additional CR's for any other impacted sections as necessary.	
Section/Text Location: Procurement Guidance T3.2.1	Links: https://fast.faa.gov/docs/procurementGuidance/guidanceT3.2.1.pdf
Redline Validation: NOTE: The redline version must be a comparison with the current published FAST version.	☒ I confirm I used the latest published version to create this change/redline. OR ☐ This is new content.
Attachments: GuidanceT3.2.1 redline GuidanceT3.2.1 final	Other Files: None.

T3.2.1 - Procurement Planning Revised 4/2009

A Procurement Request (PR) Revised 7/2007

1 Purpose of a Procurement Request Package Revised 1/2023

2 Content of PR Package Revised ~~4/2023~~7/2024

3 Review by Chief Information Officer Revised 4/2023

4 Reserved Revised 1/2018

5 Procurement System-Generated Requisition Revised ~~9/2020~~7/2024

6 Funds Certification Revised 9/2020

7 Requisition Approval Levels Revised 9/2020

8 Describing Requirements Revised ~~9/2020~~7/2024

9 Independent Government Cost Estimate Revised ~~4/2023~~7/2024

10 PR Package Clearances, Justifications and Other Documentation Revised ~~7/2023~~7/2024

11 Simplified Purchases Revised 7/2007

12 Conference Space or Short Term Leases Revised 9/2020

13 Logistics Center Supply Support Revised 9/2020

14 Reserved Revised 9/2020

15 Reserved Revised 9/2020

16 Liquidated Damages Revised 9/2020

17 Returning a Deficient PR Package Revised 9/2020

18 Reserved Revised 1/2024

B Clauses

C Procurement Forms Added 9/2021

D Procurement Samples Added 9/2021

E Procurement Templates Revised 4/2022

F Procurement Tools and Resources Added 9/2021

G Appendix Revised 4/2023

1 Estimated Acquisition Lead Time Chart Revised 4/2023

T3.2.1 - Procurement Planning Revised 4/2009

A Procurement Request (PR) Revised 7/2007

1 Purpose of a Procurement Request Package Revised 1/2023

A Procurement Request (PR) package initiates acquisition of supplies, equipment, real property, utilities, material, systems, services, or construction. It is the basis for a Contracting Officer (CO) to plan, solicit, and award a contract, purchase order, delivery/task order, agreement, lease, modification, or other procurement action. The PR package is used to define the requestor's requirements so the CO can acquire supplies, real property, utilities, and services from or through other Government agencies, private and public organizations and institutions, and commercial vendors.

2 Content of PR Package Revised ~~4/2023~~7/2024

- a. The requiring service organization responsible for the requirement to be satisfied through a procurement action prepares the PR package. The nature, value, and complexity of the requirement determines the exact content of the package.
- b. As soon as a requirement becomes known, the requiring service organization should consult with the cognizant contracting organization, or CO if known, to determine the specific types of information needed for an acceptable PR package, and when the information must be provided. The information in a PR package is the foundation for a contractual instrument, so it should be complete in all essential aspects. The Estimated Acquisition Lead-Time chart (see Appendix 1) may serve as a planning tool for both the contracting organization and requiring service organization to estimate lead-times for the various milestones applicable to a procurement.
- c. The requiring service organization is responsible for submitting the PR package to the appropriate contracting office, or assigned CO if known. Unless otherwise required by local procedures implemented by mutual agreement between the PR-initiating organization and contracting office, documents in the PR package are in electronic format and annotated with a PR number and project title. Materials accompanying a PR package that cannot be provided in electronic format, such as drawings, are delivered to the appropriate contracting office or assigned CO, and labeled with PR number, project title, and location.
- d. The following list represents information and documentation that may be required for a PR package for the procurement of products, services or construction (design or alteration of property). This list is not inclusive and each item will not apply to every procurement action:

- (1) Requisition committing funds.
- (2) Statement of work, specifications, purchase description, drawings, or other appropriate technical description of the requirement.
- (3) Technical data items (such software design documents or test plans) to be delivered, Data Item Descriptions (defining data content, format, preparation

instructions, and intended use), and Contract Data Requirements List.

- (4) Independent Government Cost Estimate.
- (5) List of potential vendors and addresses (including incumbent contractor, if applicable).
- (6) Delivery destination or place of performance and delivery date or period of performance (and optional quantities or periods).
- (7) Method and place of inspection and acceptance.
- (8) List of Government furnished property or information.
- (9) First article testing requirements.
- (10) Federal standards that must be met, e.g., energy, environment, health, and safety.
- (11) Physical, personnel, and information system security requirements.
- (12) Position Designation Record OPM Position Designation Automated Tool (PDT).
- (13) Classified information or sensitive unclassified information handling requirements.
- (14) Requirement for vendor's descriptive literature or product samples.
- (15) Brand name or equal or brand name mandatory justification.
- (16) Warranty requirements which are over and above generally accepted warranty included with the purchase of an item/service.
- (17) Liquidated damages justification.
- (18) Requirement for value engineering provisions.
- (19) Privacy Act compliance determination.
- (20) Section 508 Rehabilitation Act determination (See T3.8.9.A.1 Section 508 of the Rehabilitation Act to determine applicability).
- (21) Reprocurement data requirements, spare/repair parts lists, or other special rights.
- (22) Information about use of existing patents or copyrights.
- (23) Performance or payment bond requirements.

- (24) Requirement for insurance coverage or special indemnification.
- (25) Support services labor categories and description of minimum qualifications.
- (26) Requirement for key personnel clause.
- (27) Requirement for Government consent to subcontracting clause.
- (28) Personal services justification.
- (29) Single source justification.
- (30) CFO approval- Over \$15 million (Note: The contracting office may accept a PR that lacks the CFO approval for applicable procurements over \$15 million; however, the CFO approval must be received by the CO prior to the issuance of the Request for Offer (RFO)).
- (31) Chief Information Officer's approval for information technology exceeding the AMS risk threshold.
- (32) Draft technical evaluation factors.
- (33) Draft technical proposal instructions.
- (34) Requirements for earned value management system, reports, and integrated baseline reviews.
- (35) Procurement Plan (for all procurements with a total estimated potential value (TEPV) of \$25,000 or more). For additional reference, please see the corresponding templates in FAST.

e. Real Property. For real property PR packages, the requisition should also include the name, address and telephone number of the property owner (or his/her representative), if known, and a record of any and all contact(s) with the owner/representative. Contact with an owner/representative should only be made by the CO. At a minimum, PR packages should specify the type of requirement, include a procurement plan for real property procurements with a total estimated potential value (TEPV) of \$25,000 or more, and contain the information described below. For additional information on Procurement Plans, please see AMS 3.2.1.1.

- (1) Land Acquisition (Purchase or Lease). For such acquisitions, the PR package should include information for the CO to begin the acquisition process. Items for any new or renewal lease action include:
 - (a) Statement of Need, if applicable.
 - (b) The projected life of a facility or property for land (total term requirement for real property).
 - (c) Intended use of property (e.g., VASI, REIL, VORTAC, ARSR, ASR), and

amount and type of all required restrictive or other easements (e.g., 750, 1000, 1200 or 1500- foot radius; trees removed to XX feet).

(d) The legal description of the site and easements, expressed either in meters and bounds or as required by local land registries. If a legal description is not available, a legal description can be requested by a separate requisition transmitted to the CO.

(e) Drawings, to scale, of the property(ies) to be acquired, if available.

(f) Clearances. Environmental clearances, as follows:

i. A statement that due diligence has been performed according to the requirements of the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) and FAA Order 1050.19C, Environmental Due Diligence (EDD) in the Conduct of FAA Real Property Transactions- with Change 1. The CO receives the final, signed EDD and places a copy of the report in the real property transaction file. A copy of the EDD report should be included in the PR package, as well as a letter of acceptance of the report signed by the requiring service organization. The level of environmental due diligence required varies depending on the specifics of each real property transaction.

ii. If the site is contaminated with hazardous material, the PR package should include a cost/benefit analysis and a statement of justification signed by the requiring service organization.

(g) Statement of compliance/non-compliance with the Rural Development Act (RDA) of 1972 (P.L. 92-419, 86 Stat. 670, 7 U.S.C. Section 2661).

(2) Space Acquisition (Purchase or Lease). For space acquisitions, the PR package, at a minimum, should include the following information for the CO to begin the space acquisition process:

(a) Statement of Need, if applicable.

(b) Environmental Documentation.

(c) The intended use of the space (e.g., AFS, FSDO).

(d) A five-year projected staffing chart including the number of authorized positions, by job title, which will use the space. Any projected staffing increases must be validated by the requiring service organization.

(e) Union coordination document, if applicable.

(f) A statement of one-time costs broken out by line item, if applicable.

(g) Special Requirements. These include, but are not limited to:

- i. Authorized private offices;
- ii. Wiring for data lines;
- iii. 24-hour access;
- iv. HVAC requirements;
- v. Temperature and humidity level limits;
- vi. Local Area Network (LAN) rooms;
- vii. Computer Based Instruction (CBI) rooms;
- viii. Written examination room;
- ix. Cleaning/Janitorial Requirements;
- x. Floor loads and types;
- xi. Antennas attached to roof;
- xii. Special finishes.
- xiii. Facility Security Requirements
- xiv. Loading docks and other special equipment areas; and
- xv. Special areas required by Bargaining Unit Agreements.

(h) Vehicle parking requirements (For vehicle parking requirements, the service organizations must adhere to requirements established in FAA Order 1600.69C ~~(69D)~~ FAA Facility Security Management Program^{7,2}, Uniform Federal Accessibility Standards (UFAS), and the Americans with Disabilities Act (ADA);

(i) Recommended total lease term (base lease term plus renewal option(s));

(j) Delineated area and map depicting the area.

- (k) Statement of compliance/non-compliance with the Rural Development Act (RDA) of 1972 (P.L. 92-419, 86 Stat. 670, 7 U.S.C. Section 2661).
- (3) Space Alterations/Improvements/Repairs (AIR). For this, the PR package should include:
- (a) A full narrative description of work to be accomplished, supported by a clear sketch or drawing of proposed AIR; and
 - (b) Other related items, as stated for Space Acquisitions in paragraph T3.2.1.A.2.e(2).
 - (c) A description of how the cost of the improvements will be realized over the term of the lease.
 - (d) Independent Government Cost Estimate.
 - (e) Space Planner/Project Manager.
- (4) Construction. For construction, the PR package should include:
- (a) Real Property Interest.
 - i. For Real Property Land Interests. When a land lease or purchase is involved, the PR package should include a statement from the real property CO that such lease or purchase has been completed. In rare circumstances, if there is written assurance the property owner will provide real property rights and/or the property owner provides a written right of entry to begin construction, the PR may be processed.
 - ii. For Real Property Space Interests. For construction, modification, alteration, and/or repair to a leased space or building, the requiring service organization should coordinate with the contracting office involved in such leased space actions. The PR package should:
 - a. Contain a statement from the CO that approval from the property owner has been secured and the lease amended to cover FAA's requirements; and
 - b. Comply with all applicable requirements set forth in e(1)c and e(1)d above.
 - (b) Environmental Considerations. A statement certifying that all current

requirements for Environmental Due Diligence have been met. (See paragraph e(1)f above on environmental clearances.)

- (c) Utility Requirements. If the requirement involves changes to the location or service of utilities, the PR package must state the status of obtaining utility service and the estimated date of its availability to the project. (See paragraph g below on utilities.)
 - (d) Vehicle or Pedestrian Safety. If the requirement affects the traffic or safety of vehicles or pedestrians on the right-of-way of a public highway, road, or street owned by a governmental body other than the Federal Government, the PR package must include a statement to that effect and identify the governmental body which owns the highway, road, or street.
- (5) Utilities. The PR package, at a minimum, should contain information sufficient to enable the CO to determine the required type(s) of service, quantity, delivery point(s), time of initial service, service duration, and the principal characteristics of services. At a minimum, the PR should include the following:
- (a) Public Utilities. At a minimum, the PR package should contain the following:
 - i. Funding for the initial installation (F&E) and for the ongoing operations at the site (OPS).
 - ii. Technical description or specification of the type, quantity, and quality of service required;
 - iii. Date by which the service is required;
 - iv. Existing Meter Numbers, if applicable;
 - v. Estimated maximum demand, monthly consumption, and annual cost for the first full 12 months of service;
 - vi. Schematic diagram or line drawing showing meter locations and Government connection point to utility supplier's system;
 - vii. Estimated cost, including: required utility services, any connection charges; and contractor installed facilities for replacement utility services; and
 - viii. Principal characteristics of service specifications. As a minimum, descriptions of the premises, or location to be served, in sufficient detail to clearly establish its identity by agency, function and address, as well as the service delivery point, and an attached map or drawing showing its exact location.

- (b) Electrical Service Specifications. The PR package should contain:
- i. Monthly kilowatt hour (kWh) demand for a typical year;
 - ii. Monthly kilowatt-hour (kWh) consumption for a typical year;
 - iii. Type of current (AC or DC);
 - iv. Number of phases;
 - v. Anticipated load factor;
 - vi. Substation primary and secondary voltages, and allowable variations or tolerances; and
 - vii. Type of metering: (1) demand and/or watt hours, (2) kilovolt-amperes (kva) or kilowatts (kW).
- (c) Water Service Specifications. The PR package should contain:
- i. The required pressure and type(s) of water required (e.g., potable water, industrial water, classified as to extent of required filtration or chemical treatment; or raw water [river, lake, well, etc.]); and
 - ii. Exact location of connection with utility firm's distribution system.
- (d) Gas Service Specifications. These specifications should state the supplier's tariff. They should describe the desired British Thermal Unit (BTU) content, the purity, and the initial and terminal pressure limitations. They should also include:
- i. The estimated maximum demand per hour or per day;
 - ii. The estimated monthly usage of gas, by months, for a typical year; and
 - iii. The exact location of connection with utility firm's distribution system.
- (e) Sewer Service Specifications. These should specify the types of service required (e.g. sanitary with primary or secondary treatment, or raw waste disposal; industrial waste disposal; or storm water drainage). They should also include:
- i. The size(s) and location(s) of connections between Government and contractor systems; and
 - ii. The exact location of connection with the utility firm's distribution system.

3 Review by Chief Information Officer Revised 4/2023

a. The Chief Information Officer (CIO) must review and approve proposed procurement actions for information technology (IT) and IT-related service resources when the TEPV exceeds the AMS risk threshold and would result in a new or modified:

- (1) Contract;
- (2) Order, such as those issued through a Federal Supply Schedule (FSS); or
- (3) Agreement, to include interagency and intra-agency agreements.

b. *Information Resources.*

(1) Equipment or interconnected system or subsystem of equipment, that is used in the automatic acquisition, storage, manipulation, management, movement, control, display, switching, interchange, transmission, or reception of data or information by the FAA.

(2) Information resources include:

- (a) Services (including IT support services);
- (b) Computers;
- (c) Ancillary equipment;
- (d) Software (including Software as a Service [SaaS]); and
- (e) Firmware and similar procedures.

(3) Information resources do not include any equipment that is acquired by a Federal contractor incidental to a Federal contract.

c. *Review Process.*

(1) Procurement actions initiated by the Office of Information & Technology (AIT) that commit only funding allocated to AIT are under the direction and oversight of the Deputy Assistant Administrator for AIT and CIO. Such procurement actions fully comply with the requirements and goals of the CIO Review Process. Therefore, this CIO Review Process has been satisfied for such AIT procurement actions, and additional documentation is not required.

(2) For those proposed procurement actions for information technology and IT service resources that originate from Lines of Business other than AIT, or use funding that is not included in the AIT budget allocation, when the TEPV exceeds the AMS risk threshold, the requiring service organization official must submit the following information to the CIO Review Team Mailbox at 9-CIO-

Review@faa.gov:

(a) For Contractor Support or Technical IT Services:

- (i) Statement of Work or requirements documentation
- (ii) Cost or price information, to include an Independent Government Cost Estimate (IGCE)
- (iii) Documentation of market research conducted, if applicable
- (iv) CFO or SCRB II Business Case, if applicable
- (v) CFO or SCRB II Signature Page, if applicable
- (vi) Completed CIO IT Procurement Review and Approval Form

To minimize the amount of acquisition sensitive information released to members of the CIO IT Procurement Review Team, each document (SOW, IGCE, Business Case, and Signature Page) must be sent as a separate attachment in one email so that the reviewers will only have access to the applicable document related to their area of expertise.

(b) For Hardware and/or Software Purchases:

- (i) Documentation of market research conducted and analysis in support of an IGCE, unless using an existing contract vehicle
- (ii) Completed CIO IT Procurement Review and Approval Form

The CIO IT Procurement Review and Approval Form is in AMS Procurement Templates. Note: There is a section on the Form to address Bandwidth Impact. The link to the National Bandwidth Upgrade Program (NBUP) is as follows: <https://my.faa.gov/content/myfaa/en/org/linebusiness/ato/pmo/ajm-3100-national-bandwidth-upgrade-program.html>. The NBUP's mailbox address for questions and comments is as follows: 9-AWA-ATO-FTI-REQ@FAA.GOV.)

(3) Once approved by the CIO, the program official may then prepare the requisition.

(4) Prior to submission of the requisition to the contracting office, the program office must note the date of the CIO's approval in the body of the requisition.

d. *Goals of CIO Review.*

- (1) Ensure that goals of the FAA Flight Plan are addressed in procurements involving information technology resources.
- (2) Prevent redundant procurements.
- (3) Ensure that the resource is compatible with the FAA's current or planned Enterprise Architecture.
- (4) Ensure that information technology resources support FAA Business Processes.
- (5) Promote and ensure information security and privacy.
- (6) Identify potential savings or efficiencies.

e. For more information on the process and access to updated templates, forms, and guidance, please refer to https://my.faa.gov/org/staffoffices/afn/information/CIO_Review_Process.html.

4 Reserved Revised 1/2018

5 Procurement System-Generated Requisition Revised 9/2020/2024

a. A requisition provides basic information, such as appropriation data, item description, place of performance, and quantity/dollars needed to begin a procurement action. It is also the means of reserving funds for the procurement. Requiring service organization must prepare requisitions in the Procurement System, the FAA's automated requisitioning and purchasing system. Contracting offices cannot accept manually prepared Form DOT F-4200.1, "Procurement Request," equivalent hard copy PR forms, or manually signed Procurement System-generated forms.

b. *Electronic Routing.* Requisition review, funds certification, and approval are through electronic routing in the Procurement System and have the same force and effect as manual signatures.

c. *Requisition Control and Numbering.* The functionality of the Procurement System governs requisition numbering in accordance with AMS Procurement Guidance T3.13.1. Refer to the Procurement System business process solution "Award Types and Procurement System Document Numbering Masks" for further information.

d. *Requisition Amendment/Modification.* If additional funds are needed, the requiring service organization should either issue an amendment to the requisition prior to an award being released or should create a requisition for modification after the award is released. Funds certification, review and approval are required for either an amendment or requisition for modification. When the amount obligated for the contractual action is less than the amount funded on the requisition, the requiring service organization must de-commit excess funds. Because the original purpose of the requisition is considered complete, the requisition cannot later be amended to use the remaining funds either for the original purpose or for another

purpose.

e. *Canceling a Requisition.* Requiring service organization may cancel a requisition prior to award by creating an amendment to de-commit funding.

f. *Funds Estimate.* The requisition must indicate the total estimated cost of the requirement. For basic requisitions for new contracts, this includes the estimated amount of the basic contract and all planned options and any other requirements that would not be included in or funded as part of the basic contract. For contract modifications, this amount will be the total estimated cost of the action involved. For requisition amendments and requisition for modifications, whether for new contracts or modifications, the estimated amount will be the net amount of any change to the estimate stated in the basic requisition, and in addition to the net amount, identify in the body of the requisition the cumulative total estimated cost.

g. *Required Quantity.* This is the FAA's need, present and projected, for which funding is or will be available. Quantity discounts and transportation costs must be considered when determining required quantity of supplies. Quantities should not include those for which there are no funded requirements, or for options for which FAA has little expectation of exercising. For Indefinite Delivery/Indefinite Quantity (ID/IQ) contracts, identify realistic minimum and maximum quantities. For ID/IQ contracts, the total estimated dollar amount for the requisition should be based on the total estimated quantity. The dollar amount on the requisition should cover the minimum quantity.

h. For detailed instructions on preparing a requisition, the requiring service organization should refer to the Procurement System Requisitioner Guide and Business Processes and Policy, available on the Procurement System website (FAA only).

i. All PR's for Real Estate and Utilities Actions must have the Suffix "RE".

6 Funds Certification Revised 9/2020

a. The requisition must include funds certification if it commits funds to be obligated later on a contractual instrument. Funds certification verifies funds are reserved and certified as available, or funds are to be de-obligated on an award or de-committed on a requisition. Funds need not be certified on individual requisitions when "bulk funding" is used for Blanket Purchase Agreements (BPA).

b. The person certifying funds must be designated in writing in accordance with written procedures of the organization issuing the requisition, and must be instructed by that organization on his or her responsibilities, duties and authority limits.

c. An authorized requisitioner may also certify funds when local conditions, such as remoteness or a small facility, make it necessary, *provided:* written local procedures authorize this practice and establish reasonable maximum dollar levels for combined funds certification and approval or requisitioning authority, and include monitoring and oversight procedures to ensure propriety of all such actions.

d. Additional guidance and related business processes for funds certification can be found at the [Procurement System website](#) (FAA only).

7 Requisition Approval Levels Revised 9/2020

a. Only designated FAA employees can approve a requisition. Approval levels are tied to the total estimated amount of the requisition to be approved, as follows:

(1) Washington Headquarters Requisitions

(a) Over \$500,000--Office Head, Director, Product or Service Team Lead, or equivalent or higher position.

(b) Over \$250,000 to \$500,000--Division Manager or equivalent position. (c) Up to \$250,000--Branch Manager or equivalent position.

For Washington Headquarters, an Office Head, Director, Product or Service Team Lead, or equivalent position, as applicable, may delegate via memorandum approval levels differing from the above.

(2) Service Areas, Regions, and Centers Requisitions. Organizations approving requisitions within service areas, regions, and centers may establish written local requisition approval levels. Requiring service organization should contact their local finance office for information about approval levels.

(3) Real Property Requisitions. The requiring service organization or equivalent or higher position approves all FAA Washington Headquarters, service areas, regions, and centers for real property requisitions. For real property requisitions, the APM-210 Branch Manager may delegate, via memorandum, approval levels based upon certain thresholds.

b. Key duties and responsibilities for requisitioners, fund certifiers, approving officials, and those obligating funds (i.e. COs or others with delegated procurement authority) must be separated among individuals. Due to local conditions, some duties may need to be provided by the same individual; however, the following conditions will always apply in the processing of a requisition:

(1) An individual must never perform all duties;

(2) A requisitioner may be the fund certifier for the same requisition;

(3) The approving official and the fund certifier for any requisition must be separate individuals;

(4) A requisitioner must not be the approving official and/or CO for the same requisition; and

(5) A CO must never be the approving official or requisitioner for the same requisition.

c. Requisition approvers should refer to Procurement System guidance and business processes found at the [Procurement System website](#) (FAA only).

8 Describing Requirements Revised 9/20207/2024

a. *Technical Description.* An accurate technical description of the requirement is a critical element of a PR package and key to ensuring FAA's needs are satisfied. The requiring service organization prepares, to the extent possible, a comprehensive statement of work, specifications, drawings or other description of the product, service, or real property to avoid any misinterpretation by prospective vendors about the FAA's requirements. The technical description defines valid and minimum needs of the FAA, and is not written in a way that unduly restricts competition. See AMS Procurement Guidance T3.2.2.8, "Describing Needs" for additional information.

(1) *Supplies or Equipment.* For supplies or equipment, the description should cover as wide a range of commercially available and proven products as possible. It should avoid requirements for special manufacture, or requirements that may unnecessarily restrict competition. In this way, a broad competitive base will be possible, prices will be held to a minimum, and good relations with offerors will be promoted.

(2) *Services.* For services to be performed in accordance with a statement of work (SOW), the SOW addresses:

(a) What is the contractor to do?

(b) When is the contractor to perform the tasks?

(c) Who (qualifications and experience) should perform the tasks?

(d) Where are the tasks to be performed?

(3) *Real Property.* For real property acquisitions, the requirements should address the following:

(a) Special requirements and alternative solutions, where appropriate, are considered;

(b) The appropriate area of geographic consideration (i.e., delineated area); and

(c) FAA-mandated requirements, including but not limited to incorporating seismic safety, first consideration to rural areas, and sustainability/environmental/energy principles in the acquisition process, if practicable.

(4) Space Acquisitions. In developing requirements for space, the CO and the requiring service organization must use the guidelines from FAA Order 4665. ~~4A Federal Aviation Administration (4B FAA)~~ Administrative and Technical Space Standards. This order provides standards for the construction, reconfiguration and consolidation of administrative and technical spaces; promotes workforce mobility and workplace flexibility; and improves the Agency's space utilization rate. For space, the requiring office, at a minimum, must include the following requirements:

- (a) Square footage;
- (b) Type and Use of space;
- (c) Space Location;
- (d) Special Requirements;
- (e) Number of personnel;
- (f) Gender Breakdown;
- (g) Parking;
- (h) Delineated area; and
- (i) Required Occupancy Date.

(5) Land Acquisitions. For land acquisitions, the requiring office, at a minimum, must include the following:

- (a) Requirements for Improvements to the land, if any;
- (b) Legal description;
- (c) Title information; and
- (d) Market survey/appraisal.

9 Independent Government Cost Estimate Revised ~~4/2023~~7/2024

a. An Independent Government Cost Estimate (IGCE) describes how much the FAA could

reasonably expect to pay for needed supplies, services, construction, or real property. The IGCE is an internal Government estimate, supported by factual or reasoned data and documentation, and serves as: (1) the basis for reserving funds for the procurement action; (2) a method for comparing cost or price proposed by offerors; and (3) an objective basis for determining price reasonableness when only one offer is received in response to a solicitation. The requiring service organization ~~prepares~~ is responsible for the preparation of the IGCE. The IGCE must be signed and dated by the preparer and acknowledges that the IGCE was developed independently and in accordance with AMS Guidance T3.2.3A.2 Independent Government Cost Estimate.

b. For products, services, or construction, an IGCE may include a breakdown of major elements of cost, by category such as labor, material, equipment, subcontracts, travel, overhead, and profit. For real property acquisitions, an IGCE may include a breakdown of costs, by category such as operating costs, real estate taxes, parking, tenant improvements, and capital improvements.

c. An IGCE is required for any anticipated procurement action (to include modifications) when the TEPV is equal to or exceeds the AMS risk threshold, except for:

- (1) Modifications exercising priced options or providing incremental funding; or
- (2) Delivery orders for priced services or supplies under an indefinite-delivery contract.

d. The CO may require an IGCE for those procurement actions (to include modifications), when the TEPV is less than the AMS risk threshold.

e. The estimate and supporting documentation is for internal use only. It should be made available only on a need to know basis and must not be provided to any potential offeror. (For additional information on IGCE, see AMS Procurement Guidance T.3.2.3.A.2 "Cost and Price Methodology", "IGCE Handbook" and "FAA Pricing Handbook" located in Procurement Tools and Resources for detailed information about preparing an IGCE for products and services).

10 PR Package Clearances, Justifications and Other Documentation Revised 7/2023/7/2024

The requiring service organization furnishes evidence of certain required clearances, approvals, and justifications with the PR package. This information varies, depending on the nature of the requirement, procurement strategy, and dollar value. The requiring service organization should consult with the CO to determine applicability of each of the below clearances, documentation, and approvals to the particular requirement. Documentation or other evidence for the below forms part of the PR package (the below is not all inclusive nor will it apply to each procurement action):

a. *Chief Financial Officer Approval.* For a single or cumulative expenditure over \$15M, the CO must receive evidence of the Chief Financial Officer's (CFO) approval of the procurement prior to issuing a Request for Offer (RFO). (See AMS Procurement Guidance T3.2.1.4, "Chief

Financial Officer Requirements" for additional information.)

b. *Accountable Personal Property.* FAA's financial standards and annual audit require accurate recording of personal property acquisitions. Before creating a requisition in Procurement System, the requiring service organization must establish appropriate projects and tasks in the DELPHI Project Accounting (PA) module. Each line item on a requisition must have at least one (but can have more than one) project and task associated with it. The CO will use the line item structure contained in the requisition when setting up the Contract Line Item Number (CLIN) structure.

c. *Government Furnished Property, Information, or Material.* The PR package identifies Government property, information, or material. FAA property is managed, transferred, and added to FAA records through the Automated Inventory Tracking System (AITS). Any special restrictions or conditions, such as property provided "as is" security issues, or special handling should also be specified in the PR package.

d. *Personal Property from Commercial Sources.* Before initiating a requisition to obtain personal property, requiring service organization must determine if the property is available for reuse from an FAA or other Government source, as required by FAA Order 4600.~~27C~~ ~~(September 4, 2015)~~ 27D Personal Property Asset Lifecycle Management (December 29, 2021) and the FAA Reutilization and Disposition Process & Procedure Guide at https://my.faa.gov/content/dam/myfaa/org/staffoffices/afn/regions_center/materiel_personal_property/process/Reutilization-and-Disposition-Process-Procedures-Guide.pdf (FAA only), dated August 2018.

e. *Project Materiel.* Materiel for projects is requisitioned through the Logistics and Inventory System (LIS) Project Materiel Management System (PMMS).

f. *Section 508 of the Rehabilitation Act.* Acquisition of information and communication technology (ICT) must comply with Section 508 requirements for accessibility. The requiring service organization must properly document determinations of a Section 508 exception or waiver. For further information on Section 508 requirements, exceptions or waivers, see AMS Procurement Guidance T3.8.9.A.1.

g. *Positioning, Navigation and Timing (PNT) Services.* PNT requirements apply to all SIRs, contracts and orders for products, systems, and services that integrate or utilize Time and Frequency (T&F) systems or services. For further information on PNT requirements, see T3.8.9A.3, Positioning, Navigation and Timing Services.

h. *Internet Protocol Version 6 (IPv6).* IPv6 requirements must be included in all solicitations, contracts, and orders for ICT assets, software and network services. For further information on IPv6 requirements, see T3.8.9A.2, Internet Protocol Version 6.

i. *Personnel Security.* For individuals that may need access to FAA facilities, sensitive unclassified information, or resources, the contract security clause contains sufficient language to meet that objective. For specific guidance and regulations, see the applicable personnel security orders (FAA Order 1600.1F Personnel Security Program). The Office of Personnel Management's Position Designation Automated Tool is used by the Operating Office to make initial position risk/sensitivity level designations based on the initial list of positions and the

statement of work.

j. *Sensitive Unclassified Information*. The requiring service organization must coordinate with the local FAA Servicing Security Element (SSE) for the minimum standards to mark, store, control, transmit, and destroy Sensitive Unclassified Information, For Official Use Only, Sensitive Security Information, or unclassified information that may be withheld from public release. (See FAA Order 1600.75 [Protecting Sensitive Unclassified Information \(SUI\)](#) or AMS Procurement Guidance T3.14.1, "Security" for additional information.)

k. *Classified Information*. The PR package should identify any requirements for handling of classified materials or for access of contractor personnel to classified information. (See FAA Order 1600.2E ~~Safeguarding~~2F [Classified National Security Information \(CNSI\)](#) for additional information).

l. *Information Security*. The FAA must ensure that all information systems are protected from threats to integrity, availability, and confidentiality. (See FAA Order 1370.121B FAA Information Security and Privacy: Policy for additional information.)

m. *Paperwork Reduction Act*. The FAA must obtain approval to collect information through questionnaires, focus groups, telephone surveys, applications, performance reports, customer satisfaction surveys, studies and evaluations, interviews, forms, and other means of requesting information from 10 or more respondents. The requiring service organization must first coordinate requirements through the FAA Information Clearance Officer (AIT-20), and then obtain clearance from Office of Management and Budget (OMB).

n. *Privacy Act*. When a requirement involves the design, development, and/or operation of a system of records on individuals for an FAA function, the statement of work must identify FAA rules and regulations implementing the Privacy Act. (See FAA Order 1370.121B FAA Information Security and Privacy: Policy.)

o. *Printing or Duplicating or Purchase or Lease of Copying Equipment*. For printing or duplicating services to be performed either by Government Printing Office (GPO) or outside printing businesses, requiring service organization must coordinate with the cognizant FAA printing management office. Purchase or lease of duplicators or electronic copiers, exceeding the AMS risk threshold, must be approved: for Headquarters acquisitions, coordinate with the Corporate Information Division (ABA-10); Region, Center and Service Area acquisitions, coordinate with the servicing printing management organization.

p. *NAS Specifications*. Specifications for acquisitions under the Capital Improvement Program (CIP) are baselined and under configuration control. A requisition for NAS program specification change must include evidence of approval by the NAS Configuration Control Board.

q. *Options*. If options are to be included, the PR package should state the basis for evaluating offeror proposals. The PR package should indicate whether it is expected that offers will be evaluated for award purposes only on the basis of the price for the basic requirement exclusive of options, or price inclusive of options.

r. *Warranty*. Warranties should be cost beneficial. For other than standard commercial

warranty generally accepted as included with basic purchase price, the PR package should include an analysis of the costs of a warranty and its administration, versus the benefits of liability deferral.

s. *Liquidated Damages*. Before liquidated damages provisions may be included in a contract, the requiring service organization must adequately justify and document the basis for amounts to be assessed.

t. *Brand Name Products*. When a brand name or equal description is used, the PR package must state the brand name product and salient physical, functional, performance, and interoperability or interface characteristics of the brand name product so that vendors may offer alternative but equal products. Brand name-mandatory descriptions identify a specific make, model, or catalog number, and manufacturer of a product. This type of description differs from brand name or equal because vendors may not provide an equal item. For brand name-mandatory, a single source justification is required with the PR package. (See AMS Procurement Guidance T3.2.2.8, "Describing Needs" for more information.)

u. *Recovered Materials*. Requiring service organizations are responsible for defining product specifications, utilizing FAA's minimum content standards or preference standards, when procuring EPA- designated items. The requiring service organization should provide a written determination certifying that the statement of work/specifications for materials/services specified complies with the FAA's preference standards for recovered materials. (See AMS Procurement Guidance T3.6.3, "Environment, Conservation and Energy" for additional information.)

v. *Recycled Content*. Purchases of EPA-designated recycled content products must meet or exceed EPA guideline standards, unless price, performance, or availability justifies not doing so. The requiring service organization should document this determination. (See AMS Procurement Guidance T3.6.3 "Environment, Conservation and Energy" for additional information.)

w. *Capital Versus Non-Capital Lease Determination*. The FAA is required to capitalize certain improvements in both owned and leased space. In addition, the FAA (to include the Operating Office, CO, and accounting) is required to make a determination as to whether leases (including real property leases) are capital or operating leases and insure they are recorded and filed accordingly.

x. *Personal Services*. Personal services contracts are permissible if appropriately justified and approved by senior management. The PR package must include evidence of this approval. (See AMS Procurement Guidance T3.8.2, "Service Contracting" for more information.)

y. *Single Source Justification*. When in the FAA's best interests, a single source procurement may be appropriate. The requiring service organization should prepare a justification documenting the rational basis for using a single vendor. (See AMS Procurement Guidance T3.2.2.4, "Single Source".)

z. *Technical Evaluation Factors/Plan*. Technical evaluation factors must be approved

before issuing a solicitation. The requiring service organization must provide the factors and plan for evaluating technical proposals.

aa. *Earned Value Management System (EVMS)*. Implementation of EVM on development contract efforts is based on an assessment of cost, schedule, and technical performance risk of each contract. Implementation must be consistent with the program and contract management strategy in the implementation strategy and planning document.

- (1) Contractors are required to apply earned value management to development contracts over \$50 million and use a certified/validated EVMS for reporting.
- (2) For development contracts between \$20 and \$50 million, the contractor management control system must comply with the EIA[1]748 guidelines as tailored by the program manager, contracting officer, and EVM Focal Point but a certification/validation of the contractor EVM system is not required.
- (3) The JRC may designate the application of earned value management to any development contract based on an assessment of cost, schedule, and technical risk of each contract. The contractor must provide an Integrated Program Management Report (IPMR) and participate in government led integrated baseline reviews. The EVM Focal Point conducts contractor EVMS surveillance.
- (4) Requiring service organization should consult with the FAA's EVM Focal Point (AAP-410) to determine appropriate EVMS certification, review, and reporting requirements. (See AMS "Earned Value Management Guide" for additional information.)

bb. *Commercial Aircraft Services (CAS)*. Lines of Business (LOBs) and Staff Offices (SOs) seeking to acquire CAS, including any products or services involving the operation of any unmanned aircraft system (UAS), must coordinate each procurement with Flight Program Operations (AJF-0) to obtain the acquisition and operational standards applicable to the desired procurement. For further information on CAS requirements, see AMS Guidance T3.8.9D, Acquisition of Commercial Aviation Services.

11 Simplified Purchases Revised 7/2007

a. *Purchase Cards*. When a requisition is used as the funding document for purchase card purchases, it must contain certification of availability of funds. (See AMS Procurement Guidance T3.2.2.5 "Commercial and Simplified Purchase Method" for additional information.)

b. *Blanket Purchase Agreement (BPA)*. A requisition may be issued for a basic BPA, but is not necessary for individual orders (termed "calls") against the BPA. One or more BPAs may be established in response to a requisition. The requisition identifies types of supplies or services to be purchased under the BPA, suggested sources of supply, estimated grand total and individual call dollar limitations, and person(s) to be authorized by the CO to make purchases. BPA calls serve as the obligating documents and a requisition will be required to issue the first call. If the BPA call is funded for a period of less than one year, a requisition for modification will be required to increase the funding.

12 Conference Space or Short Term Leases Revised 9/2020

a. *Headquarters.* Requirements for short-term lease, or rental, of conference space, must be coordinated with the contracting office and AGC-530. The results of this coordination must be indicated on the requisition or an attachment. Requirements for the long-term lease of other space (e.g., office, storage or special purpose), in commercial establishments in the Washington, D.C. metropolitan area, and requests for any GSA acquired space should be coordinated through APM-200.

b. *Regions and Centers.* Requirements for short-term lease of conference space not acquired through a purchase card should be coordinated through the contracting office and AGC-530. The results of that coordination must be indicated in the requisition or an attachment.

c. All conference space must comply with the standard operating procedures (SOPs) specified by the Office of Financial Analysis. (See AMS Guidance T3.2.2.4.A.5 FAA Sponsored Conferences, Seminars, Ceremonies, and Workshops).

13 Logistics Center Supply Support Revised 9/2020

Supply Support Program requirements are processed using the Logistics Center Support System (LCSS) at the FAA Logistics Center. Requisitioning through LIS, coordination, review, certification, and approval signature are completed electronically.

14 Reserved Revised 9/2020

15 Reserved Revised 9/2020

16 Liquidated Damages Revised 9/2020

a. Liquidated damages clauses should be used only when (1) the time of completion, performance, or delivery is such an important factor in the award of the contract that the FAA may reasonably expect to suffer damage if the completion, performance, or delivery is delinquent; and (2) the extent or amount of actual damage sustained by the FAA would be difficult or impossible to calculate or prove. In deciding whether to include a liquidated damages clause in the SIR/contract, the procurement team should consider the probable effect of that clause on other issues such as contract price, competition, and the cost or difficulties of contract administration. The rates of liquidated damages must be reasonable and based on probable actual damages to the FAA. Liquidated damages assessed without consideration of actual costs are penalties, and are thus unenforceable.

b. When administering contracts that include a liquidated damages clause, the CO must take all reasonable steps to notify contractors of the pending assessment when the concern about late completion, performance, or delivery first develops. If a basis for termination for default exists, the CO must advise the contractor that it may be liable for liquidated damages assessed until the date of termination, in addition to reprocurement costs. If completion, performance, or delivery is desired after termination for default, efforts must be made to obtain completion, performance, or delivery elsewhere within a reasonable time.

c. *Construction.* Liquidated damages for construction contracts are assessed on a per project basis. The liquidated damages rate must be determined by the procurement team and documented by the requiring service organization, and must, at a minimum, cover the estimated cost of contract administration, including inspection, for each day of delay in completion. In addition, other specific losses anticipated to be incurred as a direct result of the failure of the contractor to complete the work on time must be included. Examples of specific losses are:

- (1) Additional inspection costs;
- (2) The costs of substitute facilities;
- (3) The rental of buildings; and
- (4) The costs of FAA crews, or hourly paid contract employees, forced on standby.

When different completion dates are specified in the contract for separate parts or stages of the work (i.e., milestones), the CO may revise the liquidated damages clause to state the amount of liquidated damages for the late completion of each milestone. Separate calculation and documentation of the estimated damages must be developed for each amount specified with a differing basis.

d. The requiring service organization must document the basis for the assessment rate for liquidated damages. This documentation must describe the assumptions, data, and formula used to derive the rate of assessment.

17 Returning a Deficient PR Package Revised 9/2020

a. The CO may return a deficient PR package without action, or stop work on a pending PR package until the requiring service organization submits any needed supplemental information. Examples of reasons for returning or stopping work on a deficient PR package include:

- (1) Incomplete or conflicting information between the requisition, specifications,

drawings, or other solicitation data;

(2) Unstable requirements due to repeated technical changes to functional capability, reliability, maintainability, quality control, or testing requirements;

(3) Failure to include the appropriate stock number or item code, facility type code, and other required data applicable to each accountable item listed; or

(4) Missing or improper funding citation.

(5) Failure to include required environmental documentation.

(6) Failure to provide Single Source Justification or other exception documentation as described in AMS Procurement Guidance T3.2.2.4, "Single Source."

(7) Failure to obtain appropriate approvals from the Program Office for new Space Lease Requirements.

(8) Failure to provide documentation of appropriate coordination between Security, Bargaining Units, Project Management/Space Planners, CFO approvals, etc.

b. In Washington Headquarters, the CO should return a deficient PR package by memorandum, signed by a Contracts Division branch manager, to the approver of the requisition. The memorandum should include a brief explanation of deficiencies.

c. In Service Areas, Regions and Centers, COs should return PR packages in accordance with local procedures.

18 Reserved Revised 1/2024

B Clauses

[view contract clauses](#)

C Procurement Forms Added 9/2021

Document Name

D Procurement Samples Added 9/2021

Document Name
Independent Government Cost Estimate Sample 1
Independent Government Cost Estimate Sample 2

E Procurement Templates Revised 4/2022

Document Name
CIO IT Procurement Review and Approval Form
Procurement Planning for Simplified Acquisitions – Template A
Procurement Planning for Other Than Simplified Acquisitions – Template B

F Procurement Tools and Resources Added 9/2021

Document Name
IGCE Handbook
Pricing Handbook

G Appendix Added 9/2021

1 Estimated Acquisition Lead Time Chart Revised 4/2023

Note: The timeframes in this chart are estimated and purely for planning purposes only. As each FAA acquisition is unique and independent, the lead-time chart in no way obligates contracting offices to deliver in the timeframes below.

Action	Negotiated Competitive	Two-Step/ Multiple SIRs	Single Source (1)	SEDB/8(a) Competitive	Within Scope Changes
Complete PR Package Received	Start	Start	Start	Start	Start
OSBD Acceptance	1 to 5	1 to 5	1 to 5	1 to 5	0
Market Analysis	5 to 30	5 to 30	5 to 30	5 to 30	5 to 15
Announcement/Synopsis	10 to 30	10 to 30	10 to 30	10 to 30	0

CO Review Requirements/Draft SIR	5 to 10	5 to 10	5 to 10	5 to 10	1 to 10
SIR Review (Mgmt, Legal, etc)	10 to 15	15 to 20	10 to 15	10 to 15	10 to 15
SIR	30	60	10 to 30	10 to 30	0
Proposal/Quote/Technical Evaluation	5 to 15	10 to 30	5 to 15	5 to 15	5 to 15
Discussions	5 to 10	10 to 20	0	1 to 10	0
Negotiations	5 to 10	5 to 10	1 to 10	1 to 10	5 to 10
Responsibility Review	1 to 5	1 to 5	1 to 5	1 to 5	0
Award Decision Document	1 to 2	1 to 2	1 to 2	1 to 2	1 to 2
Contract Review (Legal, etc)	10 to 15	15 to 20	10 to 15	10 to 15	10 to 15
Award	Stop	Stop	Stop	Stop	Stop
Estimated Number of Calendar Days	88 to 177	138 to 242	59 to 167	60 to 177	37 to 82
Other Potential Schedule Impacts					
CFO Review (2)	60	60	60	60	60
Acquisition Strategy Review Board (ASRB)	10 to 20	10 to 20	10 to 20	10 to 20	10 to 20
Public Affairs Notification >\$3.5M	2	2	2	2	2(3)
EEO Pre-Award Clearance (Other than Construction) >\$10M	30	30	30	30	30(4)
Number of Calendar Days with Potential Schedule Impacts	190-289	240-354	161-279	162-289	139-194

(1) Includes a single sources to socially and economically disadvantaged businesses (SEDB)/8(a) and

service-disabled veteran owned small businesses (SDVOSB)

(2) All acquisitions (e.g., contracts, interagency agreements, other transactions, etc.) over \$15 million require CFO approval. This includes modifications that increase the contract ceiling price over \$15 million or the authorized CFO ceiling limit as defined in AMS Procurement

Guidance section T3.2.1.4.

(3) Required only for mods over \$10M when the base was not originally coordinated

(4) Required if a mod increases the total contract value to \$10M or more

Action	Administrative Mods	Simplified Purchase	Delivery/Task Orders (Incl FSS)	Exercise Option
Complete PR Package Received	Start	Start	Start	Start
OSBD Acceptance	0	1 to 5	1 to 5	0
Market Analysis	5 to 10	5 to 10	5 to 10	5 to 10
Announcement/Synopsis	0	0	0	0

CO Review Requirements/Draft SIR	5 to 10	5 to 10	5 to 10	0
SIR Review (Mgmt, Legal, etc)	0	10 to 15	10 to 15	10 to 15
SIR	0	5 to 30	5 to 30	0
Proposal/Quote/Technical Evaluation	0	1 to 5	1 to 15	0
Discussions	0	1 to 2	1 to 10	0
Negotiations	0	1 to 3	1 to 10	5 to 10
Responsibility Review	0	1 to 2	1 to 2	0
Contract Review (Legal, etc)	5 to 10	5 to 10	5 to 10	5 to 10
Notification to contractor-Exercise of option	0	0	0	30
Award Decision Document	0	1 to 2	1 to 2	1 to 2
Award	Stop	Stop	Stop	Stop
Estimated Number of Calendar Days	15 to 30	36 to 94	36 to 119	56 to 77