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| Laboratory-wide | Template |  | eCR Number: | 619246 |
| Manual: 13B - Quality Assurance Program Implementing Documents | | | | |

**[Delete this entire page and sections printed in red after reading**; they are intended as guidance or information to help complete the requirements specification.

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This template provides the format for a requirements traceability matrix and may be used in support of any quality level (QL)-1, QL-2, or QL-3 Information Technology (IT) project to document traceability of requirements throughout the life cycle. For QL-3 IT projects, this template may be used as the record document for system requirements and associated test cases.

The detail and content of this document may be tailored slightly so that it is proportionate with the size and complexity of the project or M&O activity (i.e., a smaller, less-complex activity might have less detail). Deliverables (like this specification) are required, but should be complied with in a reasonable, cost-effective manner that is consistent with costs that would be incurred by a prudent person in the conduct of a competitive business.

To complete this template perform the following actions:

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2. ***Delete text printed in red after reading;*** it is intended as guidance or information to help complete the IT project plan.
3. ***Update cross reference information including the table of contents (TOC)*** by pressing <CTRL-A> to select the entire document and then pressing F9 to update references.]

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| Document ID: SPC-ID\_NO  Revision ID: REV  Effective Date: DRAFT |
| IT System Requirements and Traceability Matrix |
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| [Project or System Name]  Type Here |
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| Manual: | | | | |

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# INTRODUCTION

**Minimum Requirements:**

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| **For software projects, the following is required:** |
| 1. The software requirements shall include technical requirements including operating system, function, interfaces, performance, and security requirements, installation considerations, design inputs, and any design constraints. 2. Identify applicable reference drawings, specifications, codes, standards, regulations, procedures, or instructions that establish software requirement test, inspection, and acceptance criteria. 3. Software requirements shall be traceable throughout the life cycle. 4. Security requirements shall be specified commensurate with the risk from unauthorized access or use. |
| The software test plan as part of the requirements traceability matrix document must include, as applicable:   1. Required tests and test sequence. 2. Required ranges of input parameters. 3. Identification of stages when testing is required. 4. Criteria for establishing test cases. 5. Requirements for testing logic branches. 6. Requirements for hardware integration. 7. Expected results. 8. Acceptance criteria. 9. Reports, records, standard formatting, and conventions. 10. Disposition unexpected results. Performance of system test is by personnel other than the development staff.   **Note:** *Software test records shall include:*   1. *Computer program tested and support software used* 2. *Computer hardware used* 3. *Test equipment and calibrations, where applicable* 4. *Date of test* 5. *Tester or data recorder* 6. *Simulation models used, where applicable* 7. *Test problems* 8. *Results and applicability* 9. *Action taken in connection with any deviations* 10. *Person evaluating the test results* 11. *Customer approval.* |

## System Purpose

[Summarize the reason(s) for the system being developed or modified.]

[Enter text here.]

## System Scope

[Delineate the following:

1. Identify the product(s) to be produced by name (Network Infrastructure, Host DBMS, Report Generator, HPC Server, etc.)
2. Explain what the product(s) will, and, if necessary, will not do
3. Describe the application of the product being specified, including relevant benefits, objectives, and goals.

**NOTE:** *Be consistent with similar statements in higher level specifications (e.g., business requirements specification).]*

[Enter text here.]

## Assumptions and Dependencies

[List each of the factors that affect the requirements and should be taken into consideration for derivation of lower level requirements and design. These factors should include design inputs, design constraints, and installation considerations. Changes to these can affect the requirements in the specification. For example, an assumption may be that a specific operating system will be available on the hardware designated for the product. If, in fact, the operating system is not available, the specification would then have to change accordingly.]

[Enter text here.]

## Pre-test Instructions/Environment/Setup

[Provide a clear description of the test environment and any required instructions for setup. This includes:

* Pre-test environment and setup requirements including computer hardware and system software used
* How the test data is created and required ranges for input parameters
* How the test case is executed (i.e., manual/automated tool)
* The steps to validate the test result including any acceptance criteria.]

[Enter text here.]

# SYSTEM REQUIREMENTS

## Requirements Traceability Matrix

[This section of the specification should contain all of the requirements to a level of detail sufficient to enable designers to design a system to satisfy those requirements, and testers to test that the system satisfies those requirements. Be sure to define the system security requirements. Examples of such requirements are data privacy, user access, user privilege, export control, system configuration, event logging and communications.

1. Requirements must be stated in the form to be:

* Correct
* Unambiguous
* Complete
* Consistent
* Verifiable
* Traceable.

1. Requirements must be uniquely identifiable.
2. Requirements should be cross-referenced to earlier documents that relate (e.g., business requirements).
3. Careful attention should be given to organizing the requirements to maximize readability.
4. Requirements should address functionality, usability, performance, system interfaces, reliability, and security.

[Enter text here. Add or revise for your specific requirements and test cases.

This section contains all of the requirements, test cases, acceptance criteria, and expected and actual results to ensure satisfaction of requirements. ]

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| Requirement No. | Requirement Description | Test Description | Expected Result | Actual Result | Tested By | Date Passed |
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