

## Department of the Interior Acquisition, Arts, and Asset Policy (DOI-AAAP)

<b>Title</b>	Standards for Deferred Maintenance and Repairs, Repair Needs, Investment Categories, and Other Requirements
<b>Reference Number</b>	0192
<b>Version Number</b>	1
<b>Function(s)</b>	Real Property
<b>Point of Contact</b>	Craig Lasser
<b>Source of this Requirement</b>	Executive Order 13327, Real Property Asset Management; Federal Property Management Reform Act, DOI Asset Management Vision
<b>Regulatory Reference</b>	

### **Purpose:**

The purpose of this Policy is to standardize the methodology used in measuring certain attributes of the Department of the Interior's (DOI) real property asset portfolio. This policy advances DOI towards the end states identified in the DOI Asset Management Vision and supports previously issued policy and guidance related to Executive Order 13327, "Federal Real Property Asset Management" and the Federal Property Management Reform Act of 2016 (P.L. 114-318). This policy replaces the 2008 Policy on DM, CRV, and FCI in Life-Cycle Cost Management.

### **This Policy:**

- Provides for a consistent methodology in defining and estimating Deferred Maintenance and Repairs (DM&R) and Repair Needs;
- Updates previously issued guidance on Current Replacement Value (CRV) and Asset Priority Index (API); and
- Establishes consistent Investment Categories and Work Classification.

### **Scope:**

This policy applies to all bureaus and offices that own real property.

### **Effective date:**

Upon Signature.

### **Background:**

The DOI Asset Management Vision codifies the strategic approach to asset management for the Department. This vision establishes desired end states for DOI asset management and informs the Department's Asset Management Strategy. The DOI Asset Management Strategy (ends) will

shape Department policy (ways) and support the Department’s budget development (means). Key to implementing this vision is consistency in standards, terminology and methodology as outlined in this policy.

**Action:**

Bureaus and offices are responsible for incorporating the definitions, processes, and standards below into policy, guidance, systems, and workflows.

**Technical or Process Guidance:**

Deferred Maintenance and Repairs/Repair Needs

The DOI defines Deferred Maintenance and Repairs (DM&R) and Repair Needs according to the definitions from the Federal Accounting Standards Advisory Board (FASAB) and the Federal Real Property Profile (FRPP), respectively. Guidance for meeting the FASAB reporting requirements in the Agency Financial Report is provided in AAAP-0031, “Changes to Deferred Maintenance and Repairs Reporting.”

<b>Terminology</b>	<b>Definition</b>
Deferred Maintenance and Repairs (FASAB)	Maintenance and repairs that were not performed when they should have been or were scheduled to be and which are put off or delayed for a future period.  Maintenance and Repairs consist of activities directed toward keeping fixed assets in an acceptable condition. Activities include preventive maintenance; replacement of parts, systems, or components; and other activities needed to preserve or maintain the asset. Maintenance and repairs, as distinguished from capital improvements, exclude activities directed towards expanding the capacity of an asset or otherwise upgrading it to serve needs different from, or significantly greater than, its current use.
Repair Needs (FRPP)	The non-recurring costs that reflect the amount necessary to ensure that a constructed asset is restored to a condition substantially equivalent to the originally intended and designed capacity, efficiency, or capability. This includes deferred maintenance but excludes the actual repair expenditures reported under “Annual Maintenance Costs” data element. The total repair needs should be those documented at the time of the condition survey or parametric modeling exercise. Additionally, repair needs should exclude any consideration of the likelihood that the repair will actually be performed at any time before the asset’s disposition. The amount must be adjusted for geographic location and reported in current year dollars.

The DM&R/Repair Needs estimates should not be used for project formulation. Cost estimates for project work must incorporate a higher level of detail and accuracy prior to inclusion of the project in a budget request. Refer to the [Lifecycle Investment Planning Guidance](#) for additional detail on cost estimating objectives associated with investment plans. investment plans.

The Federal Real Property Profile (FRPP) dataset within the Financial and Business Management System (FBMS) is the official source of bureau Repair Needs data. Bureaus

currently report a subset of Repair Needs for the DOI Agency Financial Report DM&R summary, according to Federal Accounting Standards Advisory Board (FASAB) Standards. For all other external reports or requests for “deferred maintenance backlog” information, including public-facing information on DOI or bureau websites, bureaus are to use the FRPP-relevant inventory, the Repair Needs definition and associated “FRPP-relevant” FBMS data.

When calculating the DM&R/Repair Needs estimates, bureaus shall include project execution markups as defined in AAAP-0183, “DOI Policy on Standardizing Cost Estimating Allowances for Reporting of Construction Costs in the Asset Management Program.” Estimates shall be updated annually to account for inflation per the Gordian RS Means Construction Cost Index, Engineering News Record (ENR) Construction Cost Index, or other industry standard based on the activity. Note, the Consumer Price Index (CPI) is generally not applicable to construction activities.

**Standard Investment Categories and Work Classification**

The table below defines DOI’s standard Investment Categories and Work Classification. These categories shall be used to categorize lifecycle investments consistently across the department. All bureaus and offices with real property investment requirements must use these categories in program development and communication. Refer to the Lifecycle Investment Planning Guidance for more detail on program formulation. Note that DM&R/Repair Needs may be addressed through several of the following standard investment categories and work classes.

<b>Investment Category</b>	<b>Work Classification</b>	<b>Definition</b>
Maintenance	Maintenance	Routine and preventive activities performed on capital assets such as buildings, roads, and fixed equipment, or unplanned repairs, to help achieve the asset’s originally anticipated life. <sup>1</sup>
Modernization and Renewal	Recapitalization	Replacement of critical component/system that extends the useful life of a capital asset, and major renovations without a significant change in function or capacity.
	Alteration	Expansion, extension, or update of an existing asset to accommodate new technology or a change of function or unmet programmatic needs.
	Replacement	The substitution or exchange of one existing asset for another having the capacity to perform the same function.
	New Construction	Construction or assembly of a new asset.

<sup>1</sup> Includes all maintenance recurring, preventive, deferred, and unplanned. Does not include *operational activities sometimes referred to as maintenance*, e.g. custodial services, landscaping, mowing, debris/storm cleanup.

Divestiture	Divestiture	Demolition, dismantling and removal, title transfer, or surplus of a deteriorated or otherwise unneeded asset, including associated site remediation.
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### Current Replacement Value

The Current Replacement Value (CRV) is defined as the cost required to design, acquire and construct an asset to replace an existing asset of the same functionality, size, and in the same location using current costs, building codes, and standards. Neither the current condition of the asset nor the future need for the asset is a factor in the replacement value estimate. The CRV excludes the cost of land, site preparation, earthworks, and landscaping.

The CRV for assets includes all the costs necessary to reconstruct an asset. The cost of planning/design, and project management must be included in the CRV. Preliminary design costs, such as geotechnical, hydraulic, and hydrologic, permits, and special studies and assessments should also be included in the value.

The CRV is the conceptual estimate of the construction cost based on the cost per square foot of a similar constructed building or structure. At the time that an asset is to be replaced, a more detailed cost estimate must be completed. This estimate should include a detailed time and materials estimate to replace the asset and should be of sufficient detail to ensure that appropriate funding is available for completion of the project and appropriate disposition of the replaced asset.

For historic buildings and structures, a CRV based on standard industry construction costs may not accurately reflect the cost of replacing the asset using historically accurate materials and construction techniques. A replacement-in-kind CRV estimate—one that captures the costs associated with using historically accurate construction techniques and materials— may be needed to create an accurate CRV estimate. Replacement-in-kind costs may not be commonly found in industry standards and often must be determined on a case-by-case basis utilizing the expertise of cultural resource professionals familiar with the asset being evaluated. These experts include architects, archaeologists, architectural historians, and tradesmen experts in historic materials and their application.

When calculating the CRV, bureaus shall include project execution markups as defined in AAAP-0183, “DOI Policy on Standardizing Cost Estimating Allowances for Reporting of Construction Costs in the Asset Management Program”.

### Transportation Facilities

DOI bureaus may utilize expertise provided by other Federal agencies, such as the Federal Highway Administration (FHWA), to assess and capture relevant attributes for transportation-related assets. FHWA provides automated and/or manual asset condition data collection and

management services for transportation-related assets such as pavements (including cracking, rutting, raveling, or roughness), bridges, tunnels, or retaining walls.

Bureaus shall use the following requirements to calculate CRV and DM&R/Repair Needs for a transportation facility:

- Condition is assessed for the road surfacing<sup>2</sup>, the associated embankment, and any constructed assets associated with the roadway. This may include pavement, drainage, and roadside appurtenances such as signs, guardrails, retaining walls, low water crossings, gates, cattle guards, and culverts, among others.
- Each asset is assessed individually and the assessment method and guidance used must be defined and documented.
- Road pavement/surface assessment must use industry standard methods. Industry standard methods are defined as any method approved or implemented by the Federal Highway Administration (FHWA), such as the Pavement Condition Rating system using an automated data collection methodology, or any other published and widely used systems such as the University of Wisconsin PASER<sup>3</sup> system utilizing a manual visual assessment methodology.
- For roads with gravel or native surfacing, condition assessment may be limited to an assessment of the pavement/surface as a surrogate for the entire asset. If individual roadside appurtenances are included in the condition assessment, they may be considered in the aggregate, rather than being assessed and documented individually.
- Bureaus may define appropriate pavement/surface condition assessment methods provided each method is reviewed and approved by OS/PAM for adequacy and consistency. At a minimum, all methods will be based upon ratings derived from the observed severity and extent of roadway surface distress<sup>4</sup>.
- Bridge and tunnel condition assessment methods will comply with federal requirements defined by the National Bridge Inspection Standards (23 CFR 650, Subpart C) and the National Tunnel Inspection Standards (23 CFR 650, Subpart E), respectively. Exceptions can be made for bridges that no longer carry vehicle loads as well as non-public bridges and tunnels.

*DM&R/Repair Needs Requirements for Transportation Facilities*

- All estimates are identified based upon direct observation of distress or other approved methodology such as sampling and modeling. Procedures used to generate the unit costs must be documented.
- The estimate is the cost of work necessary to correct the distress and does not include any improvement to the original function or capacity of the asset.

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<sup>2</sup> Road surface is defined as any structural or surface course placed in layers above a prepared subgrade. This can include a range of surfacing types, including asphalt, concrete, surface treated earth roads and stabilized materials to loose surfaces such as earth, shell, crushed stone, and bank run gravel.

<sup>3</sup> PASER is the Pavement Surface Evaluation and Rating. It is applicable to native, gravel, asphalt, or concrete surfaces and links type, number and severity of defects with the type of maintenance treatment required.

<sup>4</sup> Distress can include cracking, rutting, roughness, wash boarding, or drainage adequacy.

- Estimates may be based upon unit costs for various types of repair and construction activities. Unit costs are expressed in common units of measure (\$/square ft, \$/each, \$/linear ft, etc.) and are derived for common roadway repair activities such as paving, culvert replacement, surface treatment, gravel layer placement, and so forth.
- Estimates may be based upon condition assessments from sources with specialized expertise, such as the Federal Highway Administration or U.S. Army Corps of Engineers.
- All unit costs are based upon national averages. These averages will be adjusted by the Location Adjustment Factor defined in this policy to account for local cost variance.
- Unit costs can include adjustments to account for the high cost of working in urban or remote environments. Costs are inclusive of and increased by the need for complex traffic control systems, the high cost of mobilization, working in and around limited rights-of-way, buildings, and utilities, limited construction seasons due to environmental constraints, or long distances to appropriate material sources. These costs may be acknowledged as separate line items or incorporated directly into the unit costs, but the assumptions used to generate them must be documented.
- Estimates are prepared and documented for equipment types on an individual basis.

#### CRV Requirements

- For gravel or native surface roads, CRV estimates can be based upon unit costs per mile of construction. The typical amount of roadside appurtenances can be accounted for using an estimated standard utilization factor applied to the overall cost and based upon the attributes of the road itself, unless there are significant levels of non-standard roadside appurtenances (for example, a much larger than average retaining wall)
- When unit costs per mile of construction are used, they must be adjusted to account for the cost structures presented by different terrain types. Unit costs per mile must also be adjusted if unique terrain characteristics are present that will significantly increase the cost of construction. Examples are terrain that has a high moisture content, inherently weak soil, or that is very unstable.

Roads Located on Other Reportable FRPP Assets. The DOI inventory contains numerous roads that are located on the top of levees, dikes, and other assets that have data reported to FRPP. The DM&R/Repair Needs and CRV estimates for these roads will only include the work required to repair the constructed surface or replace it, respectively. If erosion or some other cause has degraded the width or structural integrity of the road so that it can no longer support the safe passage of passenger vehicles, the repairs needed to restore the constructed surface shall be reported to FRPP as road Repair Needs. Repairs to the levee, dike, or other constructed feature beneath the constructed surface shall be assigned to those assets, not to the road.

#### Trails

The road section of this policy document is not applicable to DM&R/Repair Needs and CRV estimates for trails. The [Federal Trail Data Standards](#) are the controlling policy for trails.

## Dams, Power Assets, and Water Distribution Systems

The CRV and DM&R/Repair Needs estimates for these assets will be computed by using the methodology below.

*Original Construction Costs Known.* Identify the asset's original construction date and acquisition cost. Apply the appropriate index value from the [Construction Cost Trend Index](#) to the original acquisition cost for the asset type (concrete dam, diversion dam, etc.) to create a CRV for the asset. Capital improvements that added to the value of the asset should be included in the CRV calculation by identifying the original date of the capital improvement and its cost and applying the appropriate index value. to the original acquisition cost for the asset type (concrete dam, diversion dam, etc.) to create a CRV for the asset. Capital improvements that added to the value of the asset should be included in the CRV calculation by identifying the original date of the capital improvement and its cost and applying the appropriate index value.

*Original Cost is Unknown.* Identify an asset that is similar in size, function, and construction materials that has original construction date and acquisition cost data. Use the original acquisition cost data for that asset and update it to current year dollars by using the same procedure specified for Level One. If no similar asset is in close proximity, use the most recent version of the Gordian [RS Means Heavy Construction Cost Data \(or equivalent\)](#) to estimate the CRV. If RS Means does not provide cost data for a specific work activity or equipment item, other sources may be used but must be documented in the record. Labor costs will be estimated using the most recently published version of the suite of RS Means cost guides.

### Location Adjustment Factor

The RS Means three-digit weighted average zip code adjustment factors will be used to adjust for locality cost variation. The same zip code adjustment factor applied to CRV must be applied to DM&R/Repair Needs estimates. If bureaus have developed local cost indices based upon actual costs from completed construction contracts, they may use this in lieu of the RS Means three-digit weighted average zip code adjustment factor. However, bureaus must provide the PAM office the methodology used to create the index.

### Adjustment for Inflation

CRV and DM&R/Repair Needs estimates shall be adjusted for inflation each year by applying the most recently published annual value. The adjustment will be completed by April 1 each year.

### Condition Assessments

Condition assessments are required on all DOI-owned constructed assets at least once every 5 years. More frequent assessments are encouraged for mission critical assets. A condition assessment is the periodic evaluation of real property to verify and/or determine its existence, current condition, validate inventory data, and identify and provide conceptual cost estimate for necessary lifecycle investment requirements. Condition assessments may be rapid visual assessments with modeled estimates or comprehensive assessments with unit price estimates. Certain asset types, such as public bridges, require more frequent assessments due to statutory or regulatory requirements protecting public safety. Bureaus/Offices should follow the respective statutory or regulatory requirements for these assets.

### Asset Priority Index

The Asset Priority Index (API) is an attribute that provides a link to mission for each existing and proposed asset in the portfolio. This linkage is a result of the prioritization of constructed assets based on the degree to which investments support mission needs and the achievement of strategic goals.

The API has two important components that identify priority: mission dependency criteria and asset substitutability. Mission dependency criteria relate an asset's contribution to an organization's individual strategy and values based on Departmental and bureau mission and outcome goals. Asset substitutability is the degree to which a comparable substitute asset exists to fulfill the functional requirements or purpose of that asset. An API rating weights these two components with 80% weighting given to mission dependency and 20% weighting given to substitutability.

The structure for API is as follows:

Each Bureau API shall have a 0-100 point score that maps to the defined categories for mission dependency in FBMS. API provides each Bureau a guide in determining the relative priority of assets (i.e., mission critical, mission dependent not critical, not mission dependent) and the need to keep and maintain assets necessary to accomplish the overall specific site and Bureau mission. The API rating will provide bureaus with information by which assets with low API ratings may be considered for disposal, while also assisting in targeting funding towards assets with a high API rating.

- 80% of the 100-point score is reserved for criteria that reflect the bureau's unique mission. All bureaus will include criteria that are appropriate for their mission (education, science, land management, etc.).
- 20% of the 100-point score is reserved for the concept of asset substitutability. Asset substitutability encourages asset managers to consider how "substitutable" an asset may be. For example, if an asset is unique and no comparable facility exists, the asset would receive the maximum score for "no substitute." If there are many similar assets in close proximity, the asset would score lower on asset substitutability.



*Mission Dependency.* The criteria for Mission Dependency, a measure of how critical a particular asset's function is to the activity, allows for the highest possible score of an "80". A score of "80" indicates an asset is entirely critical to a bureau's mission. This evaluation is sure to be one of the most disparate among the different bureaus. It is expected that different bureaus will place different criticality measures on assets that serve the same basic function.

Mission Dependency is a variable field that can have any number of components. Depending on the bureau, Mission Dependency may involve mission importance, ability to accommodate change, visitor influence, operations or any of a host of different qualities. It is therefore necessary to make this 80% of the API as perfect a fit as is possible on a bureau-by-bureau basis. Importantly, managers are cautioned not to consider asset condition when scoring assets for API-asset condition is considered separately.

*Substitutability.* Substitutability, an ability to satisfy the operational requirements with an alternative, is assigned a maximum of 20 points (to complement the 80 points possible for Mission Dependency) and likely will have less variation of criteria than the Mission Dependency rating. Historic properties, or, assets that fulfill a function that could not be easily fulfilled by any other asset may have low substitutability and would score high on this portion of the API. Converse to how the Mission Dependency criteria are scored, low substitutability merits a higher score.

Bureaus will determine respective Mission Dependency and Asset Substitutability criteria in alignment with mission and strategic objectives to complete the requirements above.

**Definitions and References:**

- Executive Order 13327, "Federal Real Property Management"
- Federal Real Property Management Reform Act of 2016
- AAAP- 0183, "DOI Policy on Standardizing Cost Estimating Allowances for Reporting of Construction Costs in the Asset Management Program"
- AAAP- 0160, "Real Property Data Systems and Reporting."
- AAAP- 0019, "Use of FBMS for DOI Federal Real Property Profile Data"
- AAAP- 0031, "Changes to Deferred Maintenance and Repairs Reporting by the Statement of Federal Financial Accounting Standards 42"

**Approval Signature:**

8/16/2023

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Signed by: Office of the Secretary of the Interior