



Project Scorecard

SR179, I-17 to Red Rock Vista - Jun 13, 2019

Module: Project Development

Scorecard: Rural Basic

Points: 49

Achievement Level: Silver

Rural Basic Scorecard

Criteria

Point

PD-02 Lifecycle Cost Analyses

0/3

Reduce life-cycle costs and resource consumption through the informed use of life-cycle cost analyses of key project features during the decision-making process for the project.

PD-02.1a Was an LCCA performed for all pavement structure alternatives in accordance with the method described in the FHWA's Technical Bulletin for Life-Cycle Cost Analysis?

No (0 points)

PD-02.1b Was an LCCA performed for all stormwater infrastructure alternatives considered?

No (0 points)

PD-02.1c Was an LCCA performed for the project's major feature (bridges, tunnels, retaining walls, or other items not listed in the preceding options) for each of the alternatives considered?

No (0 points)

Scoring Notes

No economic analysis was completed as part of the project.

Next Actions

Record future actions here. For example, "Coordinate with HQ and ensure specifications meet requirements."

PD-03 Context Sensitive Project Development

9/10

Deliver projects that harmonize transportation requirements and community values through effective decision-making and thoughtful design.

PD-03.1 Did the project development process generally follow the six-step CSS framework described in NCHRP report 480 and NCHRP report 642, or an equivalent process?

Yes (2 points)

PD-03.2 Did the project development process feature a "cradle-to-grave" project team that included planners, traffic engineers, public involvement specialists, design engineers, environmental experts, safety specialists, landscape architects, right-of-way staff, freight experts, construction engineers, and others to work on projects who worked together to achieve the desired CSS-based vision for the project?

Yes (1 point)

PD-03.3 As a result of CSS-influenced project development process, were external "champions" for the project

created in the affected community who were engaged and proactive in supporting it?

Yes (1 point)

PD-03.4 Was acceptance achieved among project stakeholders on the problems, opportunities, and needs that the project should address and the resulting vision or goals for addressing them?

No (0 points)

PD-03.5 Do project features consider the appropriate scale of the project?

Yes (1 point)

PD-03.6 Did the project remove objectionable or distracting views?

Yes, permanently (2 points)

PD-03.7 Did the project integrate context sensitive aesthetic treatments?

Yes (1 point)

PD-03.8 Were aesthetics for structural items incorporated into the design of the project?

Yes (1 point)

Scoring Notes

The project incorporated team members from the Coconino National Forest, and incorporated many design features that would help maintain the viewer experience of this scenic road, while also implementing safety standards. Design included context sensitive design of road, shoulders, guardrail and other items.

Next Actions

Record future actions here. For example, "Coordinate with HQ and ensure specifications meet requirements."

PD-04 Highway and Traffic Safety

3/10

Safeguard human health by incorporating science-based quantitative safety analysis processes within project development that will reduce serious injuries and fatalities within the project footprint.

PD-04.1 Were human factors considerations incorporated?

Interactions between road users and the roadway using fundamentals captured in Chapter 2 of the Highway Safety Manual and the Human Factors Guideline for Road Systems (NCHRP Report 600 series) were evaluated, documented, and incorporated. (2points)

PD-04.2 Was awareness built among the public regarding contributing factors to crashes?

No (0 points)

PD-04.3 Does the agency conduct explicit consideration of safety using quantitative, scientifically proven methods?

Yes (0 points)

PD-04.3a Was the project type established during scoping of project alternatives through a quantitative and statistically reliable process?

No (0 points)

PD-04.3b Were project design and/or operational alternatives developed and evaluated using explicit consideration of substantive safety through quantitative, statistically reliable methods?

No (0 points)

PD-04.3c Were quantitative and statistically reliable methods and knowledge used to assess substantive safety performance in the development of preliminary and final design details?

No (0 points)

PD-04.4 Was a statistically reliable, science-based method used to evaluate the safety effectiveness of the

implemented project?

Yes (1 point)

Scoring Notes

The project relied solely on published design and operational performance standards during the project design process with input from the District and Coconino National Forest. Because this was a smaller project, no other alternatives were considered.

Next Actions

Record future actions here. For example, "Coordinate with HQ and ensure specifications meet requirements."

PD-05 Educational Outreach

0/2

Increase public, agency, and stakeholder awareness of the integration of the principles of sustainability into roadway planning, design, and construction.

PD-05.1 Did this project incorporate public educational outreach that promotes and educates the public about sustainability by installing or performing a minimum of two different elements from Table PD-05.1.A?

No (0 points)

Scoring Notes

Not incorporated for this project.

Next Actions

Record future actions here. For example, "Coordinate with HQ and ensure specifications meet requirements."

PD-06 Tracking Environmental Commitments

0/5

Ensure that environmental commitments made by the project are completed and documented in accordance with all applicable laws, regulations, and issued permits.

PD-06.1a Was a comprehensive environmental compliance tracking system used for the project and related facilities?

No (0 points)

PD-06.2 Has the principal project constructor assigned an independent environmental compliance monitor who will provide quality assurance services and report directly to and make recommendations to the regulatory and Lead Agencies?

No (0 points)

Scoring Notes

ADOT does not have a formal comprehensive Environmental Compliance Tracking System (ECTS). It uses multiple systems to comply with State and federal requirements each year. ADOT is moving toward identifying all environmental commitments on a single list

Next Actions

Record future actions here. For example, "Coordinate with HQ and ensure specifications meet requirements."

PD-07 Habitat Restoration

4/7

Avoid, minimize, rectify, reduce, and compensate the loss and alteration of natural (stream and terrestrial) habitat caused by project construction and/or restore, preserve, and protect natural habitat beyond regulatory requirements.

PD-07.1 Was project-specific mitigation or mitigation banking used on this project? Use Table PD-07.1.A to determine the points earned.

2 Points (2 points)

PD-07.2 Were high quality aquatic resources (HQAR) avoided or were the impacts minimized on this project? Use Table PD-07.2.A to determine the points earned.

None (0 points)

PD-07.3 Were high quality environmental resources avoided or were the impacts minimized on this project? Use Table PD-07.3.A to determine the points earned.

2 Points (2 points)

Scoring Notes

The original project assessment for the project recommended vegetation work beneath the Oak Creek Bridge, after analysis and coordination were considered the project team decided to avoid any unnecessary vegetation work underneath the bridge,

Next Actions

Record future actions here. For example, "Coordinate with HQ and ensure specifications meet requirements."

PD-08 Stormwater Quality and Flow Control

0/6

Improve stormwater quality from the impacts of the project and control flow to minimize their erosive effects on receiving water bodies and related water resources, using management methods and practices that reduce the impacts associated with development and redevelopment.

PD-08.1 Did the project treat at least 80% of the total runoff volume? Use Tables PD-08.1.A and PD-08.1.B to determine points.

No (0 points)

PD-08.2 Did the project manage the flow from at least 80 percent of the total runoff volume, and is flow control based on controlling peak flows or durations from the project site? Use Tables PD-08.2.A and PD-08.1.B to determine points.

No (0 points)

Scoring Notes

This was outside the scope of the project.

Next Actions

Record future actions here. For example, "Coordinate with HQ and ensure specifications meet requirements."

PD-09 Ecological Connectivity

3/4

Avoid, minimize, or enhance wildlife, amphibian, and aquatic species passage access, and mobility, and reduce vehicle-wildlife collisions and related accidents.

PD-09.1P Was a site-specific ecological assessment of the roadway project using GIS data or regional expertise conducted?

Yes (0 points)

PD-09.1 Were methods used to minimize impacts to ecological connectivity? Use Table PD-09.1.A to determine points.

2 (2 points)

PD-09.2 Did the project team engage natural resource and regulatory agencies throughout the planning process and ensure consistency with broader planning goals and objectives?

Yes (1 point)

Scoring Notes

The project team engage natural resource and regulatory agencies throughout the planning process, with a project agency biologist that was involved involved with the assessment. The analysis was done to evaluate and minimize impacts, in coordination with the USFWS.

Next Actions

Record future actions here. For example, "Coordinate with HQ and ensure specifications meet requirements."

PD-15 **Historic, Archaeological, and Cultural Preservation**

2/3

Preserve, protect, or enhance cultural and historic assets, and/or feature National Scenic Byways Program (NSBP) historic, archaeological, or cultural intrinsic qualities in a roadway.

PD-15.1P Is any part of the project or resource listed in the NRHP or been determined eligible for the NHRP by a State, Local, or Tribal Historic Preservation Officer?

Yes (0 points)

PD-15.1 Has an effort been made to minimize impacts, avoid impacts, or enhance features?

PD-15.1b Measures have been taken to specifically avoid impacts to the features from PD-15.1P. (2 points)

Scoring Notes

Measures have been taken to specifically avoid impacts to the features of the Red Rock All American Scenic Byway. Efforts to implement design that was sensitive in terms of color, texture, and consideration of recreational features was implemented.

Next Actions

Record future actions here. For example, "Coordinate with HQ and ensure specifications meet requirements."

PD-16 **Scenic, Natural, or Recreational Qualities**

3/3

Preserve, protect, and/or enhance routes designated with significant scenic, natural, and/or recreational qualities in order to enhance the public enjoyment of facilities.

PD-16.1P Is any portion of the project along one of America's Byways®, a State Scenic Byway, an Indian Tribe Scenic Byway, or other route that was designated or officially recognized as such?

Yes (0 points)

PD-16.2P Was existing access to scenic, natural, or recreational qualities not removed (i.e., maintained) as a part of this project unless it was specifically removed to protect the scenic, natural, and/or recreational qualities themselves?

Yes (0 points)

PD-16.1 Were efforts made to avoid or minimize impacts, or enhance features, of the scenic, natural, and/or recreational qualities?

PD-16.1d Efforts were made to protect, preserve, or enhance scenic, natural, or recreational qualities along the roadway. (3 points)

Scoring Notes

Access to scenic, natural, or recreational qualities were not removed as a part of this project within the Red Rock All American Scenic Byway. Efforts were made to protect, preserve, or enhance scenic, natural, or recreational qualities along the roadway by implementation of context sensitive design and recommendations for US Forest Service

Next Actions

Record future actions here. For example, "Coordinate with HQ and ensure specifications meet requirements."

PD-17 **Energy Efficiency**

0/8

Reduce energy consumption of lighting systems through the installation of efficient fixtures and the creation and use of renewable energy.

PD-17.1 Were energy needs evaluated for the project?

No (0 points)

PD-17.2 Was the energy consumption on the project reduced through the installation of energy efficient lighting and signal fixtures and through the installation of autonomous, on-site, renewable power sources?

No (0 points)

PD-17.3 Was a plan established for auditing energy use after project completion as part of operations and maintenance?

No (0 points)

Scoring Notes

This criteria is outside the scope of the project.

Next Actions

Record future actions here. For example, "Coordinate with HQ and ensure specifications meet requirements."

PD-18 Site Vegetation, Maintenance and Irrigation

6/6

Promote sustainable site vegetation within the project footprint by selecting plants and maintenance methods that benefit the ecosystem.

PD-18.1P Does all site vegetation use non-invasive species only, use non-noxious species only, use seeding that does not require consistent mowing for a viable stand of grass, and minimize disturbance of native species?

Yes (0 points)

PD-18.1 Based on Table PD-18.1.A, how many points did the project earn? Points for features are additive, however this criterion shall not exceed a total of 3 points.

3 Points (3 points)

PD-18.2 Based on Table PD-18.2.A, how many points did the project earn for vegetative maintenance? Points for features are cumulative, however this scoring requirement shall not exceed a total of 3 points.

3 Points (3 points)

Scoring Notes

This criterion is a major success area for ADOT for many years and the ADOT Roadside Development, Northcentral District, and US Forest Service worked together for this project to ensure native plant species, and maintenance.

Next Actions

Record future actions here. For example, "Coordinate with HQ and ensure specifications meet requirements."

PD-19 Reduce, Reuse and Repurpose Materials

4/12

Reduce lifecycle impacts from extraction and production of virgin materials by recycling materials.

PD-19 Points for different methods are cumulative; however, this criterion shall not exceed a total of twelve points. Points exceeding twelve will not contribute to overall score.

I understand. (0 points)

PD-19.1 Was remaining service life increased through pavement preservation activities? Points are awarded per Table PD-19.1.A.

4 (4 points)

PD-19.2 Was the amount of new pavement materials needed reduced? Points are awarded per Table PD-19.2.A.

No (0 points)

PD-19.3 Was remaining service life increased through bridge preservation activities? Points are awarded per Table PD-19.3.A.

No (0 points)

PD-19.4 Was remaining service life increased through retrofitting existing bridge structures? Points are awarded per Table PD-19.3.A.

No (0 points)

PD-19.5 Were existing pavements, structures, or structural elements reused for a new use? Points are awarded per Table PD-19.5.A.

No (0 points)

PD-19.6a Were foundry sand or other industrial by-products used in pipe bedding and backfill?

No (0 points)

PD-19.7 Was a project-specific plan for the recycling and reuse plan developed as described?

No (0 points)

Scoring Notes

This project includes preservation of the pavement through mill and fill activities, and fog coat.

Next Actions

Record future actions here. For example, "Coordinate with HQ and ensure specifications meet requirements."

PD-20 Recycle Materials

0/10

Reduce lifecycle impacts from extraction, production, and transportation of virgin materials by recycling materials.

PD-20 Points for different methods are cumulative; however, this criterion shall not exceed a total of ten points. Points exceeding ten will not contribute to overall score.

I understand. (0 points)

PD-20.1 Was RAP or RCA used in new pavement lifts, granular base course, or embankments? Points are awarded per Tables PD-20.1.A or PD-20.1.B.

No (0 points)

PD-20.2 Were pavement materials recycled in place using cold-in-place recycling, hot-in-place recycling, and full depth reclamation methods? Points are awarded per Table PD-20.2.A.

No (0 points)

PD-20.3 Did the project reuse subbase granular material as subgrade embankment or as part of the new subbase? Points are awarded per Table PD-20.3.A.

No (0 points)

PD-20.4 Did the project relocate and reuse at least 90 percent of the minor structural elements, including existing luminaires, signal poles, and sign structures that are required to be removed and/or relocated onsite?

No (0 points)

PD-20.5 Did the project salvage or relocate existing buildings?

No (0 points)

Next Actions

Record future actions here. For example, "Coordinate with HQ and ensure specifications meet requirements."

Scoring Notes

No criteria implemented for project

PD-22 Long-Life Pavement

7/7

Minimize life-cycle costs by designing long-lasting pavement structures.

PD-22 Points for different methods are cumulative; however, this criterion shall not exceed a total of seven points. Points exceeding seven will not contribute to overall score.

I understand. (0 points)

PD-22.1 Which of the following describes how long-life pavement was used on this project?

Long-life pavement was used for at least 75 percent of the surface area of regularly trafficked lanes. (5 points)

PD-22.2 Was the asphalt density of 100 percent of the total new or reconstructed pavement increased to a minimum of 94 percent?

No (0 points)

PD-22.3 Was a performance-based pay incentive for pavement smoothness used on this project?

Yes (2 points)

Scoring Notes

The project will be paved with long-lasting PCCP and overlaid with a rubber asphalt friction course. The friction course may have to be replaced every 10-15 years, but the PCCP materials traditionally last at least 40 years in the Phoenix area. ADOT standard specifications includes a pay incentive for pavement smoothness for both PCCP and the friction course.

Next Actions

Record future actions here. For example, "Coordinate with HQ and ensure specifications meet requirements."

PD-23 Reduced Energy and Emissions in Pavement Materials

0/3

Reduce energy use in the production of pavement materials.

PD-23 Points for different methods are cumulative; however, this criterion shall not exceed a total of three points. Points exceeding three will not contribute to overall score.

I understand. (0 points)

PD-23.1 Was at least 50 percent of the total project pavement material (by weight) a low-energy material from asphalt production?

No (0 points)

PD-23.2 Was at least 50 percent of the total project pavement material (by weight) a low-energy material from cement production?

No, or it did not meet the minimum requirements in the options above. (0 points)

PD-23.3 Was at least 50 percent of the total project pavement material (by weight) a low-energy material from concrete production?

No, or it did not meet the minimum requirements in the options above. (0 points)

Scoring Notes

Criteria not implemented for this project.

Next Actions

Record future actions here. For example, "Coordinate with HQ and ensure specifications meet requirements."

PD-24 Permeable Pavement

0/2

Improve flow control and quality of stormwater runoff through use of permeable pavement technologies.

PD-24.1and2P Does the project include a maintenance plan for permeable pavements and are permeable pavements placed in areas where no sand will be used for snow and ice control or pavement sealing?

No (0 points)

Scoring Notes

N/A

Next Actions

Record future actions here. For example, "Coordinate with HQ and ensure specifications meet requirements."

PD-25 Construction Environmental Training

1/1

Provide construction personnel with the knowledge to identify environmental issues and best practice methods to minimize impacts to the human and natural environment.

PD-25.1 Did the owner require the Contractor to plan and implement a formal environmental awareness training program during construction to ensure the project stay in compliance with environmental laws, regulations, and policies?

Yes (1 point)

Scoring Notes

ADOT provides this training to construction personnel and contractors based on the project specifics.

Next Actions

Record future actions here. For example, "Coordinate with HQ and ensure specifications meet requirements."

PD-26 Construction Equipment Emission Reduction

0/2

Reduce air emissions from non-road construction equipment.

PD-26.1 Were one or more methods implemented to reduce non-road emissions? Points are awarded per Table PD-26.1.A.

No (0 points)

Scoring Notes

Criteria not implemented for this project.

Next Actions

Record future actions here. For example, "Coordinate with HQ and ensure specifications meet requirements."

PD-28 Construction Quality Control Plan

5/5

Improve quality by requiring the contractor to have a formal Quality Control Plan (QCP).

PD-28.1 Is the Contractor required to plan and implement quality control measures throughout construction with care and for materials above and beyond what is typically required by specifications and regulations?

Yes (3 points)

PD-28.2 Does the contract leverage the use of Quality Price Adjustment Clauses to link payment and performance of the constructed products?

Yes (2 points)

Scoring Notes

ADOT construction contracts specifically pay for a contractor quality control item to ensure quality compliance beyond field inspection. Furthermore, ADOT will pay premiums for material quality that far exceeds the minimums.

Next Actions

Record future actions here. For example, "Coordinate with HQ and ensure specifications meet requirements."

PD-29 Construction Waste Management

1/4

Utilize a management plan for road construction waste materials to minimize the amount of construction-related waste destined for landfill.

PD-29.1 Is the contractor required to establish, implement, and maintain a formal Construction and Demolition Waste Management Plan (CWMP) during roadway construction, or its functional equivalent?

No (0 points)

PD-29.2 Can the owner demonstrate that a percentage of the construction waste has been diverted from landfills?

No, or diverted less than 50 percent of the construction waste from landfills (0 points)

PD-29.3 Were excess materials hauled directly to other project sites for recycling on those projects?

Yes (1 point)

Scoring Notes

Excess material for the project was taken from the project area to a designated area for use on another ADOT project

Next Actions

Record future actions here. For example, "Coordinate with HQ and ensure specifications meet requirements."

PD-30 Low Impact Development

0/3

Use low impact development stormwater management methods that reduce the impacts associated with development and redevelopment and that mimic natural hydrology.

PD-30.1 Did the project use effective BMPs or stormwater management techniques that mimic natural hydrology to treat pollutants? Use Tables PD-30.1.A and PD-30.1.B and PD-30.1.C to determine points.

No (0 points)

Scoring Notes

Not applicable for this project.

Next Actions

Record future actions here. For example, "Coordinate with HQ and ensure specifications meet requirements."

PD-32 Light Pollution

1/3

To safely illuminate roadways while minimizing unnecessary and potentially harmful illumination of the surrounding sky, communities, and habitat.

PD-32.1 Were the uplighting ratings met on this project per Table PD-32.1.A?

Yes (1 point)

PD-32.2 Were the backlighting ratings met on this project per Table PD-32.2.A?

No (0 points)

PD-32.3 Were the glare ratings met on this project per Table PD-32.3.A?

No (0 points)

Scoring Notes

Uplighting ratings were maintained through the forest service areas in accordance with the Red Rock Scenic Management Plan.

Next Actions

Record future actions here. For example, "Coordinate with HQ and ensure specifications meet requirements."