

Arizona Department of Transportation Guidelines for Highways on Bureau of Land Management and U.S. Forest Service Lands 2008



Chapter Overview Presentations

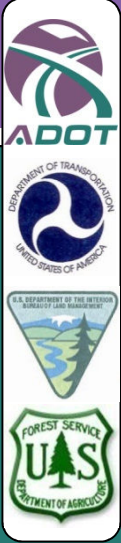
Twelve Chapter Overview presentations supplement the Guidelines document. Chapters 1-11 each have a Chapter Overview and an additional one summarizes appendices A-O.

These self-paced presentations are designed for individual use or for small group presentations where discussion can be accommodated. It is helpful to have the Guidelines document as a reference when viewing the presentations.

The Chapter Overview presentations are available on the ADOT Roadside Development Section website.

<http://www.azdot.gov/business/engineering-and-construction/roadway-engineering/roadway-design-standards-and-guidelines/guidelines-for-highways-on-bureau-of-land-management-and-us-forest-service-lands>

Navigate the Chapter Overview by scrolling through the pages.

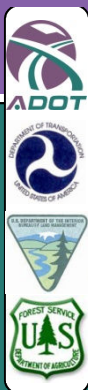


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Chapter 10: Construction



Acknowledgments:



Arizona Department of Transportation

Guidelines for Highways on Bureau of Land Management and U.S. Forest Service Lands



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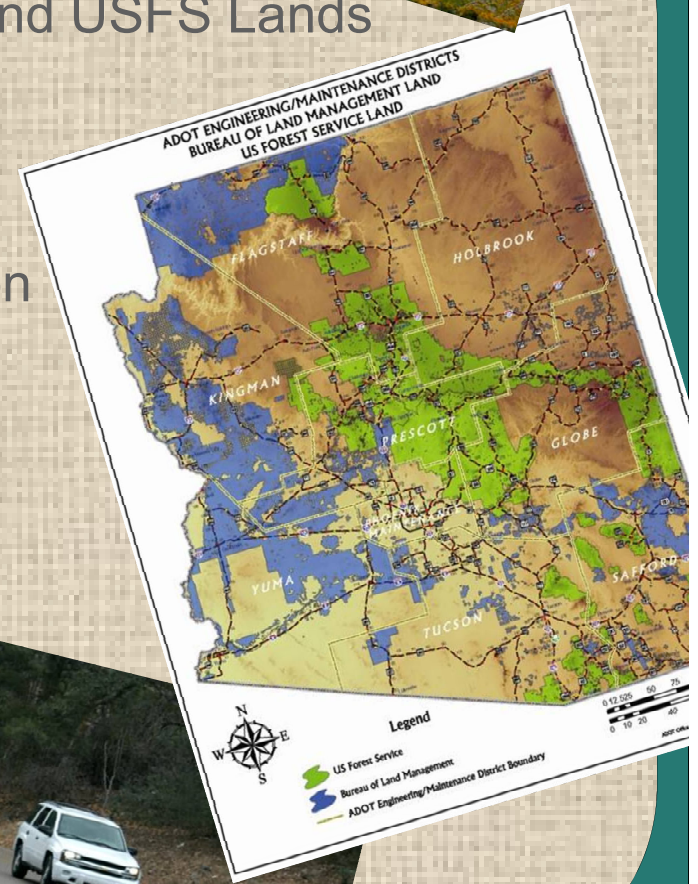
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- 1 Introduction
- 2 ADOT Development Process on BLM and USFS Lands
- 3 Habitat Connectivity
- 4 Roadway Design and Construction
- 5 Major Structure Design and Construction
- 6 Drainage Design and Construction
- 7 Landscape Restoration
- 8 Storm Water and Pollution Control
- 9 Material Sites
- 10 Construction**
- 11 Maintenance Operations
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After reviewing the Chapter 10 Tutorial you should.



- Understand 'Partnering'.
- Be able to prepare a pre-construction Partnering meeting agenda.
- Know to evaluate environmental impacts and the construction costs of potential changes before changing project documents.
- Be familiar with temporary construction access and associated environmental clearance requirements.
- Understand and be able to define these Erosion and Pollution Control terms/concepts:
 - SWPPP
 - NOI
 - Equipment Washing
 - Spill Prevention/Containment
 - Seeding
 - NOT

And you should also...



- Know that BLM/USFS provide, monitor and update Fire Control Plan information during project construction.
- Grasp the basics of Water Source Development.
- Understand the importance of protecting resources during construction including:
 - Vegetation
 - Archaeological and Cultural
 - Wildlife
- Know that work shutdowns usually occur on weekends and holidays on BLM/USFS lands.
- Understand Phased Acceptance of Work and Final Project Acceptance.
- Be able to access the *ADOT Construction Manual* online.

Chapter 10 Contents



10.1 Chapter Goals

10.2 ADOT/FHWA/BLM/USFS Interaction during Construction: Partnering

10.3 Changes and Modifications to Project Contract Documents

10.4 Temporary Access

10.5 Erosion and Pollution Control

10.6 Fire Control

10.7 Clearing Limits and Vegetation Protection during Construction

10.8 Water

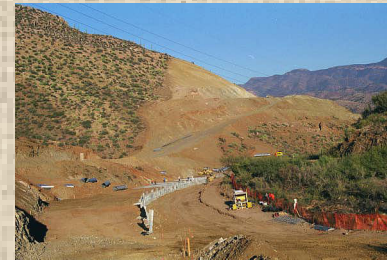
10.9 Archaeological/Cultural Awareness

10.10 Wildlife Encounters

10.11 Traffic Control during Construction

10.12 Acceptance of Work

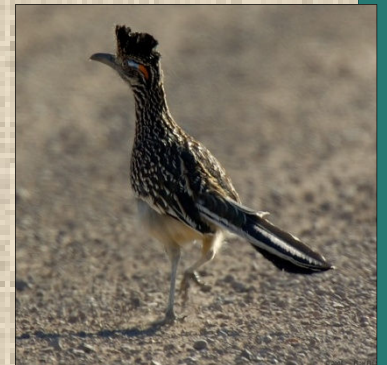
10.13 Additional Resources



10.1 Goals



- Describe 'Partnering'
- Discuss Erosion and Pollution Control
 - SWPPP- Storm Water Pollution Prevention Plan
 - NOI- Notice of Intent
 - Seeding
 - NOT- Notice of Termination requirements
- Discuss resource protection
 - Vegetation
 - Archaeological and Cultural
 - Wildlife
- Define Acceptance of Work
 - Phased Acceptance
 - Final Project Acceptance



10.2 Construction: Partnering



- ADOT-FHWA-BLM/USFS Interaction during Construction: Partnering
 - is defined as the cooperative management of project development activities.
 - fosters open communication necessary to successfully manage highway projects on lands managed by BLM or USFS.
 - includes a contractor hosted ‘Partnering’ meeting prior to the onset of construction activities.

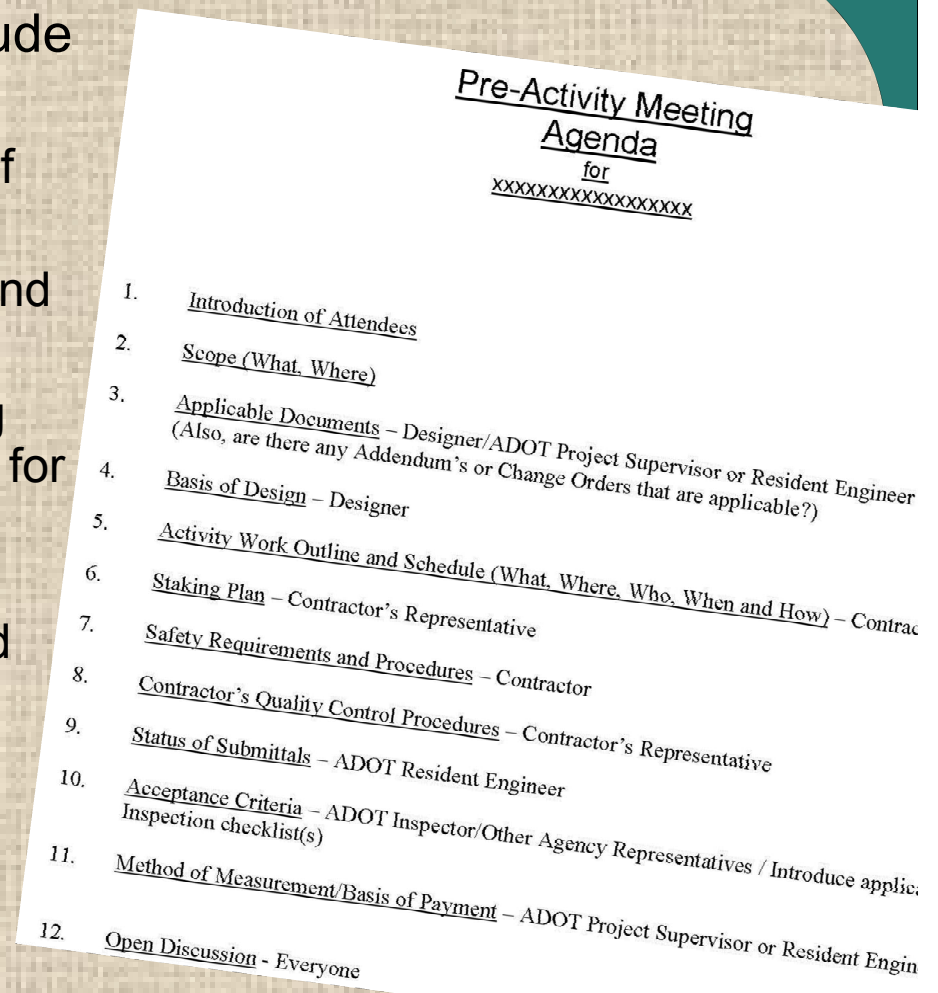


10.2 Construction: Partnering



– Partnering Meeting goals include establishing:

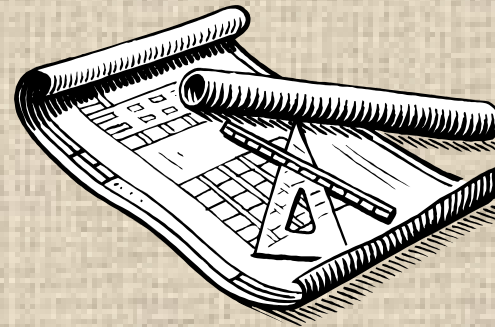
- Contacts and defining roles of key agency representatives.
- Common project objectives and guidelines.
- NEPA requirements including National Emission Standards for Hazardous Air Pollutants (NESHAPs).
- Unique project conditions and requirements.
- An issue/problem resolution process.
- A joint evaluation process.



10.3 Project Contract Document Modifications



- When changes to the project documents are required, evaluate:
 - Environmental impacts.
 - Construction costs.
- Mitigation measures described as part of the NEPA process are **not** subject to Value Engineering.



10.4 Temporary Access



- Temporary access needs should be identified during the planning and design process and included in the environmental clearances.
- Access should be described in the project plans and specifications and must be followed by the contractor.
- Contractors may request additional or unplanned temporary access.
 - Additional environmental documentation may be required
 - ADOT/BLM/USFS will assist in determining the appropriate environmental analysis and time required for proposed changes.
- Approaches across natural drainages should be narrow and as perpendicular to the streambed as possible.

10.5 Erosion and Pollution Control



- The contractor must submit his own Storm Water Pollution Prevention Plan (SWPPP) to ADOT prior to the start of construction.
 - Keep areas of disturbed soil not protected by permanent erosion control measures to a minimum.
 - Guide storm water flows through and/or divert around the construction site.
 - Address spill containment of pollutants.
- All disturbed areas must be addressed by the SWPPP and Best Management Practices (BMPs) must be applied and maintained.

**2008 Construction General Permit
SWPPP Guidance Checklist**

ADEQ
Arizona Department
of Environmental Quality

This optional checklist is provided to assist owners and operators in preparing their AZPDES Stormwater Pollution Prevention Plan (SWPPP) to meet the requirements of Arizona's 2008 Construction General Permit (AZG2008-001). The "Descriptions" provided below do not necessarily reflect the exact wording used in the permit; rather these are stated in simplified language to provide additional guidance. (Note if any inadvertent conflict exists between this document and the permit, the permit language prevails). The "Permit Citation" column shows you where each particular requirement is found in the 2008 CGP. Use the "Location" column to note the page where the requirement is addressed in your SWPPP. Please leave the "For ADEQ Use Only" column blank. Using this SWPPP checklist will help you ensure that all the permit requirements are addressed in your SWPPP and will also assist the Department in conducting a more efficient review of your SWPPP if it is required to be submitted.

Please note that your SWPPP does not have to follow the format of this checklist; the purpose of this checklist is only to ensure that your SWPPP contains all required components. While this checklist is intended for use in preparing your initial SWPPP, your SWPPP is a "living" document and it is important that it be updated to document changes in your project, best management practices (BMPs), inspections, and other pertinent information.

Permit Citation	Description	Location in SWPPP & Notes	For ADEQ Use Only
Part III.A.2.d	OPERATOR RESPONSIBILITIES		
Part III.B.2.a.	Identify who is responsible for on-site SWPPP implementation		
Part III.B.2.a.	Indicate or show the areas of the project where the operator has control over project		
Part III.B.2.a	the ability to make		

10.5 Erosion and Pollution Control



- Notice of Intent (NOI)
 - Notification to the permitting authority of a facility's intention to be covered under a general permit allowing discharge of storm water runoff from a highway construction site.
 - Submit an application for a NOI to the Arizona Department of Environmental Quality (ADEQ) after approval of the SWPPP and prior to any earth-disturbing activities.
- Equipment Washing
 - To minimize the introduction and spread of invasive and noxious plant species wash equipment before use on BLM/USFS lands and again prior to leaving the project.

A photograph of a "NOTICE OF INTENT (NOI)" form. The form is titled "NOTICE OF INTENT (NOI)" and "For Coverage Under AZPDES Permit No. AZG2003-001 for Construction Activity Discharges to Waters of the United States". It includes sections for "FOR COVERAGE, A COMPLETE AND ACCURATE NOI MUST BE SUBMITTED TO:", "Stormwater Program: Water Permits Section/ NOI", "Arizona Department of Environmental Quality", "1110 West Washington, 5415B-3, Phoenix Arizona 85007", "Is this NOI a revision to one previously filed under the 2003 AZPDES Construction General Permit?", "I. OWNER/OPERATOR (Applicant) INFORMATION", "Operator Name:", "Operator's Business Name:", "Operator's Address:", "City:", "State:", "Phone:", "Is the Site Located Indian Country Land?", "II. CONSTRUCTION SITE INFORMATION", "Project/Site Name:", "State:", "City:", "County:".

10.5 Erosion and Pollution Control



- Seeding
 - One means to achieve soil stabilization requirements of the Clean Water Act.
 - Refer to chapters 4 and 7 of the Guidelines for detailed information on seeding and successful revegetation.
- Notice of Termination (NOT) Requirements
 - An application to notify the permitting authority of a facility's intent to terminate the NOI.
 - Provide to ADEQ or EPA at the conclusion of construction.
 - Project must meet final stabilization before submitting a NOT.



10.6 Fire Control



- BLM/USFS typically provide required wildland fire information in the project contract documents.
- During construction BLM/USFS should continue to monitor and provide updated Fire Control Plan information.



10.7 Clearing Limits and Vegetation Protection During Construction



- Clearing and Grubbing
 - Stake clearing limits, access areas, staging areas and all other limits of construction prior to clearing.
 - ADOT and BLM/USFS should check staked limits prior to clearing activities.
 - If work is required beyond the limits, separate environmental documentation and authorization may be required.
- Merchantable Timber
 - USFS must appraise and sell timber to ADOT where warranted by project location.
 - Timber must be inventoried prior to removal.



10.8 Water



- Riparian Awareness

- Construction personnel should be properly trained in identification, importance and protection of riparian areas and values.



- Water Source Development

- Is sometimes needed to supply water for road construction and dust control.
- Separate BLM/USFS or other agency approval may be required to pump from an existing stream or pond.
- Cofferdams in natural streams should be constructed from sandbags filled with clean sand or other inert material, not soil.
- Downstream water flow should not be reduced to a level that may be detrimental to aquatic resources, fish passage or other established uses.

10.9 Archaeological/Cultural Awareness



- If any archaeological or cultural resources are discovered during construction, work should stop immediately in that area and findings reported to the ADOT archaeologist for evaluation.
- BLM/USFS must also be notified immediately.



10.10 Wildlife Encounters



- Awareness training should be provided as part of the required orientation training for highway construction in wildlife areas.
 - Worker safety
 - Wildlife safety
 - Minimization of work disruption



10.11 Traffic Control



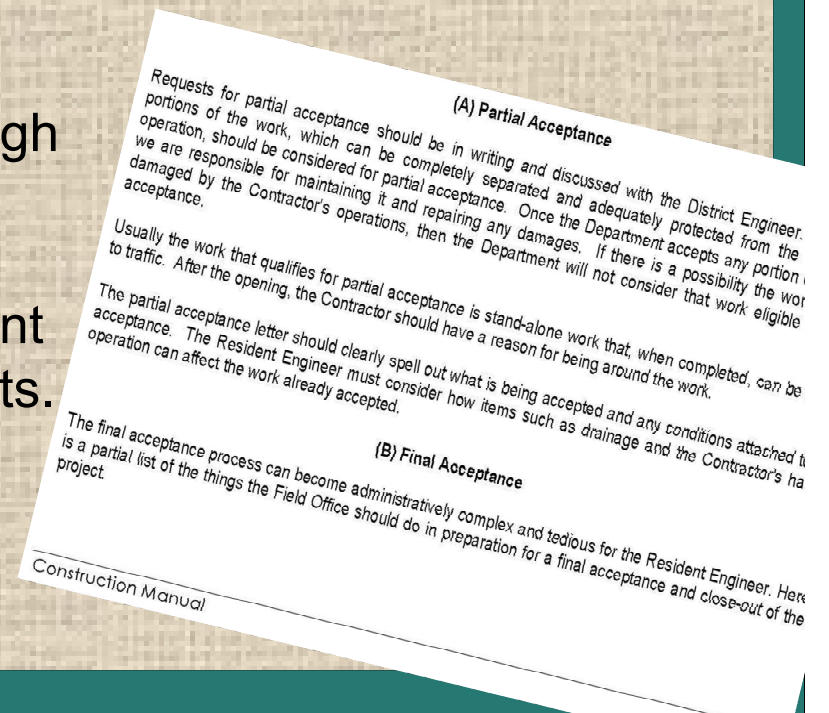
- Projects on BLM/USFS land will generally require weekend and holiday shutdowns.
 - Strict enforcement by the Resident Engineer is required.
 - Shutdowns should be clearly identified in the contract documents.



10.12 Acceptance of Work



- Phased Acceptance of Work
 - The Resident Engineer may request BLM/USFS to review work in progress prior to payments.
 - Phased acceptance may be considered to be final acceptance **only** for that portion of the work completed.
- Final Project Acceptance
 - Conduct final project walk-through and inspection prior to final acceptance of the project to ensure compliance with the intent of the project contract documents.
 - Develop final punch list and resolve any remaining construction issues.



10.13 Additional Resources



- ADOT Construction Manual
<http://www.azdot.gov/business/engineering-and-construction/construction/ConstructionManual/construction-manual>
- ADOT Storm Water Program
<http://www.azdot.gov/business/environmental-services-and-planning/water-quality>



Highlights



- Read Chapter 10.....
 - To understand ‘Partnering’.
 - For an awareness of topics related to the construction period.
 - For an overview of erosion and pollution control requirements during construction.
 - To know the importance of staking clearing limits and vegetation protection during construction.
 - To understand the difference between phased and final acceptance of work.



Knowledge Check: Do you.....



- ✓ Understand 'Partnering'?
- ✓ Know how to prepare a pre-construction Partnering meeting agenda?
- ✓ Know to evaluate environmental impacts and the construction costs of potential changes before changing project documents?
- ✓ Understand temporary construction access and associated environmental clearance requirements?
- ✓ Understand and can you define these Erosion and Pollution Control terms/concepts:
 - ✓ SWPPP
 - ✓ NOI
 - ✓ Equipment Washing
 - ✓ Spill Prevention/Containment
 - ✓ Seeding
 - ✓ NOT

And do you.....

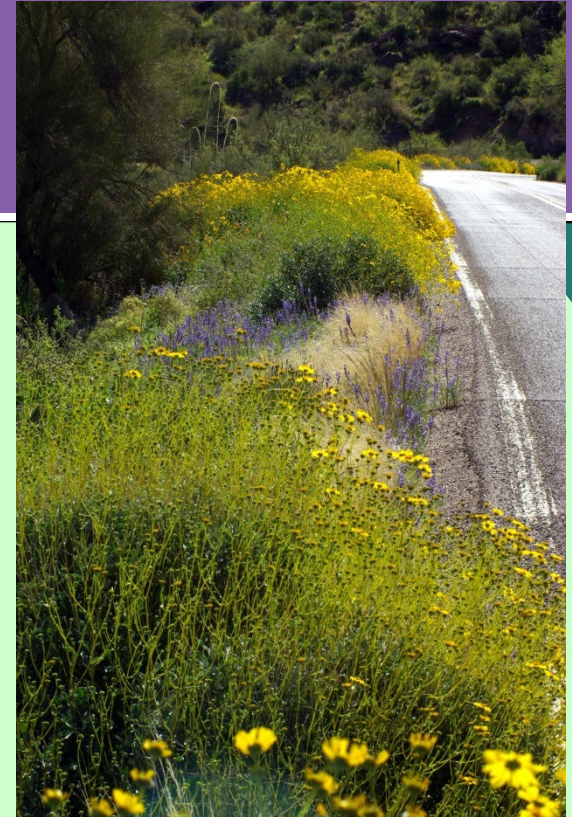


- ✓ Know who is responsible for updating Fire Control Plan information during project construction?
- ✓ Grasp the basics of Water Source Development?
- ✓ Understand the importance of protecting resources during construction including:
 - ✓ Vegetation
 - ✓ Archaeological and Cultural
 - ✓ Wildlife
- ✓ Know when work shutdowns usually occur on projects on BLM/USFS lands?
- ✓ Understand Phased Acceptance of Work and Final Project Acceptance?
- ✓ Know how to access the *ADOT Construction Manual* online?

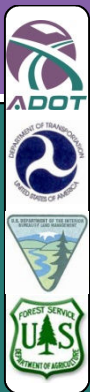
Guidelines Appendices



- Acronyms and Abbreviations
- Glossary of Terms
- ADOT-FHWA-USFS MOU
- ADOT-FHWA-BLM MOU
- Slope Design Details
- Easement Development
- Section 106 Process on Forest Service Lands
- Typical Blasting Plan Content
- Comparison of Permit Processes for Material Sites
- Signing
- Project Reference Fact Sheet
- Native Plant Salvage & Replanting Evaluation Guidelines
- References and Photography Credits
- Additional Photos (online appendix)
- Document Revision History



Document Availability



Purchase from:
ADOT Engineering Records Section
1655 W. Jackson Room 175
Mail Drop 112F
Phoenix, Arizona 85007-3217
Telephone: 602-712-8216 or 712-7498
Fax: 602-712-3235

For availability and cost:
[http://www.azdot.gov/business/Contracts
andSpecifications](http://www.azdot.gov/business/ContractsandSpecifications)

Download from:
[http://www.azdot.gov/business/engineering-and-construction/roadway-
engineering/roadway-design-standards-and-guidelines/guidelines-for-
highways-on-bureau-of-land-management-and-us-forest-service-lands](http://www.azdot.gov/business/engineering-and-construction/roadway-engineering/roadway-design-standards-and-guidelines/guidelines-for-highways-on-bureau-of-land-management-and-us-forest-service-lands)

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