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RIGHTS OF WAY HANDBOOK

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Memorandum

To: Directorate Overview Group
THRU: Deputy Director, Land & Renewable Resources (200)
From: Terms & Conditions Study Group Leader
Subject: Study Group Report and Recommendations

This report conveys the findings and recommendations of the Terms and Conditions Study Group. Our accomplishments were primarily the result of the Study Group's efforts, however, the support provided by Bureau management at all levels and members of their staffs who were willing to help on numerous occasions provided significant contributions. We greatly appreciate their support and assistance.

Discussion:

The study group was established to review and analyze alleged impacts right-of-way terms and conditions contributed to the Northwest Pipeline Company's appeal. Major concerns of Northwest Pipeline Company involved BLM's terms and conditions in comparison with those used in private right-of-way easements and the inconsistency of the Bureau's use and administration of terms and conditions. The alleged inconsistencies included differences between BLM state, district, and resource area offices; variations in stipulation content and requirement; and terms and conditions which exceeded rehabilitation needs by imposing experimental and enhancement requirements.

Objectives for the Study Group were to address the allegations and develop recommended policy, guidance, direction, and assistance to effect remedial actions. To the extent that a study group can influence and develop recommendations that could result in change, we believe we have done that. However, management acceptance and use of the recommendations will provide the ultimate test.

Many of the factors which caused the Study Group to be initiated could not be addressed objectively or effectively primarily because industry's issues and concerns resulted from management styles and attitudes. Contributing factors appeared to be an unwillingness to accept risk, failure to ensure consistent application of stipulations and compliance inspections, and a lack of confidence in the capabilities of private industry and its contractors.

1. Introduction
2. Methodology
3. Results
4. Discussion
5. Conclusion

These situations were exhibited in a variety of ways, most of which can be related to time--time to do the job right. Grant terms and conditions were written, rewritten, and written again to ensure that a specific resource or environmental concern was protected or mitigated. This resulted in a proliferation of terms and conditions with considerable redundancy and much inconsistency. Time pressures resulted in employees reproducing copies of previously used stipulations and limited or no review and analysis of the proposed action. In many instances BLM was writing all the grant terms and conditions in spite of the fact that the action proponent had construction, operation, and/or maintenance plans. Bureau employee time and effort could be saved in many instances through the use of performance stipulations. Performance stipulations are defined as actions that are identified in an applicant's plan of development intended to prevent or mitigate resource and/or environmental damage and, when accepted and approved by the authorized officer, would require most technical situations to be covered by one stipulation added to the grant, "The holder shall perform all actions and activities in conformance with the approved Plan of Development."

Factors contributing to the above situations were the 2803 Manual Appendix which was cumbersome and difficult to use; a reluctance because of time pressures to analyze, use, and apply only the necessary mitigating measures; and a desire to ensure that all potential situations were covered by stipulation. Another factor appears to be the Bureau has generally used employees with limited experience and background to develop stipulations and to assure their on-the-ground execution. Competent technical and professional skills are available in all the Bureau offices, however, this expertise and knowledge was generally not sought until a serious problem or situation developed on the project.

Much of the inconsistency in administering grant terms and conditions occurred when the holders (industry) crossed State, district, and/or resource area boundaries. Compliance responsibilities changed, compliance inspectors changed and philosophies and attitudes changed. Some were positive changes, but most were negative changes in the eyes of Industry, which provided a basis for their allegations.

State, district, and resource area offices have not consistently coordinated activities relative to the use and administration of right-of-way grant terms and conditions. This has resulted in inconsistencies on single projects as well as with individual companies. Some flexibility is necessary, however, we believe much of the inconsistency which occurred between areas of responsibility was confusing to industry and can, to a large degree, be resolved.

We believe the Bureau Manual Sections 2800 through 2803 lack some essential policy guidance. This absence contributed to the development of cumbersome stipulations and the basis for misunderstanding and inconsistency.

Our attempt to resolve the problems and issues is summarized by the following recommendations:

1. Rewrite Bureau Manual Sections 2800, 2801, and 2803.

We have provided draft manual sections which set out significant guidance statements designed to clarify the intent of using stipulations, encourage the use of industry generated performance stipulations, and provide a process to encourage the objective analysis of a proposed action.

2. Use of Performance Stipulations.

The difference between performance stipulations and developmental stipulations is as follows:

Developmental Stipulations--We (BLM) dictate how a resource conflict will be mitigated by construction techniques and impose these requirements by way of grant stipulations.

Performance Stipulations--We (BLM) identify to the action proponent (industry) our resource and environmental concerns at the time we initially review the proposed action. Industry, through the Plan of Development, identifies to BLM by their survey, design, and illustrations how the concerns will be avoided, mitigated, or restored. When acceptable to BLM, this plan can be incorporated with the grant. Thereafter our compliance (inspections) requires industry or their contractor to perform in accordance with their approved Plans of Development. Changes in the Plans of Development can be made when the need is identified.

We are recommending maximum use of performance stipulations through industry-prepared construction, operation, and maintenance plans (Plans of Development) and allow management discretion for the use of developmental stipulations for small projects and small contractors. Performance stipulations enable the Bureau to request and approve construction, operation, and maintenance plans from the action proponents that will mitigate resource damage without the use of developmental stipulations.

We also believe that more consideration must be given to the administration of the right-of-way compliance function. Appropriate inter-office and inter-staff involvement in all phases of the right-of-way granting process would enhance the understanding and coordination between the Bureau and industry. These actions would considerably diminish the opportunities for inconsistencies and misunderstanding. Similarly, to integrate the concepts recommended by the study group into the Phoenix Training Center curriculum would also improve compliance consistency.

3. Handbook Concept.

We recommend that the present appendix to Manual 2803 be replaced with a handbook. This will require that mandatory (boiler plate) stipulations be included in the grant. The handbook will contain a listing of guide stipulations commonly used in right-of-way permits and grants. They should not be unilaterally used. They are to be used, as written, when applicable to the proposed action. The handbook also includes an outline to be used to

"trigger" a thought process when a proposed action is received, a set of stipulations generally applicable to the proposed action, and optional special or unique stipulations related to the proposed action. These too are to be used, when applicable, as written.

After using the handbook stipulations, the need to mitigate site specific and/or unique situations should be minimal. We would further recommend that the handbook concept be expanded to include all surface disturbing actions in BLM. Initially our Study Group planned to develop the concept for mill sites, mineral pits, Applications for Permits to Drill (APD's), etc. We ultimately determined that including all surface disturbing actions in our study had the potential of reducing the quality of our efforts on right-of-way and/or extending our timeframe, therefore, the mineral related actions were given only limited consideration. We have, however, tried them in the concept and format we are recommending and believe these actions are also compatible. Examples of how other program actions could be considered in this concept have been included in the handbook section.

We would urge that, if the Study Group's recommendations are adopted as set out in the manual and handbook, an evaluation program be implemented to assure that concepts are effective and that they are used in the field offices. In our discussions with industry representatives, we have found the concepts to be very acceptable. However, there remains a nagging concern with industry that BLM field offices will not accept the concepts or that they will ultimately revert back to the use of stipulations rather than industry plans of development.

We believe the evaluation process should determine how extensive the concept is being used, how effective it is, and the adequacy of the handbook. Terms and conditions (stipulations) in the handbook should be reviewed and additions and deletions made as appropriate. Duplications and redundancy must be avoided. These evaluations should be made annually by the Washington Office Right-of-Way staff and can include written comments with limited field sampling. We also believe it desirable to include members of the Terms and Conditions Study Group in these evaluations.

We make the above suggestions based on the fact that BLM generally must change the way we write and impose terms and conditions or we cannot avoid allegations of a lack of standards and compliance inconsistencies.

The Study Group makes two specific recommendations:

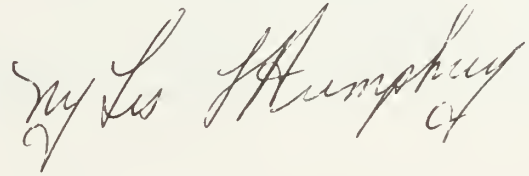
1. That the Bureau adopt a standard form for the granting of Right-of-Ways.

Currently the Bureau refers to the grant as a "format" rather than a "form". This allows any Bureau office the opportunity to change or modify the grant. We believe the use of a Bureau wide grant form is an initial and essential step to achieving consistency.

2. That the Appendix to the existing 2803 Manual be deleted in its entirety.

The Study Group reviewed the 2803 Manual Appendix and attempted to incorporate all the desirable stipulations from this Appendix into the Right-of-Way Handbook.

Your favorable consideration of these recommendations and the Manual changes, together with the handbook concept, will be the initial phase of what our Study Group believes to be a positive change in how our Bureau processes Right-of-Way grants.

A handwritten signature in cursive script, reading "Myles Humphrey". The signature is written in dark ink and is positioned to the right of the main text block.

Enclosures



BUREAU MANUAL

2800 - RIGHTS-OF-WAY

.01 Purpose. The 2800 Manual series provides procedural guidance for issuing, amending, and renewing right-of-way grants and permits in an environmentally, socially, and economically sound manner. It provides direction for right-of-way planning and program management.

.02 Objectives. The objectives of the right-of-way program are to:

A. Provide policy, procedures, and guidance for managing rights-of-way on public land so as to:

1. Minimize the proliferation of separate rights-of-way and adverse environmental impacts resulting from such proliferation.

2. Promote and facilitate use of rights-of-way in common, when such use is compatible.

3. Reflect national, state, and local government land-use policies, environmental quality, economic efficiency, national security, safety, good engineering, and technological practices.

4. Provide a system of designated right-of-way corridors on Public land to help meet future right-of-way needs.

B. Promote uniformity and efficiency in right-of-way application processing and granting procedures.

.03 Authority.

A. The Federal Land Policy and Management Act of October 21, 1976, (FLPMA) (90 Stat. 2743-2794; 43 U.S.C. 1701-1771).

B. Section 28 of the Mineral Leasing Act of 1920, (41 Stat. 449, as amended 30 U.S.C. 185).

C. The Federal-Aid Highway Act of August 27, 1958, as amended (72 Stat. 892, 916, 23 U.S.C. Sections 107(d) and 317), supplemented by Section (a)(1) of the Act of October 15, 1966, as amended (80 Stat. 937, as amended 49 U.S.C. 1655).

D. Title XI of Alaska National Interest Lands Conservation Act of December 2, 1980, (94 Stat. 2457, 16 USC 3161).

E. 43 Code of Federal Regulations.

1. Part 2800, Rights-of-Way, Principles and Procedures, Subpart 2800 Rights-of-Way, General.

2. Part 2810, Tramroads and Logging Roads.

3. Part 2880, Oil and Natural Gas Pipelines and Related Facilities, General.

.04 Responsibility.

A. Director and Associate Director, acting under broad Departmental guidance, are responsible for overall compliance with statutory authorities, Department policies, and specifically responsible for the development and management of the right-of-way program affecting the public lands.

B. Deputy Director for Lands and Renewable Resources, through the Assistant Director, Land Resources, and the Chief, Division of Rights-of-Way, is responsible for providing regulation, direction, policy, and procedural guidance for efficiently evaluating and processing right-of-way applications, issuing right-of-way authorizations, monitoring and terminating right-of-way grants, managing the Bureau's right-of-way program, and ensuring that future needs are met through designation of right-of-way corridors.

C. State Directors, District Managers, and Area Managers, within their delegated areas, are responsible for uniformly implementing and carrying out the guidance and instruction contained in this 2800 Manual series, implementing and managing the rights-of-way program in their States, Districts, or Areas, programming and budgeting right-of-way funds, issuing local instructions, maintaining program quality control, training and maintaining a cadre of personnel proficient in developing, evaluating and processing right-of-way applications, providing timely compliance and monitoring during construction, and providing designated corridors for future right-of-way needs.

.05 Definitions. See Glossary of Terms.

.06 Policy. It is the policy of the Bureau to:

A. Authorize all right-of-way uses on public land at the discretion of the authorized officer by a grant or temporary-use permit except for:

1. Transportation and utility facilities which have been otherwise authorized by law, regulation, or a Bureau approved land-use authorization.

2. Casual use.

3. Right-of-way uses that include an incurable defect revealed during the NEPA evaluation process.

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B. Allow owners of land within or adjacent to public land without other reasonable access the privilege of ingress and egress over existing roads and trails for reasonable access to their property. The public must be permitted reasonable use of existing roads and trails administered by the Bureau. Ingress, egress, and use must conform to the rules governing the administration of the public land, roads, and trails.

C. Permit owners of land surrounded by public land adequate access for reasonable use and enjoyment of their property. Such access must conform to rules governing the administration of the public land.

D. Expeditiously process right-of-way applications in an environmentally, socially, and economically sound manner by providing:

1. A system of designated right-of-way corridors which are preferred locations for future rights-of-way and are consistent with the principal uses and management of the public land.

2. Reasonable analysis, evaluation requirements, and granting processes.

E. Require landowners who apply for an access road to grant reciprocal access road rights to the Bureau for access roads on their lands in the vicinity of the application if such needs have been identified in a land-use plan.

F. Require all right-of-way grants to include terms and conditions that minimize damage and protect the environment. Terms and conditions designed to enhance the affected environment may be included in the right-of-way grant provided:

1. Enhancement is consistent with existing resource management plans.

2. The cost of enhancement that exceeds that required to restore and protect the environment is not borne by the holder. When enhancement measures are deemed to be of valuable public benefit, the specific enhancement requirements and actions including reimbursement methods become an addendum to the grant agreement. Acceptance of the enhancement addendum must be agreed to by the Holder and approved by the Authorized Officer.

G. Encourage the use of Applicant/Holder prepared Plans of Development which address public, Bureau and other agency issues and impacts generated during the application and NEPA process. Preparation of this plan of development emphasizes problem solving and mitigation before the grant is issued or at least prior to issuing the notice to proceed and reduces the need for lengthy, detailed stipulations because the plan becomes a part of the grant.

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.07 Scope. The series of Manual Sections which appear as 2800 and the subsidiary numbers at 2801, 2802, 2803, 2804, 2805, 2850, 2851, 2860, and 2880 contain right-of-way policy procedures and guidance for:

A. Reservoirs, canals, ditches, flumes, laterals, pipes, pipelines, tunnels, and other facilities and systems for the impoundment, storage, transportation, or distribution of water or effluent.

B. Pipelines and other systems for the transportation or distribution of liquids and gases, oil, natural gas, synthetic liquid or gaseous fuels, or any refined product produced therefrom, and for storage and terminal facilities in connection therewith.

C. Pipelines, slurry and emulsion systems, conveyor belts for transportation and distribution of solid materials, and facilities for the storage of such materials.

D. Systems for generation, transmission, and distribution of electric energy including wind and solar facilities.

E. Systems for transmission or reception of radio, television, telephone, telegraph and other electronic signals, and other means of communication.

F. Roads, trails, highways, railroads, canals, tunnels, tramways, airways, livestock driveways, or other means of transportation.

G. Such other necessary transportation or other systems or facilities as are in the public interest and which require rights-of-way over, upon, under, or through public land.

H. Temporary use of additional public land needed for the construction, operation, maintenance, or termination of grants, or for preapplication access or facilities necessary to gather application data.

I. Renewals, assignments, and terminations of existing grants.

J. Identifying and designating a system of designated right-of-way corridors to help meet future right-of-way needs.

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Glossary of Terms

Note: The terms used in the glossary are derived from the statutes, regulations, and Solicitors' opinions.

-A-

Ancillary Access Roads: the roads constructed or used by a holder for ingress and egress to the primary right-of-way including parallel roads along the route.

Airways: gondolas, aerial trams or ski lifts, aerial conveyor belts, and other devices for transportation above the ground.

Authorized Officer: any employee of the Bureau who has been delegated the authority to perform the duties described in this Manual Section.

Agency Head: the head of any Federal department or independent Federal office or agency, other than the Secretary of the Interior, who has jurisdiction over the surface of Federal land.

Applicant: any qualified individual, partnership, corporation, association, or other business entity or any Federal, State, or local governmental entity or agency who applies for a right-of-way grant or temporary use permit.

Authorized Officer's Representative: Bureau employee designated by the Authorized Officer for onsite inspection for compliance with terms and conditions of the grant and technical interpretation as needed. The individual does not have authority to change or alter the grant but is the main contact for matters pertaining to the grant.

-B-

Bureau: the Bureau of Land Management.

-C-

Casual Use: activities which involve practices which do not cause disturbance or damage to the public lands, resources, or improvements, and therefore do not require a right-of-way grant or temporary use permit.

-D-

Descriptive Outlines: a listing of items under a variety of categories which are to be considered when reviewing a proposed right-of-way action. They provide a logical process to analyze a specific right-of-way proposal to assist in determining that all the proponent's, the Bureau's, and any other needs and involvement are considered and appropriate action(s) taken.

Designated Right-of-Way Corridor: a parcel of land either linear or aerial in character that has been identified by law, by Secretarial Order, through the land use planning process, or by other management decision as being a preferred location for existing and future right-of-way uses and suitable to accommodate more than one type of right-of-way or one or more rights-of-way which are similar, identical, or compatible.

-F-

Facilities: those ancillary situations such as pumphouses, settling ponds, or other structures necessary to the effectiveness of the project when completed.

Federal Lands: all land owned by the United States except land in the National Park System, land held in trust for an Indian or Indian Tribe, and land on the Outer Continental Shelf.

FLPMA: Federal Land Policy and Management Act of 1976.

-G-

Guide Stipulations: stipulations that are common to most surface disturbing actions associated with rights-of-way and other land use authorizations.

-H-

Holder: any individual, partnership, corporation, association or other business entity, or Federal, state, or local governmental entity or agency who has received a right-of-way grant or temporary use permit.

Holder's Representative: The Holder's onsite representative who is responsible to see that the terms and conditions of the grant are met. The representative is the main contact for the Bureau concerning technical matters of the grant.

-I-

Interagency Agreement: a written document between the Bureau and any other Federal bureau or agency, State government agency, governing official or governing board of a unit of local government, any agency of local government, or any organization with authority to commit itself, setting

forth a policy covering respective or mutual responsibilities with respect to mutual goals and the manner in which such responsibilities will be carried out.

-N-

Notice to Proceed: a written authorization approved by the Authorized Officer to initiate preconstruction activities required prior to an approval of the grant.

-O-

Oil or Gas: oil, natural gas, synthetic liquid or gaseous fuels, or any refined product produced therefrom.

Oil or Gas Pipeline: a line of pipe traversing Federal land for transportation of oil or gas. The term includes trunk lines and related facilities, but does not include a lessee's or operator's production facilities located on lease.

Oil or Gas-Production Facilities: a lessee's or lease operator's pipes and equipment used on-lease solely to aid in extraction, storage, and processing of oil and gas. The term includes storage tanks and processing equipment, and gathering lines upstream from such tanks and equipment, or in the case of gas, upstream from the point of delivery. The term also includes pipes and equipment, such as a water and gas injection line, used in the production process for purposes other than carrying oil and gas downstream from the wellhead.

Oil or Gas-Related Facilities: those structures, devices, improvements, and sites, the substantially continuous use of which is necessary for the operation or maintenance of pipelines which are located on Federal land, which are authorized under the Act, including but not limited to supporting structures, airstrips, roads, campsites, pump stations, including associated heliports, structures, yards, and fences; valves, and other control devices; surge and storage tanks; bridges; monitoring and communication devices and structures housing them; terminals including structures, yards, docks, fences, and storage tank facilities; retaining walls, berms, dikes, ditches, cuts, and fills; structures and areas for storing supplies and equipment. Related facilities may be connected or disconnected, or contiguous or noncontiguous to the pipe.

-P-

Pipeline System: all facilities, whether or not located on Federal land, in connection with the construction, operation, maintenance, or termination of a pipeline.

Plans of Development: comprises a complete description and design for the proposed project. It shall include proposed plans, specifications, construction methods, schedules, restoration practices and other information pertinent to the proposal, and when approved by the Authorized Officer becomes a part of the grant. Refer to Handbook for outline and

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guidance. The plan can include sections for construction, operation, maintenance, and abandonment. The content of the plan will vary with the complexity of the proposal.

Proponent: any individual, partnership, corporation, association, or other business entity or any Federal, State or local governmental entity or agency interested in applying for a right-of-way grant.

Public Interest or Benefit: whatever serves to promote the good of the public in general rather than the exclusive use of the applicant.

Public Land: Any land or interests in land owned by the United States and administered by the Bureau of Land Management, except the lands located on the Outer Continental Shelf and lands held for the benefit of Indians, Aleuts, and Eskimos; and may also include lands withdrawn by other agencies but administered by the Bureau pursuant to the withdrawal order.

Project: the transportation or other system for which the right-of-way is authorized.

-R-

Right-of-Way: the public or Federal land authorized to be used or occupied pursuant to a right-of-way grant

Right-of-Way Grant or Grant: an instrument authorizing the use of a right-of-way over, upon, under, or through public or Federal land for the construction, operation, maintenance, and termination of a project.

-S-

Stipulations: the terms and conditions under which the grant is issued. Stipulations are in addition to the regulations in 43 CFR and other laws that apply. They may include stipulations and drawings and/or Plans of Development necessary to issue a grant or Notice to Proceed.

System: the project authorized under the grant.

-T-

Temporary Use Permit: a revocable, nonpossessory, nonexclusive privilege to use specified public or Federal land for data collection, or construction, operation, maintenance, or termination of a project or to protect the natural environment or public safety. Temporary use permits are used in association with existing or proposed right-of-way grants.

Transportation and Utility Corridor: a parcel of land without fixed limits or boundaries that is being used as the location for one or more transportation or utility right-of-way.

2801 - MANAGEMENT

.21 Right-of-Way Grants are used to manage the vast majority of right-of-way uses. The thrust of this 2800 Manual series deals with managing the uses. (See BLM Manual Sections 2800 through 2804). The main steps consist of preapplication, application processing, grant issuance and compliance monitoring.

A. Preapplication can be the most important part of the process. Basically it boils down to clearly establishing what the proponent wants to accomplish and outlining, for the proponent, all of the obligations of the grant, immediate and future, before finally making an application. (See BLM Manual/Handbook 2802).

B. Application Processing begins with the receipt of a completed standard application form and continues through the preparation of the right-of-way grant document. Intermediate steps include application verification, application acceptance, preliminary evaluation, NEPA evaluation, plans of development, appraisal, determination of cost recovery fees, a decision, grant preparation, and approval by the Authorized Officer. The goal is to make both this process of issuing a grant and the actual use of the lands as smooth as possible for both the applicant and the Bureau. We are trying to achieve a balance between protecting and managing the land resources and keeping the process as economical and burden free as possible for the applicant and the Bureau. (See BLM Manual/Handbook 2802.)

C. Grant Issuance is the culmination of preapplication and application processing efforts. The applicant signifies acceptance of the terms and conditions by signing the grant. As a holder he/she agrees to comply with all terms and conditions contained in the grant. The Authorized Officer's signature and date on the grant determines the effective date of the grant. There are two basic methods of determining the terms and conditions in the grant. Grants for uses which require only minor construction, short term, insignificant impacts, or only a few stipulations to accomplish the job can be incorporated into a packaged grant which is the preferred method for grant issuance. Some companies, especially those that are repeat applicants, prefer to use a Plan of Development. In this case the basic grant format could include either a reference to an attached plan of development or require a plan of development to be prepared and approved by the Authorized Officer at a later date. Before the grant is issued the holder submits the Plan of Development for review. Once approved by the Authorized Officer the holder's Plan of Development automatically incorporates into the grant as the terms and conditions. As long as the grant contains a stipulation binding the holder to the plan of development, the grant can be issued before the plan is approved. The holder often uses this plan for subcontracting the right-of-way work and so overall it becomes less burdensome and still satisfies the Bureau's resource protection goals. (See BLM Manual/Handbook 2803.)

2801 - MANAGEMENT

D. Compliance Monitoring in its simplest terms is accomplishing the job on the ground that the holder and Bureau had agreed to. Generally, most of the terms and conditions are utilized only during the construction phase of the facility. After that is completed, only a minimal amount of monitoring is required for administration of the grant and evaluation of the success of the mitigation measures. In addition, rental collection and periodic reappraisal of the fair market rental value may be necessary. (See BLM Manual/Handbook 2804.)

2803 - GRANTS

.01 Purpose. This Manual Section provides procedural guidance for using the terms and conditions usually contained in a grant, a grant format for issuing grants of right-of-way, and a handbook with examples of standard and action specific stipulations.

.02 Objectives. See BLM Manual Section 2800.02.

.03 Authority. See BLM Manual Section 2800.03.

.04 Responsibility. See BLM Manual Section 2800.04.

.05 Definitions. See Glossary of Terms, BLM Manual Section 2800.

.06 Policy. See BLM Manual Section 2800.06.

.07 Scope. See BLM Manual Section 2800.07.

.1 Terms and Conditions.

.11 Nature of Interest.

A. All Rights Expressly Granted. If it is not stated in the grant, the right to do something is not given. The only exception is casual use. (See BLM Manual Section 2801.24)

1. The rights granted are nonpossessory and nonexclusive.
2. The rights are for specific uses: (for example to construct, maintain, and use.)

B. Rights Retained by the United States.

1. The Bureau retains a continuing right of access to the public land covered by the grant.

2. The Bureau has a continuing right to physically enter any part of a facility for inspection, monitoring, or any other purpose consistent with any needs or obligations of the United States. This right is subject to giving the holder reasonable notice.

3. The Bureau may require the holder to share the right-of-way with another compatible right-of-way use and manage the land for all other uses consistent with the purpose of the grant. Compatibility of right-of-way uses is determined after consultation with the holder and evaluation of the proposed sharing action.

4. All rights granted are subject to valid existing rights.

5. If the Bureau disposes lands subject to a valid existing right, the new owner is subject to the terms and conditions of the right-of-way.

C. Tenure. The term of a grant should be limited to a reasonable period. A reasonable period may range from one month to perpetuity. Factors that may be considered to establish a reasonable period for the use may include:

1. Public purpose served;
2. Cost and useful life of the facility;
3. Time limitations imposed by licenses or permits that the holder is required to secure from other Federal and state agencies; and

2803 - GRANTS

4. Other factors:

- a. Temporary use permits cannot exceed three years.
- b. Oil and gas pipeline grants cannot exceed 30 years.
- c. Right-of-way grants that cross administrative boundaries (area, district, state, or other Federal agencies) should have identical tenure.
- d. Different holders with like facilities (e.g., telephone lines) in the same administrative area should have identical terms unless an applicant requests a shorter than normal term.

.12 Financial Interests.

A. Rental Payments must be paid in advance.

1. Rental fees are based upon the fair market value of the rights authorized in the right-of-way grant. See BLM Manual Section 9300.

a. When the annual fee is \$100 or less, a lump sum payment for five years for a grant and three years for a temporary use permit may be required. When the annual fee is more than \$100 per year, rental is collected on an annual basis unless item (b) below applies.

b. If holder agrees, rental may be collected for the entire term of any nonperpetual grant.

c. Holder may make a written request for permission to pay annual rentals in advance, regardless of amount. Any advance payments are subject to adjustment and collection of additional rentals or refund of overpayments when changes in fair market value occur.

d. A grant may be issued subject to future appraisal. This should be done with the applicant's concurrence. Make sure the applicant understands that the fee is only an estimate and is a temporary measure to expedite the issuance of the grant. If possible, obtain an estimate from the appraisal staff. If this estimate is not available, use the minimum rental of \$25 per five years. This procedure is discouraged.

2. No rental fees or fees less than fair market value may be authorized under the following circumstances:

a. For Federal, state, or local government agencies. The exceptions are municipal utilities whose principal source of revenue is derived from customer charges.

b. Rural Electric Associations.

c. For a nonprofit corporation or association.

d. For rights-of-way involving cost share roads and reciprocal right-of-way agreements.

e. For applicants who hold a permit, lease, license, or contract for which the United States is already receiving compensation, subject to the following conditions:

(1) When the applicant's need for a right-of-way grant or temporary use permit is within the extension boundaries of a permit, lease, license, or contract area.

(2) Where the applicant needs a right-of-way across public lands outside the permit, lease, license, or contract area in order to reach said area.

(3) Oil and gas leases are the exception to (1) and (2) as the lessee is required to secure a right-of-way grant or temporary use permit as outlined under BLM Manual Section 2880.

f. When a holder provides a valuable benefit to the public or to a Bureau program without charge or at a reduced rate. For example, a holder has a right-of-way for an access road which is a part of the Bureau's transportation plan. The holder is providing an important service to the public and the Bureau by maintaining the road. The rental fees may be waived or reduced. Another example would be if the Authorized Officer determines that inclusion of terms and conditions that "enhance" the environment are appropriate. The difference in cost of enhancement over protection may be accomplished by reducing the holder's rent. Conditions for rental reduction are:

g. When the Authorized Officer determines that enhancement measures will provide a valuable public benefit and desires to accommodate the enhancement measures.

(1) Any fee reduction should be based on an appraisal approved by the Authorized Officer. In the first example given above, it may be a simple equipment hourly rate times an estimated number of hours.

Cat No. 12 motor grader	\$ 25/hr.
Grader operator	\$ 10/hr.
Maintenance rate	\$ 35/hr.

Maintenance of 2.5 miles of Rock Creek Road for 1 year requires 20 hours:

\$35/hr. x 20 hours	\$700
Annual Rental Fee of Grant	\$750
Annual Maintenance	\$700
Rental Fee For Next Year	\$ 50

2803 - GRANTS

(2) There must be a public or Bureau program benefit. Reduction of rental fees may not exclusively benefit the holder.

(3) The maintenance or enhancement should be an item that has in the past received, or would under good economic conditions receive, consideration in the Bureau's annual work plan (AWP).

(4) The holder has to agree in writing or as a grant condition to do the required maintenance in advance of the road maintenance actually being completed.

B. Cost Recovery. See BLM Manual Section 1323.

C. Bonding. The Authorized Officer may require the holder of a right-of-way grant or temporary use permit to furnish a bond or other security. The purpose of a bond is to secure the obligations imposed by the grant or temporary use permit.

1. Bonds are normally used only when an applicant has previously shown (e.g., other right-of-way grant) a lack of technical, financial, or performance capability.

2. The amount of the bond should be based on the approximate cost to satisfy the stipulations of the grant relating to mitigating measures. For example, a grant with stipulations that require seeding and mulching may have a bond total of \$3,000. Two acres of disturbed area must be seeded and mulched.

$$2 \text{ acres} \times \$1,500/\text{acre} = \$3,000$$

3. Limits for bonding range from \$500 to \$100,000 or more.

4. The bond may be canceled or the total reduced when the stipulation(s) have been satisfactorily completed.

5. The bond must be either a surety bond, individual bond, or other securities acceptable to the United States Government.

D. Liability. (Reserved)

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.2 Grant Format. To maintain uniformity and consistency in the granting program, the Bureau will use a standard grant format in authorizing the use of public land for right-of-way purposes. The standard grant format may also be used as a temporary use permit. The use and enforcement of all grants are dependent upon stipulations incorporated into the grant. The grant format must not be modified without Washington Office approval. See Illustration 1 for grant format and instructions.

.21 Terms and Conditions that are added to the grant as stipulations are the tools that the Bureau uses to define the nature of interest both retained by the Bureau and granted to the holder. The stipulations transfer mitigating measures from the CE/EA/EIS to the grant to protect the environment. Words used in the stipulation having more than one reasonable meaning are interpreted in favor of the holder. Therefore, the stipulations must be explicit, concise, and easy to understand. It is fundamental that both the Bureau and applicant understand all of the obligations (stipulations) of the grant prior to the signing event. Stipulations that are vague or too general often do not lead to this understanding. The Bureau has an obligation to keep the grant as simple and burden free as possible. This generally means to use the minimum number of stipulations possible. The Right-of-Way Handbook includes a number of appropriate stipulations. However, they are included to make it easier to handle the many different site specific situations that are encountered in a wide variety of rights-of-way. They are not intended to be used indiscriminately or just in case they might be needed. As a general rule, stipulations should not be included in the grant unless the Authorized Officer would be willing to terminate or shut down the operations on the grant if the stipulation were to be violated. Most mitigating measures should be incorporated in the plan of development.

.22 Bureauwide Standard Stipulations. See the Right-of-way Handbook for guide and action-specific stipulations that may be included in each grant. Illustration 1 shows where these stipulations are included in the grant. See also BLM Manual Section 1512, Field Contracting, and Appendices 3 and 4 (presently reserved) for references to specifications and drawings which, with some modification, may be applicable to some site specific situations. See also BLM Manual Section 9102.2, Facility Design Specifications, for a discussion on preparing and using specifications and drawings. Stipulations can become part of the grant document through two different procedures. The grant preparation may be completed prior to signing with all stipulations included in the grant, or the grant may require the holder to submit a plan of construction-operation-maintenance (Plan of Development) prior to the pre-construction conference and issuance of the notice to proceed.

A. A Packaged Grant is the preferred method of issuing the grant, that is, one that includes all the necessary stipulations and/or an approved plan of development. If the description of the proposal contained in the application, when combined with a few standard stipulations, is sufficient, then no separate plan is required. This procedure should always be used for grants that are relatively simple, i.e., little construction, short term, or insignificant impacts identified in an EA. A package grant should also be utilized when the applicant is unfamiliar with Bureau procedures. This ensures that the applicant knows what the grant obligations are including terms, conditions, and rental prior to the effective date of the grant.

B. Plans of Development It is desirable to have an approved Plan of Development prior to the effective date of the grant. This negates the need for numerous stipulations. However, this is not always possible, especially on larger projects where specifications or final designs have not been selected prior to issuing the grant. In this case, the grant includes a stipulation requiring submittal and approval of a Plan of Development prior to the Notice to Proceed. Many applicants prefer the use of the Plans of Development because it allows use of their expertise and experience to meet the Bureau's requirements, and the Plan becomes their contracting document as well. In addition, some companies who are repeat applicants find it less burdensome to furnish a plan of development. The content and level of detail for the Plans of Development should be commensurate with the complexity and impacts of the proposal and should be worked out with the applicant during the application and NEPA processes. The Right-of-Way Handbook provides outlines to assist realty specialists and applicants in preparation and evaluation of plans of development. See Right-of-Way Handbook (Description Outline for Plans of Development) for an outline that can be used to assist the holder in preparing the plan.

1. The Authorized Officer reviews the plan. If the plan is not site specific, the Authorized Officer may suggest appropriate design, specification, criteria, or mitigation to be added to the plan. After the Authorized Officer approves the plan, a notice to proceed may be used to implement all or portions of a plan.

C. Optional Stipulations may be developed and used when the standard stipulations in the Handbook do not fit the site specific situation. Standardization of these stipulations between state, district, and area offices is also necessary.

.23 Grant Issuance. The Authorized Officer, after receiving and evaluating an application for a right-of-way grant or temporary use permit, issues a copy of the grant or permit for the applicant's review. The applicant signifies acceptance of the terms and conditions by signing the grant permit. This written acceptance constitutes an agreement

between the applicant and the United States that, in consideration of the right to use the public lands, the applicant will comply with all terms and conditions contained in the authorization and the provisions of applicable laws and regulations. The effective date of the grant is the date of execution by the Authorized Officer.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

District Office

RIGHT-OF-WAY

SECTION A

1. There is hereby granted pursuant to: (check appropriate authority)

- a. _____ Federal Land Policy and Management Act
- b. _____ Mineral Leasing Act
- c. _____ Federal Highway Act
- d. _____ Other (Describe) _____

a nonexclusive, nonpossessory right-of-way to:

2. To use, subject to the terms and conditions set out below, the following described public land.

3. Description of the right-of-way facility and purpose:

The right-of-way is for a _____ to be constructed, maintained, and used to provide _____. The right-of-way width is _____ feet wide, _____ feet/miles in length, and contains _____ acres more or less.

A map showing the location of the right-of-way is attached hereto as Exhibit "A".

SECTION B

1. APPLICABLE REGULATIONS

This right-of-way grant is subject to all applicable regulations contained in 43 CFR 2800.

2. EXISTING RIGHTS

This grant is subject to all valid rights existing on the effective date of this grant.

3. COMPATIBLE USE

There is reserved to the Authorized Officer the right to grant additional rights-of-way or permits for compatible use on, over, under, or adjacent to the land involved in this grant after consultation with the Holder. The final decision on compatibility will be by the Authorized Officer.

4. OTHER REQUIREMENTS

Holder shall comply with all Terms and Conditions, Additional Terms and Conditions, Special Stipulations, and/or the approved Plan of Development which are attached hereto and made a part hereof.

5. RENTAL

In consideration for the rights granted, the Holder shall pay the Bureau of Land Management the sum of _____ for the period from _____, to _____, and thereafter annually _____.

Provided, however, charges for these uses may be made or readjusted whenever necessary to place the charges on the basis of fair market value of uses authorized by this grant. This right-of-way grant is not in force unless the Holder has paid the rental fee in advance. Subsequent payments are due on anniversary. Failure to pay timely is cause for termination.

6. TERMINATION

This right-of-way grant shall terminate _____ years from the effective date of this grant unless, prior thereto, it is relinquished, abandoned, terminated, or otherwise modified pursuant to the terms and conditions of this grant or of any applicable Federal law or regulation.

This right-of-way grant may be renewed. If renewed, the right-of-way will be subject to regulations existing at the time of renewal and such other terms and conditions deemed necessary to protect the public interest.

7. TERMINATION FOR DEFAULT

If the Holder violates any of the terms and conditions to this grant, the Authorized Officer, after giving written notice, may declare the grant terminated for default. All improvements will be removed within _____ days of grant termination.

8. TERMINATION FOR CONVENIENCE

The right-of-way shall be relinquished to the United States if the authorized uses are no longer needed.

9. PUBLIC HEALTH AND SAFETY

The Holder shall comply with federal, state, and county standards for public health and safety.

10. CULTURAL AND PALEONTOLOGICAL RESOURCES

Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the Holder, or any person working on his behalf, shall be immediately reported to the Authorized Officer. Holder shall suspend all operations in the area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant cultural values. The Holder will be responsible for the cost of evaluations and for mitigation. Mitigation may include rerouting or excavation, and any decision as to proper mitigation measures will be made by the Authorized Officer after consulting with the Holder.

11. SURVEY MONUMENTS

Holder shall protect survey monuments and references within this right-of-way grant against disturbance during operations. If any monuments or references are disturbed during operations, Holder shall secure the services of a registered land surveyor or a Bureau cadastral surveyor to restore the disturbed monuments and references using surveying procedures found in the Manual of Surveying Instructions for the Survey of the Public Lands of the United States, latest edition. Holder shall record such survey in the appropriate county and send a copy to the Authorized Officer. If the Bureau cadastral surveyors or other Federal surveyors are used to restore the disturbed survey monument, Holder shall be responsible for the survey cost.

12. PESTICIDES

Use of pesticides shall comply with applicable Federal and state laws. Pesticides shall be used only in accordance with their registered uses and within limitations imposed by the Secretary of the Interior. Prior to the use of pesticides, the Holder shall obtain from the Authorized Officer approval of a written plan showing the type and quantity of

material to be used, pest(s) to be controlled, method of application, location of storage and disposal of containers, and other information required by the Authorized Officer. Pesticides shall not be permanently stored on public lands authorized for use under this right-of-way grant. Emergency use of pesticides shall first be approved by the Authorized Officer.

13. WORK LIMITS

Holder shall conduct all activities associated with the construction, operation, and maintenance of this facility within the limits of this right-of-way grant.

14. ADDITIONAL STIPULATIONS ATTACHED. YES NO

SECTION C

The effective date of this right-of-way grant is the date of execution by the Authorized Officer.

The undersigned agrees to the terms and conditions of this right-of-way grant.

The right-of-way grant is executed this ____ day of ____ 19__.

Name

Authorized Officer

Date

Title

RIGHT-OF-WAY GRANT
ADDITIONAL TERMS AND CONDITIONS

In addition to the "boiler plate" stipulations, there are other stipulations which could apply to right-of-way grants when plans of development are provided. These stipulations have been termed "Additional Terms and Conditions" and should be used as an attachment to the right-of-way grant.

Some of the stipulations included here have previously been included as a part of the cover memoranda or other documents that were not necessarily a part of the right-of-way grant. These stipulations are administrative requirements and should be considered separately from the technical stipulations. When used in this context, the right-of-way grant format is similar to the format of Bureau contracts.

ADDITIONAL TERMS AND CONDITIONS

A. ADMINISTRATIVE REQUIREMENTS

1. AUTHORIZED OFFICER

The Authorized Officer's Representative for onsite technical administration of this grant is:

Name: _____

Title: _____

Address: _____

Telephone: _____

2. THE HOLDER'S REPRESENTATIVE

The Holder's Representative responsible for onsite technical requirements of the grant is:

Name: _____

Title: _____

Address: _____

Telephone: _____

3. PLANS OF DEVELOPMENT

Holder shall submit plans of development that describe in detail the construction, operation, maintenance, and abandonment of the facility. The degree and scope of these plans will vary depending on: (1) the complexity of the facility or proposed action, (2) defined conflicts that require mitigation, and (3) additional technical information required by the Authorized Officer. The plans will be reviewed and approved by the Authorized Officer and, if deemed appropriate, incorporated as terms and conditions of the right-of-way grant.

4. PRECONSTRUCTION CONFERENCE

The Holder shall contact the Authorized Officer or his representative at least _____ days prior to the anticipated start of construction. The Authorized Officer may require and schedule a preconstruction conference with the Holder prior to

commencing construction activities on this right-of-way grant. The holder or his representative and his contractors or agents involved with construction under this right-of-way grant shall attend this conference to review stipulations and plans of development.

5. CONFORMITY WITH PLANS OF DEVELOPMENT

Holder shall construct, operate, and maintain the facilities and structures within this right-of-way grant in strict conformity with the plans of development which were furnished the authorized officer in connection with the application for this right-of-way grant. Any relocation, additional construction, or use that is not in accord with such data shall not be initiated without the prior written approval of the Authorized Officer. A copy of the complete application and the right-of-way grant stipulations shall be available on location during construction and rehabilitation to all supervisory personnel and the authorized officer. Noncompliance with the above will be grounds for an immediate temporary suspension of activities.



ROW HANDBOOK

PREFACE

RIGHTS OF WAY HANDBOOK

This Handbook is the result of a study group that was established to review and analyze alleged impacts the Bureau's terms and conditions has had on its Right-of-Way grantees. Major concerns of the grantees involved BLM's terms and conditions in comparison with those used in private right-of-way easements and the inconsistency of the Bureau's use and administration of terms and conditions. These inconsistencies included differences between BLM state, district, and resource area offices; variations in stipulation content and requirement; and terms and conditions which exceeded rehabilitation needs by imposing experimental and enhancement requirements.

Allegations by utility and pipeline companies have been considered and recommended policy, guidance, direction, and assistance to effect remedial actions was developed. Essentially, the Bureau's problems and industry's perceptions related more to management's use and application of the grants terms and conditions, than to the terms and conditions we imposed. Thus, management acceptance and use of the concepts included in this Right-of-Way Handbook will be essential in minimizing future problems in the Right-of-Way program.

The Right of Way Handbook addresses the Bureau's and its grantees problems primarily through changes in the manner in which Rights-of-Ways are processed and granted. The changes set out in the manuals and handbook resulted from information provided primarily by Bureau offices, however, recommendations and comments were also received from Industry representatives.

Essentially, this handbook is designed to provide a reference source that will enhance consistency, coordination and efficiencies for the Bureau and its Right-of-Way applicants. Consistency on the basis that the Bureau will be using stipulations from a common source. Coordination from the standpoint that all Bureau Offices will be operating by the same basic ground rules. And, efficiencies because stipulations for most situations are readily available and will require minimal preparation of "one-time" site specific stipulations.

The primary emphasis both in the Manuals and this Handbook is the use by the Bureau of applicant prepared plans of development. Plans of development in actuality are Construction, Operation and/or Maintenance plans prepared by the action proponent. Contact and coordination between the Bureau and the action proponent are essential to the effective preparation of the plans of development. As the project develops from its conception to grant issuance, the Bureau and the applicant must discuss issues, problems, and concerns to ensure that needed mitigation measures are included in the plans of development. As a rule, Industry does not construct or maintain a project without a plan and specifications. Therefore a basic plan is available for the Bureau to work through to assure that all resource and environmental concerns are mitigated. However, this will not occur without discussion and cooperation between the Bureau and the applicant.

To resolve the problems and issues the following actions have been implemented.

1. Bureau Manual Sections 2800, 2801, and 2803 have been rewritten.

The primary objective of the manual rewrite and the Right of Way Handbook is to change the Bureau's Right of Way granting process.

The manual sections as rewritten set out significant policy changes designed to clarify the intent of using stipulations, encourage the use of Plans of Development and performance stipulations, and provide a process to encourage the objective analysis of a proposed action.

2. Use of Performance Stipulations.

The difference between performance stipulations and developmental stipulations is as follows:

Developmental Stipulations--The Bureau decides how a resource conflict or environmental concern will be mitigated and requires the Holder to survey, design, and construct to a very precise requirement or specification. Developmental stipulations are normally used when a proposal contains adequate mitigation when combined with a few stipulations, or where grants are relatively simple or where impacts are slight. They may also be more appropriate when dealing with a one-time R/W applicant

Performance Stipulations--The Bureau identifies to the action proponent (Holder) the resource problems and environmental concerns at the time the proposed action is initially reviewed. The Holder, through the Plan of Development, identifies to BLM through their survey, design, and illustrations how the problems and concerns will be avoided, mitigated, or restored. Performance stipulation are primarily results oriented. When acceptable to the Bureau and approved by the Authorized Officer, this plan can be incorporated into the grant. Thereafter Bureau compliance is merely to ensure that the holder and/or their contractor perform in accordance with their approved Plan of Development. Performance stipulations are generally used when dealing with a complex R/W issue, applicants familiar with Bureau processes and/or where one entity is obtaining R/Ws for the same kind of use in an area such as numerous small oil or gas pipelines, powerlines etc., and the Bureau either negotiates reasonable stipulations with the applicant as a part of a joint field examination or the applicant provides specific mitigation in a plan of development.

Maximum use of performance stipulations through applicant-prepared construction, operation, and maintenance plans (Plans of Development) are encouraged. This will permit the use of developmental stipulations for small projects and small contractors at the discretion of management. Performance stipulations enable the Bureau to request and approve construction, operation, and maintenance plans (Plans of Development) from the action proponents that will mitigate resource damage with minimal use of specific stipulations.

3. Handbook Concept.

The appendix to the old 2803 Manual has been replaced by this Right-of-Way handbook. Mandatory (boiler plate) stipulations have been included on the grant form. The handbook contains a listing of guide stipulations commonly used in right-of-way permits and grants. They are to be used, as written, when applicable to the proposed action. The handbook also includes outlines to be used to "trigger" a thought process when a proposed action is received, as well as sets of special or unique stipulations generally applicable to a proposed action. These are to be used as written.

Using the handbook stipulations will minimize the need to write site specific and/or unique mitigation stipulations.

Objectives of the Right-of-Way handbook are as follows:

1. To highlight and emphasize the use of design specifications and performance stipulations through applicant generated plans of development.
2. To provide, early in the process (pre-application conference) an overview of the kinds of information and actions which should appear in the plan of development in order to mitigate the significant environmental and resource concerns.
3. To minimize the use of developmental stipulations which:
 - a. Require the Bureau to prepare survey and design specifications and interpret them into stipulations.
 - b. Require the Bureau to prepare stipulations for each resource problem and environmental concern identified through the planning and NEPA processes.
4. To provide an outline of items to be considered by Bureau employees when a right-of-way proposal is received. (Descriptive outline for plans of development for each right-of-way action.)
5. To provide a source for action-specific sample stipulations. (Sample stipulations for each right-of-way action.)
6. To provide a source of sample stipulations with broad applicability to surface disturbing actions. (Guide stipulations.)
7. To provide a source document to be used by the Bureau to achieve greater uniformity and consistency in the Right-of-Way program.

Simply stated, plans of development are the construction and/or operation plans the applicant/holder will use during the construction and/or maintenance phase(s) of the project.

The intended use of plans of development by the Bureau is to ensure that the construction plans mitigate our resource and environmental concerns and when approved by the Authorized Officer become a binding part of the right-of-way grant. This can significantly reduce the size and time required to prepare the NEPA documents.

RIGHT-OF-WAY HANDBOOK

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RIGHT-OF-WAY HANDBOOK

I. PURPOSE

This handbook provides detailed stipulations and outlines the analysis procedures required for the evaluation of proposed facilities to be constructed on public land under authority of 43 CFR 2800. This handbook is also useful for analysis of similar facilities constructed under other authorities. i.e. . . . (2600, 2700, 2900)

II. OBJECTIVE

To help assure uniformity throughout BLM in preparing, analyzing, and presenting technical data which become a part of the terms and conditions of right-of-way grants. Uniformity of approach to the development of stipulations and analysis of proposals helps ensure that complete data are obtained for the evaluation, location, design, and construction of facilities.

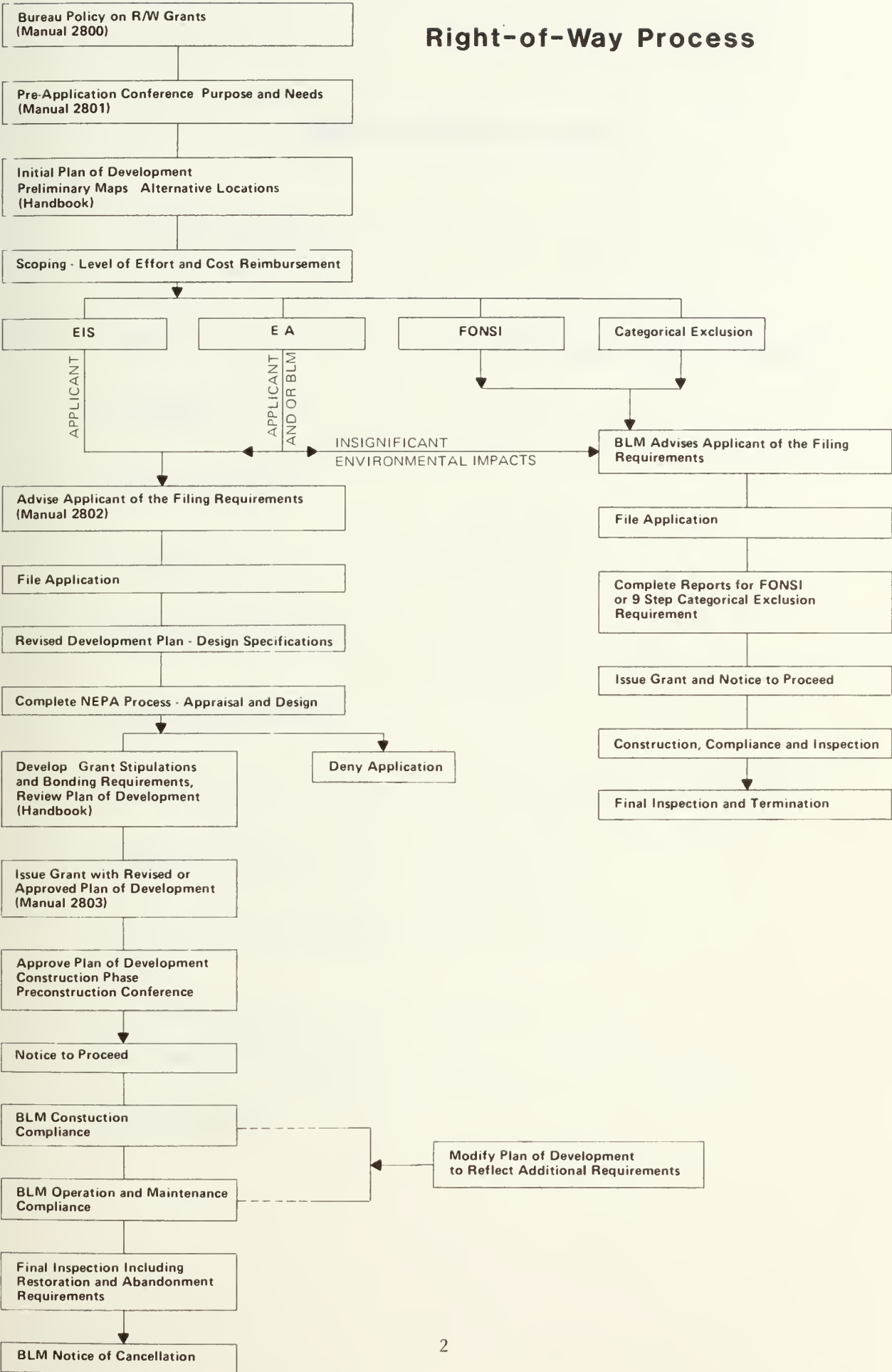
III. USE OF HANDBOOK

This handbook is for realty and other staff specialists involved with processing applications for construction of facilities on the public land. Training and orientation of Bureau realty specialists focus on history of the public domain, land law, procedures, and regulatory authorities. Many managers, however, expect program specialists to be knowledgeable and able to challenge applicants on issues involving resource conflicts, engineering design, and construction techniques. Lack of such expertise can result in inconsistent stipulations, inexperience in recognizing potential problems, and frustration.

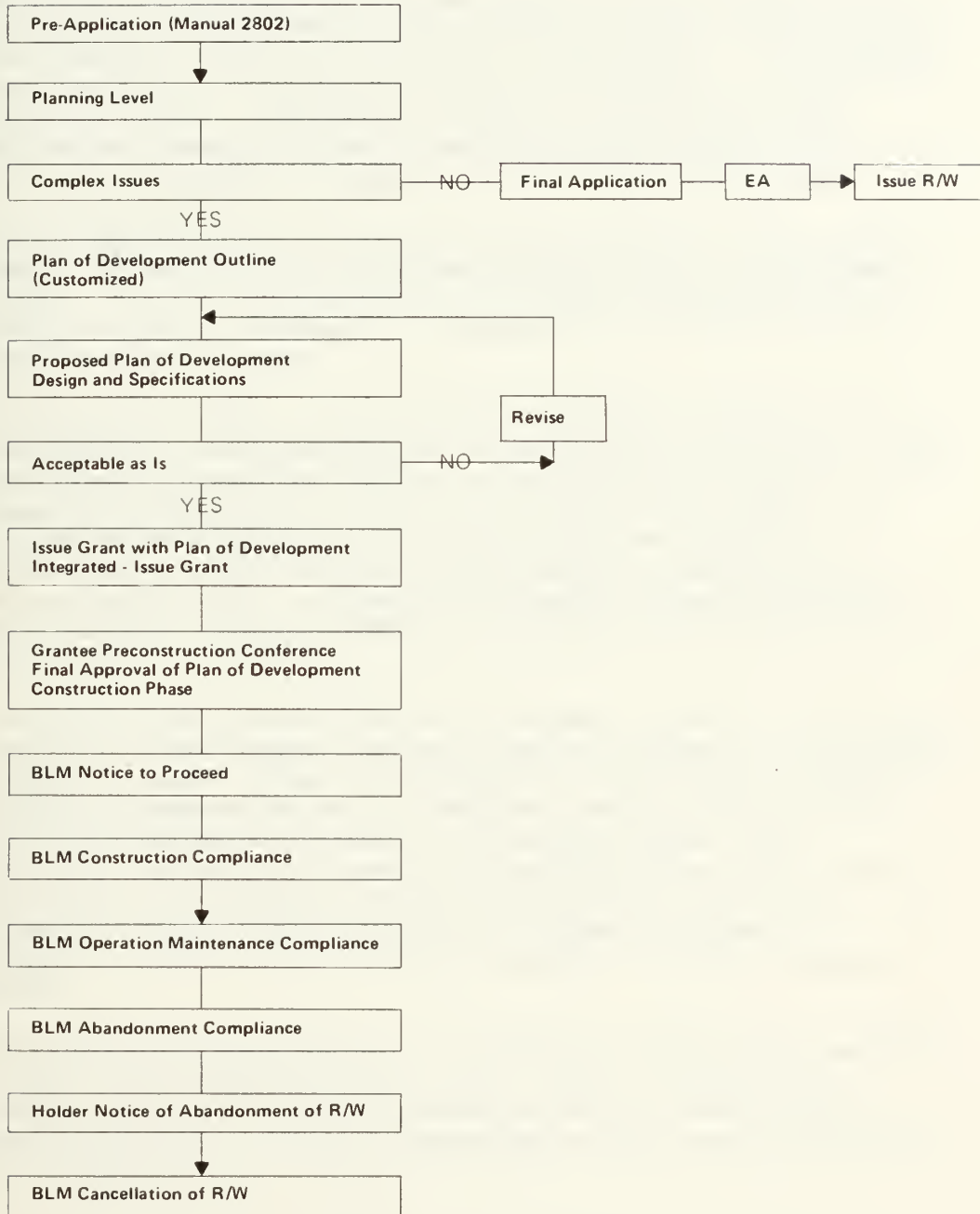
This handbook was designed to be used as an initial reference source and a guide for the evaluation of proposals. It is based on the concept that program specialists and technicians must utilize available Bureau expertise in resources and engineering, recognize the roles of other agencies, encourage applicants to submit complete plans of development, and avoid developing new stipulations when suitable stipulations are already in use.

This handbook is not intended to replace existing Bureau or other handbooks specifically developed for technical application, i.e., Oregon State Forest Engineering Handbook; Bureau Manual 9172, Water Control Structures, Guidelines for Design; and others. Proper use of this handbook should enable the realty specialist or other program specialists/technicians to intelligently discuss with applicants the potential resource, engineering, and construction issues associated with the proposal.

Right-of-Way Process



Right-of-Way Process



PLANS OF DEVELOPMENT

I. INTRODUCTION

Bureau policy encourages stipulations that require the applicant to furnish a plan of development for the proposed action. The complexity of this plan will vary with the scope of the project. An acceptable plan may be either as simple as a single paragraph with a drawing or at the other extreme, comprehensive enough to include detailed narratives and drawings of how the applicant will locate design, build, operate, maintain, rehabilitate, and abandon the project.

Plans of development may be offered by the applicant on any grant. Similarly, the Authorized Officer may require plans of development on any grant. Plans of development should always be required when an Environmental Impact statement is required and/or when the project proposal is major in scope.

It is the responsibility of the realty specialist, with assistance from appropriate staff specialists, to coordinate the review of plans of development, comment and require revision or additions, and recommend acceptance and inclusion in the right-of-way grant. The plans then become a condition of the grant and the basis for compliance inspections. In the review process emphasis should be placed on ensuring that applicable and complete specifications are included and that they are commensurate with the complexity of the project.

This section of the handbook has been designed to assist the realty specialist by presenting an outline of items to address in the review of project proposals (plans of development). The types of projects addressed are examples of those authorized under 43 CFR 2800 even though some examples may normally be considered under other authorities. The outline format is intended to stimulate a logical thought process for adequate review of proposals or plans of development. These outlines can also be copied and given to applicants as guides to use in the development of their plans and proposals.

Within the BLM districts there is a variety of professional resource and engineering skills essential to the review of construction proposals. Specialists are encouraged to utilize these resource personnel when they encounter projects whose scope goes beyond their level of expertise.

DESCRIPTIVE OUTLINE FOR PLANS OF DEVELOPMENT

I. DESCRIPTION

Briefly summarize the purpose, answering these questions:

- A. What is it for?
- B. What does it support?
- C. What is the season of use?
- D. What other agencies are involved?
- E. What special authorizations or permits are required?

The description should set the tone for identification of the scope of the proposal, engineering requirements, necessary reviews, impacts on existing right-of-way facilities, etc.

II. RECONNAISSANCE AND LOCATION

List criteria that may influence the location of the facility.

- A. Is the facility compatible with existing Bureau planing documents?
- B. What is the present land use?
- C. What are the resource conflicts, now and under the proposal?
- D. What engineering standards will be used?
- E. What are the air quality standards and how will the proposal effect them?
- F. What are the impacts from the proposal on soil and watershed conditions?.
- G. What construction materials are required?
- H. Does proposal use existing corridors?
- I. What are the visual impacts?
- J. Is the proposal on areas where future ownership adjustments are planned?

III. ANCILLARY RIGHTS-OF-WAY AND PERMITS

- A. List actions necessary to support the proposal, such as other BLM permits; other Federal, state, or county permits; or hearings.
- B. How will the holder cross other existing Rights-of-Way?
- C. What are the clearance requirements? - cultural, threatened and endangered species, etc.
- D. Is power, water, access, or communications needed?

IV. ENGINEERING SURVEYS

Define the degree of engineering survey(s) expected including maps and design specifications. Complexity may range from a flag line to a centerline with elevations and cross sections every 100 feet.

V. DESIGN

Define the minimum engineering standard. Stipulate design speed for a road or an accepted industry standard. Degree of design must be compatible with the scope of the project. For plant sites, the design may incorporate extensive modeling to predict air quality problems. Visual resource management must be considered in the design.

VI. PLANS AND SPECIFICATIONS

Define what engineering plans and construction specifications will be required by the BLM. On simple proposals such as road rights-of-way over existing roads, only a description of the work may be required, i.e., blading the road or we may only want verification of the contractors set of plans. Complex proposals require a review of the holder's construction plans and specifications. Contracts for fabrication of steel pipe or installation specifications of mechanical systems is not necessary, but drainage, earthwork, and reclamation specifications are.

VII. CONSTRUCTION

Describe the construction methods including stabilization or restoration methods and schedules for the prime facility and ancillary projects. Determine whether the operator plans to do the work through contractors or by his own crews. Determine whether work camps are needed. Size of work force, number of vehicles, and amounts of materials to be transported and stockpiled may dictate redesign of the access road.

VIII. OPERATIONS AND MAINTENANCE

List considerations to be addressed for the specific proposal such as:

- A. Safety: employees, other users, public.

- B. Waste disposal: litter, sanitation.
- C. Inspection and maintenance schedules.
- D. Work Schedules: seasonal, shifts.
- E. Fire control.
- F. Access maintenance: snow removal, mud problems.
- G. Proposed chemical applications
- H. Pollution control.
- I. Erosion control: drainage.
- J. Joint responsibilities: coordination.
- K. Monitoring of site: specific mitigation.

Maintenance of stabilization and restoration efforts must be emphasized. Followup inspection of maintenance efforts during operations is essential.

IX. RESTORATION AND ABANDONMENT

Define the expected scope of restoration and abandonment in specific terms. The scope of restoration required will be included in the holder's design and construction budget, therefore, it must be stipulated at the beginning as a condition of approval. (The cost of abandonment and restoration can exceed the cost of the original earthwork.)

X. OTHER STAFF SUPPORT AND EXPERTISE

Required professional, agency, or staff coordination and/or reviews.



Airports, Airstrips & Heliports

AIRPORTS, AIRSTRIPS, AND HELIPORTS

INTRODUCTION

Airstrips and heliports may be permitted under 2800; airports are generally permitted under 2640. However, the items discussed in this outline and the role of the FAA are identical in each situation, and a plan of development submitted for an airstrip, heliport, or airport should follow this analysis. Thus, airports are included in this section to help illustrate the usefulness of this outline.

Because airports are open for public use, the design and construction of airports is subject to the Federal Aviation Administration's National Airport Standards. These standards have been developed for nationwide application in design and construction of airports. Through the use of these standards, each airport is made compatible with other airports and the national system of airports.

It is required in the Airport Act 1955 that FAA be notified by the applicant of any proposed landing site (FAA Form 7480-1); and FAA will be notified of proposed construction within 20,000 feet of an airport when the height of the structure is expected to exceed 1 foot for every 100 feet of distance for the airport (200 feet at 20,000 feet, 100 feet at 10,000 feet), FAA 7460-1.

The FAA is the source of a great amount of detailed data on airport design and construction. When undertaking an airport right-of-way application, the staff specialist or applicant should immediately consult with the FAA Regional Headquarters of Airspace and Procedures Office, or FAA Airport District Office for advice and assistance. The Authorized Officer will consider FAA concerns and right-of-way stipulations will reflect FAA design and other requirements.

DESCRIPTIVE OUTLINE FOR PLANS OF DEVELOPMENT

AIRPORTS, AIRSTRIPS, AND HELIPORTS

I. DESCRIPTION

- A. Anticipated types, weight, and volume of air traffic.
- B. FAA National Airport Plan: Summary of airport needs and recommended development.
- C. Primary use: Air carrier airport, servicing scheduled airlines; or general aviation airport, servicing commercial, business, or personal aviation.
- D. Airport category: VFR airport, serving aircraft operations under visual flight rules; or other airport, providing instrument landing facilities.
- E. Proposed location, acreage required.

II. RECONNAISSANCE AND LOCATION

- A. Compatibility with planning decisions.
- B. Availability of utilities.
- C. Drainage: Hydrologic studies, soils analysis.
- D. Wind and weather.
- E. Special conflicts: Impacts on property values, nuisance and noise, hazard and risk.
- F. Potential for expansion.
- G. Year-around or seasonal use.
- H. Ground Access (legal and/or physical).
- I. Other resource considerations: Threatened and endangered species, cultural resources, wildlife, watershed.

III. ANCILLARY RIGHTS-OF-WAY AND PERMITS

- A. Associated rights-of-way: Roads, powerlines, waterline, material site, telephone.
- B. Municipal and county fuel storage permits.
- C. Civil Aeronautics Board (CAB) certification.

- D. FAA approval to ensure airspace compatibility with existing air traffic patterns.
- E. "Notice of a Landing Area Proposal", FAA Form 7480-1 (not a formal authorization from FAA).

IV. ENGINEERING SURVEY

- A. Size and complexity of airport, airstrips, and facilities define level of survey required. Even small landing strips require centerline, profile, and cross sections.
- B. Additional plat surveys for ancillary facilities: Right-of-way centerlines, boundaries.
- C. Hydrologic surveys to support drainage design.
- D. Section corner ties and legal description.
- E. Acreage calculations.

V. DESIGN

- A. Consult with local FAA District Airport Engineer for advice and assistance.
- B. Reference "FAA Airport Design Manual" for general use and "VFR Airports" for small airports operating under visual flight rules.
- C. Drainage pattern.
- D. Ancillary buildings: Fuel storage, offices, hangars, restrooms.
- E. Runway surface type.
- F. Access roads: Refer to Descriptive Outline for Plans of Development--Roads.
- G. Verify qualifications of designer.

VI. PLANS AND SPECIFICATIONS

- A. Plans and specifications for airport facilities should be reviewed by FAA District Airport Engineer.
- B. Bureau staff specialists and engineers will review ancillary facilities: Culverts, buildings, material sites, roads, powerlines, fences.
- C. Traffic control, access to public highways.

VII. CONSTRUCTION

- A. Schedule: Established seasonal restrictions for protection of wildlife and watershed.
- B. Methods: Contractors or Holder's employees.
- C. Construction staking.
- D. Stabilization and restoration.
- E. Material pits, disposal areas, hazardous waste (i.e., chemicals from crop dusting aircraft).
- F. FAA/BLM/Holder inspection: Verify qualifications.

VIII. MAINTENANCE AND OPERATION

Special considerations: Snow removal, wildlife and livestock control, fire and safety, search and rescue, oil and gas spills, security, emergency landings.

IX. STABILIZATION AND ABANDONMENT

- A. Determine end result expected.
- B. Obliteration of earthworks and structures.
- C. Removal of surfacing material and disposal.
- D. Revegetation.

SAMPLE STIPULATIONS

AIRPORTS OR LANDING STRIPS

FAA Requirements

"Prior to construction, the Holder shall submit a "Notice of a Landing Area Proposal" to the Federal Aviation Administration. The Holder shall comply with the recommendations of the FAA concerning any conflicts between the Holder's proposal and other air space uses. A copy of the FAA response to the "Notice of Landing Area Proposal" shall be forwarded to the Authorized Officer."

Subordinate Authorizations

"The Bureau of Land Management reserves the right to grant additional authorizations for the use of this area as a landing strip."

Exemption Clause

"Emergency landings and use of the air strip by Federal and state agencies shall be accommodated at no charge."



Commercial Recreation & Public Facilities

COMMERCIAL RECREATION AND PUBLIC FACILITIES

INTRODUCTION

Profit-making organizations, including recreation facilities, such as parks, ski areas, water recreation facilities, rest areas, and gunnery ranges; landfills; cemeteries; public buildings; and other public facilities are considered in this section. Non-profit organizations, although usually authorized under 2700 or 2900, would address the same concerns in their plans of development under a recreation and public purposes application.

DESCRIPTIVE OUTLINE FOR PLANS OF DEVELOPMENT

COMMERCIAL RECREATION AND PUBLIC FACILITIES

I. DESCRIPTION

- A. Proposed use.
- B. Expected patronage.
- C. State Comprehensive Outdoor Recreation Plan (SCORP) for recreation facilities: Whenever Federal funds are involved, demand for this type of facility should be reflected in the SCORP developed by individual states in cooperation with the National Park Service.
- D. Size and Component Parts.
- E. Length of use: Temporary or permanent.
- F. Category of applicant: State, city, nonprofit association, etc.

II. RECONNAISSANCE AND LOCATION

- A. Critical elements: Suitability of the location to proposed use.
- B. Planning decisions.
- C. Existing rights-of-way, compatible uses.
- D. Mineral status: Leased tracts, mining claims.
- E. Soils, topography, flood plain.
- F. Adjacent land uses: County zoning.
- G. State Comprehensive Outdoor Recreation Plan (SCORP).

III. ANCILLARY RIGHTS-OF-WAY AND PERMITS

- A. Utilities: Power, water, sewer.
- B. Building permits.
- C. State health.
- D. Water rights (state), Section 404 (Corps of Engineers).

IV. ENGINEERING SURVEY

- A. Site plan, showing buildings, parking areas, utilities, use areas.
- B. Section corner ties and legal description.
- C. Acreage calculations.

V. DESIGN

The facility should be designed by a professional engineer or architect licensed in the appropriate state or by a state or Federal agency. Design shall conform to applicable county and state public health requirements and other Federal, state, and county standards.

- A. Site plan: Buildings, landscaping, erosion control.
- B. Safety requirements.
- C. Handicap access.
- D. Ancillary projects.
- E. Water treatment facilities.

VI. PLANS AND SPECIFICATIONS

- A. Copy of construction contract.
- B. Ancillary structures.
- C. Utility system detail: Power, water, telephone.
- D. Special mitigation.

VII. CONSTRUCTION

- A. Scheduling.
- B. Method: Contract, Holder's employees, volunteer labor.
- C. Ancillary facilities: See applicable sections of this handbook.

VIII. MAINTENANCE AND OPERATION

- A. Maintenance responsibility: Cooperative agreement, type of maintenance.
- B. Signs.

- C. User fees.
- D. Site security and safety: Lighting, fencing/other barriers.
- E. Insurance.
- F. Inspection and monitoring: Public health-county responsibility; proof of construction - Bureau responsibility; construction and operations inspections - Bureau/Holder.
- G. Compliance.

IX. STABILIZATION AND ABANDONMENT

- A. Transfer to another operator.
- B. Stabilization of active use areas.
- C. Removal of facilities.
- D. Total obliteration or modification for other use.

SAMPLE STIPULATIONS

COMMERCIAL RECREATION AND PUBLIC FACILITIES

Approval of Subordinate Use

"Any other lease, sublease, assignment, or third-party contract that affects the management of the based area is expressly prohibited unless such document is first approved by an Authorized Officer of the Bureau of Land Management."

Rental

"This lease is issued without monetary consideration to _____ for _____ purposes. The BLM reserves the right to initiate a rental fee in accordance with existing regulations should the use, management, or Holder's qualifications for such waiver change."

Sanitation Facilities

"Sanitation facilities meeting county and state standards shall be available on the site for public use (at any time the site is open for use)."

Prohibitions

"The following acts or practices are prohibited: (Overnight camping, camping over 14 days, shooting, pits, dumping, etc.)."

User Fees

"The Holder shall make no more than reasonable charges for use of the facilities on the applied-for land (whether by concession or otherwise), and no more for entrance to and use of the area than is charged at other comparable installations managed by state and local agencies. All charges are subject to review and modification by the BLM District Manager under due process procedures."

Records

"The following records shall be kept and maintained by the Holder and be available for inspection by _____ at reasonable times:

- a. Use made of the site including pertinent data such as visitors, volumes of material, times, and dates.
- b. Problems encountered or complaints received and corrective actions taken.
- c. Fees charged.

- d. Inspections by other jurisdiction.
- e. Hours of operation."

Monitoring

"The following monitoring, sampling, testing, or measurements shall be carried out by the Holder and results (available/submitted) to the Authorized Officer at _____ at the specified intervals:

(water depth or flow rates, snow conditions, air quality data, water quality data (drinking), noise data)."

Site Security

"The following site security measures shall be implemented and maintained by the Holder:

- a. Fences, screens, covers, and gates in accordance with _____ drawings at _____ locations.
- b. The site will be manned/guarded at _____ times.
- c. Signs containing _____ (information will be placed _____). Access to the site at _____ (location) will be open/closed at _____ (times or conditions) to the public."



Communication Sites

COMMUNICATION SITES

INTRODUCTION

In addition to routine surface use and resource evaluation, a comprehensive technical evaluation of the proposed communication system is necessary. Applicant should complete this evaluation, with preliminary concurrence by the FCC, prior to application. Bureau telecommunications staff (district or state) must be consulted to ensure that the Holder's evaluation is technically sufficient and the facility will not interfere with other communication systems. When entities such as civil defense organizations are the applicants, it should be remembered that they are exempt from the FCC requirements, i.e. RACES STATIONS.

DESCRIPTIVE OUTLINE FOR PLANS OF DEVELOPMENT

COMMUNICATION SITES

I. DESCRIPTION

- A. Ability to use existing facility: sublease.
- B. Opportunity to allow future expansion or allow for subsequent use by others, including BLM, USFS.
- C. Proposed location.
- D. Area of coverage.
- E. Acreage requested.
- F. Anticipated season of use/access.
- G. Ensure that FCC license is appropriate for type of operation proposed: Low power intermittent (mobile radio), high power continuous (TV, FM), microwave common carrier (ATT, commercial service).
- H. Submission of technical data: equipment, frequency, elevation, location.

II. RECONNAISSANCE AND LOCATION

- A. Availability of utilities (power)
- B. Planning decisions specific to telecommunications (potential sites), current or pending land use (corridors).
- C. Geologic and soil type compatibility.
- D. Alternate site location.
- E. Compatibility with other users.
- F. Potential conflicts with other communication modes: Mixing of high power continuous with low power intermittent operations, obstructions between microwave towers.
- G. Other resource considerations: Threatened and endangered species, cultural resources, wilderness areas, visual impact.

III. ANCILLARY RIGHTS-OF-WAY AND PERMITS

- A. Associated rights-of-way: roads, power lines, material sites.

- B. Acquisition of easements across other landowners: There may be justification for BLM to acquire these easements.
- C. FCC concurrence on proposed frequency.
- D. Documentation of FAA concurrence for structures constructed within 20,000 feet of airports: "Notice of Proposed Construction/Alteration" (FAA form 7460-1).

IV. SURVEY

- A. Tower sites, shelters.
- B. Section corner ties and legal description.
- C. Acreage calculation.
- D. Ancillary facilities: Plan, profile, typical cross section, when applicable.

V. DESIGN

- A. Tower design and finish shall consider visual impacts.
- B. Industry standards: Electronics Industries Associates (EIA) Standard RS-222-B, as amended for tower construction and design; FAA Advisory Circular AC No. 70-7460-26, "Proposed Construction/Alteration of Object That May Affect Navigable Air Space," for height, color, and lighting.
- C. Wind load.
- D. Staging areas.
- E. Drainage patterns.
- F. Shelters: Portable, nonflammable.
- G. Ancillary facilities: Reference applicable sections of this handbook.

VI. PLANS AND SPECIFICATIONS

- A. Typical drawings of tower installation, shelters, and guy wire configuration.
- B. Engineering standards, construction codes.
- C. All surface disturbances: Roads, drainage, power lines.
- D. All electrical wiring must meet "NEC" standards.

VII. CONSTRUCTION

- A. Site staking.
- B. Schedule: Season, dates, hours.
- C. Method: Equipment - ground or helicopter.
- D. Material site: Borrow area.
- E. Fencing.
- F. FCC/BLM/Holder inspection: Verify qualifications.

VIII. MAINTENANCE AND OPERATION

- A. Access road.
- B. Authorization for sublease.
- C. Stabilization/erosion control measures.
- D. Special considerations: Snow removal.
- E. Signing: BLM right-of-way number posted on shelter door.

IX. RESTORATION AND ABANDONMENT

- A. Removal and disposal of surface materials: Shelters, towers, guy wires, platforms.
- B. Rehabilitation: Seeding, recontouring.
- C. Determine end result expected: Total obliteration of all facilities, or identification of those facilities to remain (road, power line) and future use.

SAMPLE STIPULATIONS

COMMUNICATION SITES

FCC License

"The right-of-way herein granted is conditioned upon the submission of an approved license and/or renewal license granted by the Federal Communications Commission for the installation. If a copy of the FCC license was not submitted with the application, it shall be submitted within 90 days of issuance of the grant, or the grant will be terminated. The BLM may grant an extension to the 90 days, if requested in writing by the applicant."

Interference

"Holder shall at all times operate its radio-electronic equipment in such a manner as not to cause interference with radio-electronic operations of existing users in the vicinity. If such interference results from Holder's operations, Holder will promptly, at its own expense, modify its equipment and operations, or shut down if necessary to eliminate or reduce the interference to the satisfaction of the adversely affected user."

Termination

"This right-of-way shall terminate 60 days after expiration or cancellation of the FCC license or Interior Department Radio Advisory Committee (IRAC) radio frequency assignment, unless renewal is obtained within this period and a copy of such renewal is furnished to the Authorized Officer."

Reassigned Rights

"Electronic facilities installed on the site shall not be operated on rights reassigned to any other person or organization without the written approval of the Authorized Officer."

Modification

"Copies of the amended FCC construction permit, or license or IRAC frequency assignment, together with corrected block diagrams, must be filed with the Authorized Officer before modification of previously authorized facilities will be approved."

Subleasing

"The Holder shall notify the Authorized Officer of any intent to locate additional users within or upon their facilities no less than 45 days prior to occupancy of Holder's facilities. Information that must be included is:

- a. Current name, address, and phone number of third party user(s).
- b. Expected date of occupancy.
- c. A photo or sketch illustrating the type of antenna to be installed as well as any other planned physical changes to the exterior facilities operated by the Holder."

Subleasing Notification

"No less than 45 days prior to occupancy of the Holder's facility, the Holder shall notify existing users within a one-mile radius that it intends to accommodate a new communication user in its facility. Existing users can then file any comments pertaining to potential frequency or electromagnetic problems with the Federal Communication Commission, 1919 M Street, N. W., Washington, D. C. 20554, with a copy to the Authorized Officer."

Joint Maintenance

"For the purpose of determining joint maintenance responsibilities, the Holder shall notify all authorized communication site road users of this right-of-way. Holder shall provide the Authorized Officer, within 30 days from date of grant, with the names and addresses of all parties notified, dates of notification, and method of notification. Failure of Holder to share proportionate maintenance costs on the common use access road in dollars, equipment, materials, or manpower with other authorized users may be adequate grounds to terminate the right-of-way grant. The determination as to whether this has occurred and decision to terminate shall rest with the Authorized Officer. Upon request, the Authorized Officer shall be provided with copies of any maintenance agreement entered into."



Pipelines

PIPELINES

INTRODUCTION

The Bureau's concern in pipeline applications is to understand the scope of the proposal and its potential impacts on surface use. Fabrication, pipeline engineering, transmission, and safety are responsibilities of the Department of Transportation (DOT) and/or subject to accepted standards of the pipeline industry.

DESCRIPTIVE OUTLINE FOR PLANS OF DEVELOPMENT

PIPELINES

I. DESCRIPTION

- A. Pipeline systems: Gathering system, trunkline system, or distribution system. Pipe size, right-of-way widths, length, and location. Is the pipeline above ground or buried.
- B. Petroleum products and by-products: Crude oil, gasoline, sweet or sour gas, molten sulphur, petrochemicals.
- C. Commodity pipelines: Slurry, water, chemicals.

II. RECONNAISSANCE AND LOCATION

- A. Pipeline location criteria: Economics, maximum grade of slurry lines.
- B. Planning decisions affecting route: Established corridors, areas of critical environmental concern.
- C. Feasibility of restoration and stabilization: Relative difficulty of recontouring or reseeding.
- D. Compatibility with other rights-of-way: Power lines, roads, canals, irrigation ditches.
- E. Mineral status, leased tracts.
- F. Alternate routes.
- G. Other resource considerations: Cultural, threatened and endangered species, visual impacts, wildlife, watershed.
- H. Seismic zones.
- I. Access routes.

III. ANCILLARY RIGHTS-OF-WAY AND PERMITS

- A. Rights-of-way from adjacent ownership.
- B. Crossing permits: Highway, railway, other pipelines.
- C. Access roads.
- D. Material sites: Select borrow.
- E. Proof of water rights for water lines (State Engineer).

- F. Equipment and material staging areas.
- G. Crew housing: Approved camping areas, worker camps.
- H. Corps of Engineers Section 404 Permit.
- I. Other regulatory agencies: State and Federal Departments of Transportation, Federal Energy Regulatory Commission.

IV. ENGINEERING SURVEYS

Generally standard industry practice is acceptable, however if BLM needs the information, the minimum requirements are:

- A. Plotted map: USGS topographic maps.
- B. Aerial photos of centerline.
- C. Site-specific engineering surveys, including centerline, profiles, cross sections, steep terrain (side hill locations), river crossings, highway and railroad crossings, and others as required.
- D. Section corner ties, legal description of centerline.
- E. Acreage calculations.

V. DESIGN

The staff specialist should be concerned about pipeline design whenever it affects location. Engineering design standards are dictated by Department of Transportation regulations and industrial standards such as American Petroleum Institute (API), American Society of Mechanical Engineers (ASME), and American National Standards Institute, Inc. (ANSI) - "American Standard Code for Pressure Piping." When questions arise over design criteria, the specialist should consult with staff engineers.

- A. Design features that could influence location: Surface or buried, high or low pressure, nontoxic or toxic, soils and geology.
- B. Special consideration: Maximum grade for slurry lines, risk analysis for sour gas transmission. These may dictate the location of the pipeline.
- C. Cathodic protection: Proximity to power lines, corrosive soils.
- D. Special mitigation: Unique erosion control, crossings, drainage, protective devices (block valves).

VI. PLANS AND SPECIFICATIONS

- A. Engineering drawings and specifications for site-specific problems relating to surface use or special mitigation.
- B. The plans and specifications specific to the pipeline may only require typical diagrams, drawings, and cross sections.

VII. CONSTRUCTION

Installation, including fabrication and welding, is covered under API standards, and enforcement of these is not a Bureau responsibility.

- A. Schedule: Established seasonal restrictions for protection of wildlife and watershed.
- B. Description of methods and techniques: May be illustrated through typical drawings.
- C. Utilization of special equipment, e.g., auger backfillers, double-joint pipe hauling trucks should be noted prior to development of stipulations.

VIII. OPERATION AND MAINTENANCE

- A. Inspection: Ground or air, frequency.
- B. Maintenance: Removal and replacement, mechanical repair, recontouring and restoration (erosion control).
- C. Identification of proposed or approved access routes.
- D. Vegetation control.
- E. Signing: Warnings, BLM right-of-way number.
- F. Emergency contingency plans: Ruptures, spills, fire, evacuation.
- G. Hydrostatic testing and subsequent release of water.

IX. STABILIZATION AND ABANDONMENT

- A. Revegetation: Consider mulch, fertilizer, equipment to be used, and timeframes.
- B. Recontouring.
- C. Water breaks, special erosion treatments: Riprap, silt traps, fabric treatment.
- D. Prohibiting access: Barricades.
- E. Define whether pipe will be removed or abandoned in place.
- F. Decontamination of pipelines.

SAMPLE STIPULATIONS

PIPELINES

Water-Control Structures

"Holder shall design and construct adequate water-control structures in each drainage crossing to prevent excessive erosion along the pipeline and protect the pipeline from the natural erosion process within the drainage."

Waterbars

"Holder shall construct waterbars to control erosion on all slopes as follows:

Percent Side Slope

Interval

(Local experience will dictate the criteria.)

Waterbars shall be constructed to simulate imaginary contour lines of the slope, ideally with a channel grade of two percent or less. A close interval is the general recommendation unless on rock or very stable soil. Waterbars shall begin in vegetation on the uphill side and feather out into vegetation or rock on the downhill side. Waterbar locations on slopes greater than 12 percent shall be flagged and the location approved by the Authorized Officer prior to construction."

Pipeline Industry Standards

"All design, material, and construction, operation, maintenance, and termination practices employed with the pipeline shall be in accordance with safe and proven engineering practices and shall meet or exceed the following standards:

- a. USA Standard Code for Pressure Piping, ANSI B 31.4, 'Liquid Petroleum Transportation Piping System.'
- b. Department of Transportation regulations, 40 CFR 195, 'Transportation of Liquids by Pipeline.'
- c. ASME Gas Piping Standard Committee, December 15, 1970: 'Guide for Gas Transmission and Distribution Piping System.'
- d. Department of Transportation regulations, 49 CFR 192, 'Transportation of Natural and Other Gas by Pipelines: Minimum Federal Safety Standards.'

Construction Limits

"A minimum of ten feet of undisturbed surface shall be maintained between fencelines and roads or pipelines that are constructed parallel to fences."

Restoration and Topsoil

"Before seeding, Holder shall restore all disturbed areas to the original form, slope, contour, and soil density to the extent practicable, subject to the Authorized Officer's approval. Stockpiled topsoil shall be the top layer."

Drainage Restoration

"Holder shall restore drainages to their original bank configuration, stream bottom width, and channel gradient. Loose soil, road crossing fill, and culverts shall be removed from drainage channels."

Water Crossings

"Fording of streams and rivers with construction equipment and other motorized vehicles shall be permitted only with prior approval from the Authorized Officer. Temporary bridges, culverts, or other structures shall be used whenever stream crossings are necessary, unless otherwise approved in writing by the Authorized Officer. Rivers, streams, and impoundments shall be promptly cleared of all falsework, piling, debris, or other obstructions placed therein or caused by construction activities."

Signs

"Signs shall be posted at road crossings and other appropriate points to identify the pipeline and list the emergency telephone number. On Bureau land, these signs shall also carry the BLM case number assigned to this project."

Accident Reports

"Holder shall inform the Authorized Officer within 48 hours of any accidents on public lands that require reporting to the Department of Transportation as stipulated in 49 CFR 195."

Contingency Plan

"Holder shall submit its contingency plan to the Authorized Officer prior to scheduled start up. The plan shall conform to this stipulation and the National Oil Hazardous Substances Pollution Contingency Plan, 40 CFR 300 and shall:

- a. Include provisions for oil or other pollutant spill control.
- b. Specify that the action agencies responsible for contingency plans in (appropriate state(s)) shall be among the first to be notified in the event of any pipeline system failure resulting in a spill of oil or other pollutant.
- c. Provide for restoration of the affected resource.

- d. Provide that the Authorized Officer shall approve any materials or devices used for oil spill control and any disposal sites or techniques selected to handle oil matter or other pollutants.
- e. Include separate and specific techniques and schedules for cleanup of spills of oil or other pollutants on land or waters."

Spill Cleanup

"If during any phase of the construction, operation, maintenance, or termination of the pipeline, any oil or other pollutant should be discharged from the pipeline system, impacting Federal lands, the control and total removal, disposal, and cleanup of such oil or other pollutant, wherever found, shall be the responsibility of Holder, regardless of fault. Upon failure of Holder to control, dispose of, clean up such discharge on or affecting Federal lands, or to repair all damages to Federal lands resulting therefrom, the Authorized Officer may take such measures as he deems necessary to control and clean up the discharge and restore the area, including, where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the Holder. Such action by the Authorized Officer shall not relieve the Holder of any responsibility."

Discharge of Pollutants

"Holder is prohibited from discharging oil or other pollutants into or upon the navigable waters of the United States, adjoining shorelines, or the waters of the contiguous zone in violation of the Federal Water Pollution Control Act, as amended in 33 U.S.C. 1161(B), and the regulations issued thereunder, or applicable laws of the states of (list appropriate states) and regulations issued thereunder. Holder shall give immediate notice of any such discharge to the Authorized Officer and such other Federal and state officials as are required by law to be given such notice."

Firewood

"When clearing in pinyon-juniper or other nonmerchantable type vegetation, the trees removed shall be left available for wood gathering activities. Soil shall not be mixed with the trees during right-of-way clearing."

Surface Pipelines

"The pipeline shall be laid above ground from station _____ to station _____ and no blading shall be allowed between these stations."

Double-trenching

"Holder shall practice double-trenching during construction, wherever there is a topsoil layer of _____ inches of more."

Discharge of Hydrostatic Testing Water

"Prior to discharge, hydrostatic testing water will be tested and processed, if necessary, to ensure that water meets local, state or Federal water quality standards."

"Prior to discharge of hydrostatic testing water from pipeline, the Holder shall design and install a suitable energy dissipater at the outlets, and design and install suitable channel protection to ensure that there will be no erosion or scour of natural channels within the affected watershed as a result of discharge. Holder will be responsible for any erosion or scour resulting from discharge. Sandbags, rock, or other materials or objects installed shall be removed and cleaned up upon completion of hydrostatic testing."



Plant Sites

PLANT SITES

INTRODUCTION

Plant sites are large and complex facilities such as gas sweetening plants and power generating plants, that may be issued under a variety of authorities, including 2800. These actions require extraordinary coordination with Federal, state, and county agencies. Extensive NEPA environmental analyses and documentation are normally necessary. These processes often involve extensive negotiations over mitigation requirements. In addition to the plant site, rights-of-way will be needed for ancillary facilities such as roads, railroads, pipelines, etc. These rights-of-way cannot be overlooked and should be considered in conjunction with the plant site.

DESCRIPTIVE OUTLINE FOR PLANS OF DEVELOPMENT

PLANT SITES

I. DESCRIPTION

- A. Type of plant or industrial site.
- B. Support requirements: Utilities, transportation, housing.
- C. Anticipated start-up date, construction schedule.
- D. Preapplication meetings with Federal, state, and local agencies.

II. RECONNAISSANCE AND LOCATION

- A. Planning decisions: Resource conflicts and zoning.
- B. Mineral status: Lease tracts, mining claims.
- C. Air quality: State and regional standards, wilderness dictate location and density of plants.
- D. Emission control: Description of available technology and feasibility.
- E. Geology: Seismic risk zone.
- F. Topography, soils: Drainage, erosion potential.
- G. Utilities: Water, power, fuel.
- H. Transportation systems: Highway, rail, pipeline.
- I. Material sources: Gravel, fill, aggregate.
- J. Other resource considerations: Visual impacts, threatened and endangered species, wildlife, livestock, water quality.

III. ANCILLARY RIGHTS-OF-WAY AND PERMITS

Although the Bureau grants rights-of-way on public land, state or county governments must issue construction permits for the plant, and these processes can be long and involved. Rights-of-way or easements ancillary to the plant site may also be needed, on public and private land.

- A. County: Building permits.
- B. State construction, maintenance, and operation permits (siting permits); pollution control (air, water) permits; water rights.

- C. Staging areas: Material, equipment.
- D. Material sites: Fill, gravel, aggregate.
- E. Easements on other ownerships.
- F. Ancillary Facilities (roads, railroads, pipelines, power lines, communication sites often constructed by other holders):
Reference the applicable sections of this handbook.

IV. ENGINEERING SURVEYS

Several surveys may be needed to support this project, since each segment of the project, i.e., road, power line, requires survey data. The Bureau's concern is for total surface use; therefore, it is important that complete data are available.

- A. Plant site: Location survey and site map.
- B. Ancillary facilities: Reference appropriate sections of this handbook.
- C. Section corner ties, legal description.
- D. Acreage calculations.

V. DESIGN

- A. Plant design: Staff specialists should be concerned about plant design whenever it influences land use, such as location, visual impact, air and water quality, and other resource conflicts. They should not be concerned with electrical, chemical, or mechanical systems within the plant. Access road design is often a central issue; in mountainous terrain the impacts of the road can be greater than those of the plant. Reclamation should be considered during the design process rather than after construction.
- B. Ancillary facility design: Reference the appropriate sections of this handbook.
- C. Erosion control: This should be an integral part of the total design, including stabilization during the construction phase, submitted in the form of an "Erosion Control, Revegetation, and Restoration Plan" (ERRP).
- D. Hydrology of plant site: Anticipate increased runoff due to site alteration (roofs, paving-grossly underestimated in the past).

VI. PLANS AND SPECIFICATIONS

The Bureau emphasizes minimum surface disturbance and maximum reclamation potential. These and a concern for drainage and erosion control should be evident in the plans and specifications for earthwork and slope stabilization, drainage, roads, etc., which are subject to Bureau review and approval.

- A. Site plan: Building, reservoirs, fences, storage areas, etc.
- B. Copy of construction contracts: As they relate to surface use, erosion control, etc.
- C. Ancillary facilities: Reference appropriate sections of this handbook.
- D. Utility system detail.

VII. CONSTRUCTION

Construction scheduling is seasonally dependent and often must be changed due to weather conditions. Avoiding winter and spring startup and shutdown dates will mitigate some weather-related conflicts, since the greatest potential for permanent erosion and offsite damage is during the spring thaw period. Stabilization during construction (erosion, drainage) is critical in any season.

- A. Scheduling: Plant site and ancillary facilities.
- B. Type and method: Reference applicable sections of this handbook.

VIII. OPERATION AND MAINTENANCE

- A. Roads.
- B. Snow removal, control of water: Increased runoff.
- C. Fire and safety: Structural and wildfire.
- D. Safety, contingency plans: Hazardous spills.
- E. Vegetation control: Noxious weeds.
- F. Security.

IX. STABILIZATION AND ABANDONMENT

- A. Stabilization: Implementation of erosion control plans that will reflect stabilization during construction, use, and abandonment of the plant and ancillary facilities, zero discharge standards.
- B. Abandonment Objective: Removal of structures and obliteration or blending of the plant site and ancillary facilities.

SAMPLE STIPULATIONS

PLANT SITES

Site-specific stipulations relating to ancillary projects would be developed to reflect special mitigation required, as defined in the decision documents, if these projects were not covered in a general plan of development. In practice, the applicant submits a detailed plan of development including technical data. The Bureau attaches routine terms and conditions along with stipulations that incorporate the plan of development in the terms and conditions of the grant.

Examples of such unique stipulations follow:

Cost reimbursement

"The Holder shall reimburse the United States for all reasonable administrative costs subject to the terms and conditions of the Memorandum of Understanding submitted for _____ review on _____, 19 _____, or as modified by agreement between _____ and the BLM."

Plan of Development

"Holder shall conduct all construction, operation, maintenance, and termination activities associated with this grant in accordance with the Plan of Development approved by the BLM on _____, 19 _____, the Erosion Control, Revegetation and Restoration Plan (ERRP) approved _____, _____, and technical data submitted by _____ as part of the updated application submitted _____, 19 _____."

Modifications

"Holder shall construct, operate, and maintain the facilities and structures within the grant in strict conformity with the descriptive and technical data furnished to the Bureau of Land Management by application and supplemented by the Plan of Development. The Holder shall furnish major project modifications to the BLM Authorized Officer at least twenty (20) working days prior to implementing those changes."



Powerlines

POWERLINES

INTRODUCTION

Power lines are applied for and constructed by public and private utility companies and utility cooperatives. In some regions, another Federal agency may be the applicant, e.g., Bonneville Power Administration, Western Area Power Administration (DOE). The Bureau processes rights-of-way on public land. State public service commissions certify the public need and have authority for review and enforcement of safety and engineering standards. The primary emphasis of the Bureau specialist should be the evaluation of routes and incorporation of mitigation measures in the stipulations.

DESCRIPTIVE OUTLINE FOR PLANS OF DEVELOPMENT

POWERLINES

I. DESCRIPTION

- A. Transmission line: Voltage level, overhead or underground.
- B. Interagency coordination, identification of lead agency.
- C. Regulatory and licensing authorities.
- D. Utility groups: Identify participants.
- E. Size and type of structures: Single or double-pole, wood or metal towers; buried.
- F. Origin and destination.
- G. Right-of-way width: Future expansion.
- H. Individual, public, or industrial use.

II. RECONNAISSANCE AND LOCATION

- A. Land use decisions that affect location: Corridors.
- B. Public hearings may be required by public service commissions for large power lines (over 230 kv). This generally affects private land.
- C. Compatibility with other rights-of-way: Pipelines, communication systems, roadways and railways.
- D. Interference with other electrical and distribution systems.
- E. Mineral status: Leasable tracts, mining claims.
- F. Clearance requirements: Temperature, wind, voltage, span, height.
- G. Conflict with other utility distribution areas/districts.
- H. Visual impacts: Specular or non-specular conductors and towers.
- G. Raptors: See BLM Manual 2851, Protection of Raptors.
- I. Access routes, material, and equipment.
- J. Potential for expansion: Additional lines on existing poles or overdesign of towers to accommodate future expansion.
- K. Other resource considerations: Cultural, threatened and endangered species, forestry, wildlife, watershed.

III. ANCILLARY RIGHTS-OF-WAY AND PERMITS

- A. Licensing by public utility authorities.
- B. Access routes and staging areas.
- C. Corps of Engineers Section 404 Permits.
- D. Microwave sites.
- E. FAA review: Aircraft and warning devices, "Notice of Proposed Construction/Alteration" (near airports) FAA form 7460-1.

IV. ENGINEERING SURVEYS

Generally, standard industry practice is acceptable. Minimum requirements are:

- A. Centerline map: USGS topographic map.
- B. Aerial photo of centerline.
- C. Site-specific surveys: Centerline, profiles, cross sections (steep terrain, sidehill locations, river crossings, highway and railroad crossings) and others as required.
- D. Section corner ties and legal description of centerline.

V. DESIGN

The safety and engineering design standard of the industry is the latest edition of the National Electrical Safety Code, or equivalent state code. Transmission line voltage determines design specifications. The staff specialist should be concerned about power line design when it affects route and major structure locations, visual impacts, and other special mitigation requirements, e.g., raptor protections.

VI. PLANS AND SPECIFICATIONS

Engineering drawings and specifications for site-specific problems relating to surface use or special mitigation should be submitted.

- A. The plans and specifications specific to the power line may only require typical drawings and illustrations along with supporting narratives.
- B. Aircraft warning devices: Placement and type.
- C. Roads and communication sites: Reference applicable descriptive outlines for plans of development.

VII. CONSTRUCTION

- A. Schedule: Established seasonal restrictions for protection of wildlife and watershed.
- B. Mobilization and installation: Land-based vehicles or helicopter.
- C. Clearing: Burning plan, timber sale, selective cutting, limits, tapering.
- D. Identification of turn-around areas, framing pads.
- E. Access roads: Permanent and temporary.

VIII. MAINTENANCE AND OPERATION

- A. Approved access routes or helicopter access for maintenance and inspection.
- B. Vegetation control.
- C. Compatible uses of right-of-way.

IX. RESTORATION AND ABANDONMENT

- A. Revegetation.
- B. Roads and staging areas.
- C. Structure removal: Substation, towers, conductors.
- D. Obliteration of roads and structure sites.

SAMPLE STIPULATIONS

POWER LINES

Raptor Protection

The publication cited in the following stipulation provides sufficient information on phase spacing, configuration, and grounding to preclude the existence of significant hazards to large perching birds. A copy of this publication may be obtained from the BLM.

"Unless otherwise agreed upon in writing, power lines shall be constructed according to standards as outlined in "Suggested Practices for Raptor Protection on Power lines," Raptor Research Foundation, Inc., 1981. Industry officials shall assume the burden and expense of proving that pole designs not shown in publications are "eagle safe." Such proof shall be provided by a raptor expert approved by the Authorized Officer. The BLM reserves the right to require modifications or additions to all power line structures placed on this right-of-way, should they be necessary to ensure the safety of large perching birds. Such modifications and/or additions shall be made by the Holder without liability or expense to the BLM."

Visual Impact

"Holder shall coordinate with the Authorized Officer on the design and color of the poles and transmission line to achieve the minimum practicable visual impacts."

Visual Impact

"Holder shall use nonreflecting lines and conductors at the following location(s) to reduce reflection and visibility: (list locations)."

Access Routes

"Whenever practicable, "cross country" access will be utilized without clearing vegetation or grading a roadbed. All construction and vehicular traffic shall be confined to the right-of-way or designated access routes, roads, or trails unless otherwise authorized by specific written permission. All temporary roads used for construction shall be rehabilitated after construction of the power line. Only one road or access route will be permitted to each site requiring access."

Excess Excavation

"Holder shall evenly spread the excess soil excavated from pole holes in the immediate vicinity of the structure site."



Railroads

RAILROADS

INTRODUCTION

Railroads are similar to roads in survey, design, and construction methods. Those items that make the proposal for a railroad unique are presented through the following outline.

Railroads are subject to very strict engineering limitations that cannot be compromised. Railroads cannot have steep grades and sharp curves, so there is far less flexibility to mitigate conflicts by rerouting or changing a curve. These restrictions make the reconnaissance and location phase a very critical step.

DESCRIPTIVE OUTLINE FOR PLANS OF DEVELOPMENT

RAILROADS

I. DESCRIPTION

- A. Single use: private or common carrier (ICC).
- B. Type of product being transported.
- C. New construction, realignment, upgrading.
- D. Right-of-way road.
- E. Origin and destination, relationship to other transportation systems.

II. RECONNAISSANCE AND LOCATION

- A. Alternate routes.
- B. Planning decisions, other land uses.
- C. Mineral status: leasable tracts, mining claims.
- D. Major geologic and soil features.
- E. Material sources: aggregate, select borrow.
- F. Other resource considerations: cultural resources, threatened and endangered species, visual impacts, forestry, watershed, wildlife, state agency sensitive.

III. ANCILLARY RIGHTS-OF-WAY AND PERMITS

- A. Associated rights-of-way: roads, powerlines, switching yards.
- B. ICC permits.
- C. Corps of Engineers Section 404 Permit.
- D. Easements across adjacent ownerships.
- E. Eminent domain.
- F. Competition with other commercial rights-of-way: slurry pipelines.
- G. Crossings and grade separations: roads, pipelines.

IV. ENGINEERING SURVEYS

Railroad survey standards are the recommended practices described by the American Railway Engineering Association (AREA).

- A. Additional plat surveys for associated facilities: grade crossings, building sites, right-of-way road.
- B. Section corner ties, including legal description of centerline.
- C. Acreage calculations by ownership.

V. DESIGN

Railroad design standards are the recommended practices described by AREA. These standards cannot be compromised.

- A. Grade versus separated crossings.
- B. Buildings, switching yards.
- C. Structures: signals, microwave towers, telegraph lines, crossing gates, bridges, culverts.
- D. Livestock/wildlife underpasses, fencing.
- E. Visual impact: cut and fill slopes should blend with terrain (similar to roadway design).

VI. PLANS AND SPECIFICATIONS

- A. Aerial photos of route showing centerline.
- B. Engineering standards: AASHTO, AREA, ASTM.
- C. Detailed engineering drawings, plans, and specifications for railway, including structural elements: bridges, retaining walls.
- D. Drainage: location and design of relief culverts to minimize interruption of natural drainages.

VII. CONSTRUCTION

- A. Schedule.
- B. Inspection by BLM/Holder: Verify qualifications.
- C. Stabilization: temporary and final.
- D. Material pits, disposal areas.

VIII. MAINTENANCE AND OPERATIONS

- A. Minimum maintenance requirements: right-of-way road, drainages, crossings, fences.
- B. Signals.

- C. Fire control on right-of-way.
- D. Safety/accidents.
- E. Hazardous spills: contingency plan.
- F. Hours/times per day of use: length of crossing delays, seasonal wildlife restrictions.

IX. STABILIZATION AND ABANDONMENT

- A. Revegetation.
- B. Scope of abandonment effort: Total obliteration of earthworks and removal of rails, ties, utility and communication lines, roads, etc., or maintenance of the railway bed or other purposes (hiking/biking trails, access roads, etc.)

SAMPLE STIPULATIONS

RAILROADS

Crossings

"The Applicant shall install signs, signals, or other warning devices at grade crossings. In the areas where several roads cross the rail line within a short distance, consideration shall be given to merging the roads into one crossing. The Holder shall provide wildlife and livestock crossings."

Spills

"Contingency plans shall be developed to clean up accidental spillage of detrimental or toxic materials, such as gasoline, oils, and chemicals."



Reservoirs & Dams

RESERVOIRS AND DAMS

INTRODUCTION

Rights-of-way for reservoirs, dams, and other waterworks may be applied for by public agencies, public utilities, irrigation companies, industry, and individuals. When public land is involved, the permitting process involves state and Federal agencies, including the Bureau.

Actions involving small reservoirs, such as livestock, small irrigation, and erosion control structures, are subject to BLM Manual 9170 and state dam safety standards and water rights regulations. For large irrigation and major storage reservoirs, in addition to state standards and regulations, a design manual for reference is the Bureau of Reclamation Water Resources Technical Publication, Design of Small Dams. Dam structures and ancillary facilities will be located, designed, constructed, and inspected by registered professional engineers or professionals of the Bureau or other agencies, such as SCS, BOR.

The Bureau staff specialist should be concerned with processing the right-of-way permit and identifying special mitigation. District and state office engineering staff should be consulted for advice concerning reservoirs and dams.

DESCRIPTIVE OUTLINE FOR PLANS OF DEVELOPMENT

RESERVOIRS AND DAMS

I. DESCRIPTION

- A. Primary use or function: Fisheries; recreation; irrigation; stockwater; wildlife; flood control; industrial, domestic, power, streamflow regulation.
- B. Period of use: Season.
- C. Functional life: Water storage, silt storage.
- D. Size: Dam height, surface area, permanent storage volume, flood storage volume.
- E. Inundation impacts: Existing structures and facilities, other resources.

II. RECONNAISSANCE AND LOCATION

The selection of a reservoir site requires detailed economic, geologic, hydrologic, climatic, engineering, and other analyses. These analyses are often presented in a feasibility and engineering report developed by the Applicant. A copy of this report should be given to the Bureau for evaluation.

- A. Land use planning decisions.
- B. Hydrologic data: Rainfall, streamflow, sedimentation.
- C. Major geologic and soil features: Sand or gravel pockets, clay sources, siltation, soils susceptible to piping or settling.
- D. Alternate locations.
- E. Water quality.
- F. Water rights: Identify to the extent possible all known water rights and public water reserves.
- G. Access: New or existing.
- H. Mineral status: Leased tracts, mining claims.
- I. Other resource considerations: Threatened and endangered species, cultural clearances.

III. ANCILLARY RIGHTS-OF-WAY AND PERMITS

- A. State water rights and dam safety standards.

- B. Existing rights-of-way conflicts (relocation and reconstruction).
- C. Corps of Engineers Section 404 Permit.
- D. Ancillary rights-of-way: Access roads (temporary and permanent), power lines (hydropower), irrigation ditches, triangulation and survey networks, worker camps.
- E. Material sites: Select borrow, riprap, aggregate.

IV. ENGINEERING SURVEYS

The location, design, and construction of reservoirs require specific surveys. These will routinely be required and supervised by professional engineers. Minimum requirements for Bureau review of the project are:

- A. Map showing location of structure and outlet works, high water line, and ancillary facilities.
- B. Section corner ties and legal description.
- C. Acreage calculations.

V. DESIGN

- A. Reservoir should be designed by a professional engineer licensed in the appropriate state or by a state or Federal agency professional. Design criteria shall be based on state and Federal standards.
- B. Special mitigation: Fish ladders, controlled discharge, minimum flow.
- C. Recreation facilities: Parking lots, boat ramps.
- D. Emergency spillway and outlet works.
- E. Hydropower potential.

VI. PLANS AND SPECIFICATIONS

- A. Copy of construction contract.
- B. Ancillary structures, special mitigation.

VII. CONSTRUCTION

- A. A licensed professional engineer shall certify that reservoir structures are constructed according to the plans and specifications submitted, and approved.

- B. Scheduling: Established seasonal restrictions for protection of watershed, wildlife, and other resource values.
- C. Clearing: May be a major item because it could include all areas below the high water line as well as the construction site. Requirements vary considerably and may include timber sale, burning plans and clearing and grubbing.
- D. Disposal of waste materials: Unsuitable excavation.
- E. Sediment and erosion control.
- F. BLM/Holder Inspection: Verify qualifications.
- G. Access roads: Refer to descriptive outline for roads.

VIII. MAINTENANCE AND OPERATIONS

- A. Safety requirements.
- B. Maintenance for mitigation facilities, compliance with other regulatory permits.
- C. Flood control.
- D. Water quality monitoring.

IX. RESTORATION AND ABANDONMENT

Restoration and abandonment of reservoirs deserves special emphasis because of the complications involved with stabilization, safety, and conversion to other uses. Restoration to the original condition may be impractical or impossible; thus other alternatives must be implemented. When a reservoir's useful life for the intended purpose is over, a number of factors must be considered and should be addressed in an abandonment plan:

- A. Safety: Hazard analysis, liability.
- B. Inspection and maintenance schedule and responsibility.
- C. Design changes: Widen or raise spillway; raise dam; make permanent drop structure; etc.
- D. Future purpose for BLM/others: Stockwater, irrigation, creation/enhancement of wetlands.
- E. Removal of structures.
- F. Obliteration of roads, earthwork (when feasible).
- G. Revegetation and other stabilization of slopes.

SAMPLE STIPULATIONS

RESERVOIRS

The following are examples of stipulations for reservoir construction. For large reservoirs, almost all detailed considerations should be addressed in a comprehensive construction plan.

Section 404 Permit

"The Holder shall comply with the construction practices and mitigating measures established by 33 CFR 323.4, which sets forth the parameters of the "nationwide permit" required by Section 404 of the Federal Water Pollution Control Act. If the proposed action exceeds the parameters of the nationwide permit, the holder shall obtain an "individual permit" from the appropriate office of the Corps of Engineers and provide the Authorized Officer a copy of that permit prior to issuance of the Notice to Proceed. Failure to comply with this requirement shall be cause for revocation of this right-of-way grant."

(Reference: U. S. Army, Corps of Engineers, EP 1145-2-1, Permit Program: A Guide For Applicants, latest edition).

Road Maintenance

"Holder shall maintain all access roads in a safe, usable condition. A maintenance program shall be specified in the maintenance plan including roads, dam, recreation facilities, and any other structures."

Water Rights

"Holder shall be responsible for complying with state water law and filing the appropriate water rights applications prior to commencement of construction."

Abandonment Plan

"Five years prior to abandonment of the dam or reservoir, the Holder shall contact the Authorized Officer to arrange a joint inspection to discuss abandonment and stabilization concerns and agree on an acceptable stabilization and abandonment plan. This plan may include: removal and obliteration of dam and outlet works; maintenance and/or alteration of the structure; recontouring and stabilization; safety inspections; liability; and schedule of abandonment activities. This abandonment plan must be approved in writing prior to commencement of any abandonment activities."

Clearing

"Existing drainages feeding the pool area shall be cleared of vegetative debris _____ feet upstream from the maximum high water line."

**RIGHTS
OF WAY**

Roads

ROADS

Introduction

Roads are unique rights-of-way because they are generally open to public use as opposed to pipeline rights-of-way. All actions involving roads are subject to Bureau Manual Section 9113, Roads:

.06 Policy: It is Bureau policy that:

"Bureau roads must be designed to an appropriate standard no higher than necessary to accommodate their intended functions adequately, (timber hauling, administrative access, public travel); and design, construction, and maintenance activities must be consistent with national policies for safety, esthetics, protection and preservation of cultural, historic, and scenic values, and accessibility for the physically handicapped" and,

"All roads controlled by the Bureau must meet appropriate Bureau road standards, whether or not they are constructed by Bureau initiative."

Therefore, it is critical that staff specialists involved in authorizing road rights-of-way consult with engineers and the following outline.

DESCRIPTIVE OUTLINE FOR PLANS OF DEVELOPMENT

ROADS

I. DESCRIPTION

- A. New construction, reconstruction, or maintenance.
- B. Primary use, temporary or permanent, types of vehicles.
- C. Compatible uses: timber, recreation, livestock, oil and gas, mining.
- D. Relationship to other transportation systems.
- E. Season of use.
- F. Origin and destination.

II. RECONNAISSANCE AND LOCATION

- A. Land use decisions affecting route selection.
- B. Land status.
- C. Alternate routes.
- D. Major geologic and soil features: avoid slumps, seeps, heavy clays, avalanche areas.
- E. Material sources: gravel, select borrow.
- F. Other resource considerations: cultural, threatened and endangered species, visual impacts, forestry, wildlife, watershed.

III. ANCILLARY RIGHTS-OF-WAY AND PERMITS

- A. Road use and maintenance agreements.
- B. Corps of Engineers, section 404 permits.
- C. Other uses of rights-of-way.
- D. Material sites: select borrow, gravel, aggregate.
- E. Equipment and material staging areas.
- F. Acquisition of easements on adjacent ownerships and possibility of acquiring public rights.
- G. Approaches to public highways authorized by State Highway Authority.

IV. ENGINEERING SURVEYS

- A. Level of survey:
 - 1. Map of existing of proposed roads; or
 - 2. Centerline staking with or without a survey; or
 - 3. Centerline surveys including cross sections and profiles with degree to accuracy reasonably needed to control work.
- B. Section corner ties and legal description of centerline.
- C. Acreage calculations by ownership.

V. DESIGN

Scope of project will determine whether formal design is required or field location is adequate.

- A. BLM design criteria: (9113 Manual Section, Roads).
- B. Typical roadway cross section.
- C. Drainage: culverts, ditches.
- D. Surfacing: soil engineering analysis, aggregate design. Will surfacing be allowed.
- E. Structures: bridges, retaining walls.
- F. Verify qualifications of designer.

VI. PLANS AND SPECIFICATIONS

- A. Bureau specifications and standard drawings.
- B. American Association of State Highway and Transportation Officials (AASHTO) Standards; Federal Highway Administration, Specifications for Construction of Roads and Bridges; and other applicable standards for major roads.
- C. Submission of detailed engineering plans and specifications for major construction: earthwork, major culverts, bridges, retaining walls.

VII. CONSTRUCTION

- A. Schedule: Established seasonal restrictions for protection of wildlife, watershed, and livestock (i.e., lambing areas).
- B. Methods: contractors, Holder's employees, equipment rental.

- C. Construction staking: centerline, slope stakes, reference stakes, exterior right-of-way boundary stakes.
- D. Stabilization: temporary and final.
- E. Inspection--BLM/Holder: verify qualifications.
- F. Material pits, disposal areas.

VIII. MAINTENANCE AND OPERATION

- A. Minimum maintenance requirements, schedules.
- B. Joint maintenance responsibilities and cooperation with other users.
- C. Traffic signs: control, warning, directional.
- D. Special needs: snow removal, seasonal closures, controlled access.

IX. STABILIZATION AND ABANDONMENT

- A. Abandonment requirements: put to bed or total obliteration.
- B. Removal of structures: bridges, culverts, cattleguards, signs.
- C. Revegetation.

SAMPLE STIPULATIONS

ROADS

Formally Designed Road

"Holder shall perform the necessary transportation studies and recommend a road standard to meet the purpose of the road. If accepted, this standard will define the level of survey and design necessary. BLM Manual Section 9113 shall be used as guidance for the determination of design standards. Other accepted standards may be considered."

"The Holder shall incorporate the services of a licensed professional engineer to locate, survey, design, and construct the proposed road. The road design shall be based on the following criteria:

Width:

Maximum Grade:

Design Speed:

Cross Section

"The Holder shall submit a standard or typical cross section of the road to be maintained or reconstructed. This includes proposed road width, ditch dimensions, cut and fill slopes, and typical culvert installation."

Material Sites

"The proposed locations of material sites shall be shown on a topographic map with a scale of not less than 1" = 1,000 feet and a contour interval of not more than 50 feet, or on a USGS 7.5 minute quadrangle map."

Construction Staking

"The Holder shall set centerline stakes to identify on the ground the location of the proposed road."

"Cut and fill slope stakes shall be set."

"Culverts and lateral ditches shall be staked as to locations, skew, and elevation on slopes over 30 percent."

Clearing and Grubbing

"Clearing limits shall extend _____ feet beyond the cut stakes and _____ feet beyond the fill stake."

"Clearing and grubbing debris shall not be placed or permitted to remain in or under any embankment sections, but may be placed under waste material with a minimum of three feet of cover."

"No excavation shall be permitted prior to approval of the clearing and grubbing by the Authorized Officer."

"Prior to any operations the Holder shall enter into a timber sale contract with the Bureau of Land Management for timber designated for cutting on the right-of-way."

Excavation and Embankment

"Excavation and embankment quantities shall be balanced as nearly as design and construction considerations allow. Any waste and/or borrow needs shall be specifically identified."

"Material encountered on the project and needed for select borrow, surfacing, riprap, or other special needs shall be conserved."

"Excess excavated, unsuitable, or slide materials shall not be disposed of on areas where the material will encroach on a stream course or other body of water."

Drainage

"The operator shall submit a complete culvert list to reflect the drainage plan for the road. The list shall indicate the location(s) and size(s) of the culverts."

"Construction stakes shall be set for each culvert to show location as well as inlet and outlet elevations, diameter, and length."

"The minimum diameter for relief culverts shall be 18 inches."

"Drainage structures with an end area greater than 20 square feet and all bridges shall be designed by a registered professional engineer. Design of drainage facilities shall consider design storms, debris, bedload, fish passage, erosion, and floodplain impact."

Subgrade and Surfacing

"The existing subgrade shall be scarified for its full width and to a depth sufficient to eliminate surface irregularities. The scarified surface shall then be bladed and shaped to the lines, grades, dimensions, and typical cross section shown on the plans."

"The completed subgrade shall be approved by the Authorized Officer prior to the placement of any surfacing."

"Surfacing shall be designed to accommodate anticipated loading and traffic volumes and shall provide for future maintainability."

"All road segments not completed during dry weather periods shall be winterized by providing a well-drained roadway by waterbarring, maintaining drainage, and any additional measures necessary to minimize erosion and other damage to the roadway."

"Any portion of the road not having surfacing rock in place shall be blocked or barricaded to prevent vehicular traffic."

Obliteration

"The entire roadway, including cut and fill slopes, shall be obliterated. The ditches shall be filled and structures removed. Fills shall be removed and replaced into cut areas, and the entire roadway shall be rough graded to restore approximately the original contour of the ground or to produce a pleasing appearance by forming natural, rounded slopes."



Wind Farms

WIND FARMS .

INTRODUCTION

Wind farms are an aggregation of wind turbine generator stations operated by individual owners, agencies, or associations. A Wind Turbine Generator (WTG) is a machine that converts the kinetic energy in the wind into a usable form of electrical or mechanical energy. Wind farms can be small, with only one or two generators, or large, with 50 or more generators. The staff specialist should be concerned with proposed surface use and environmental concerns, including noise and vibration. Staff specialists must consult with engineering, appraisal, and telecommunication staffs, to mitigate the potential for serious administrative and technical problems related to wind farms. There are appraisal and royalty problems associated with unauthorized subleasing and unexpected electromagnetic interference with radio, TV, and other communication systems.

DESCRIPTIVE OUTLINE FOR PLANS OF DEVELOPMENT

WIND FARMS

I. DESCRIPTION

- A. Size: Total area involved, size of individual parcels.
- B. Type: Physical description of the wind turbine generator, i.e., height, diameter, design.
- C. Site location.
- D. Purpose.
- E. Number of generators and minimum spacing between generators.
- F. Location of and distance to receiving system.

II. RECONNAISSANCE AND LOCATION

- A. Land use decision and zoning restrictions.
- B. Potential for expansion.
- C. Review wind source study: Wind setback.
- D. Geology, soil.
- E. Alternate locations.
- F. Potential electromagnetic interference.
- G. Noise.
- H. Vibration.
- I. Seismic data.
- J. Visual impact.
- K. Other resource considerations: Threatened and endangered species (raptors), wilderness areas, cultural resources.
- L. Location of sensitive receptors (occupied dwellings or work areas).

III. ANCILLARY RIGHT-OF-WAY AND PERMITS

- A. Other agencies-Federal, state, local: FAA (height), FCC (interference).
- B. Power line: Permanent or temporary.

C. Maintenance stations.

D. Roads.

IV. ENGINEERING SURVEYS

A. Site location.

B. Legal subdivision of sections.

C. WTG sites in relation to highways, railroads, buildings, transmission lines, etc.

D. Roads and power line.

V. DESIGN

Structural, mechanical, and electrical systems shall be designed by professional engineer(s) registered in the respective state. All designs shall be based on engineering practices and accepted electrical and mechanical codes.

A. Structural designs of wind turbine generators to mitigate visual, noise, vibration, and other physical impacts.

B. Potential of redesign or modification: New technology.

C. Layout of WTG sites in relation to other structures.

D. Roads: Refer to Descriptive Outline for Plans of Development-Roads.

VI. PLANS AND SPECIFICATIONS

Plans and specifications for WTG's and power transmission systems shall be developed by registered professional engineers.

A. Wind turbine generator, typical installation.

B. Power lines, typical installation.

C. Roads.

D. Drainage.

VII. CONSTRUCTION

A. Schedules: Seasonal restrictions, wildlife, watershed, fire.

- B. Methods: Components erected by mobile cranes/helicopter.
- C. Disposal sites.
- D. Inspection: BLM/Holder/other agency.
- E. Safety plans.
- F. Stabilization during construction.
- G. Rehabilitation plans.

VIII. MAINTENANCE AND OPERATIONS

- A. Administrative procedures: Rental, royalty provisions.
- B. Security: Fencing, lighting, controlled access.
- C. Raptor protection.
- D. Stabilization and rehabilitation.
- E. Noise: Local noise standards.
- F. Roads.
- G. Vegetation control.
- H. Fire protection: Structural, wildfire.
- I. Safety signing.

IX. RESTORATION AND ABANDONMENT

- A. Stabilization during use.
- B. Structure removal and cleanup.
- C. Obliteration of roadways, generator pads, power lines.
- D. Revegetation.

SAMPLE STIPULATIONS

WIND FARMS

Noise Pollution

"Holder shall conduct studies to monitor noise levels in the air and vibration levels in the soil created by wind turbine generators (by machine type and model) at predetermined distances from the generator(s). The impact of such noise levels on the rare and endangered species in the area shall be evaluated in a report and submitted to the Authorized Officer no later than three months after construction is completed and operation is initiated. If development is completed in phases, a separate report shall be submitted for each phase, unless otherwise approved by the Authorized Officer."

Subleasing and Reassignment

"All subleasing and subordinate use agreements and assignments must be approved by the Authorized Officer."

TV

"Holder shall take all necessary precautions to prevent television interference when siting WTG's. In those cases where a WTG is sited in the direct path between the receiver and television station, and normal mitigation is ineffective, the Holder shall pay initial hook-up fees for resident cable television or install a television translator, as approved by the Authorized Officer."

Microwave Interference

"No WTG shall be located such that a transmitted microwave signal is directly impeded by a WTG or within twice the beam width of the transmitting antenna."

Radio Interference

"Holder shall take all necessary precautions to prevent interference to radio communications. In those cases where WTG siting results in the interference of radio communication in critical areas, the Holder shall move the WTG from the path of the transmitting station and/or require the use of nonmetallic blades, as approved by the Authorized Officer."

Noise and Vibration

"Prior to issuance of a notice to proceed, the Holder shall test all large WTG's for impulsive noise and submit the results of these tests to the Authorized Officer. No WTG's shall be sited that result in the generation of a "thumping" noise adversely affecting the habitation or use of any dwelling unit, hospital, school, library, or nursing home."

Royalty

In some instances royalty payments may be made a part of the grant rentals due the Government. In those instances, the Holder shall be made aware of this requirement and the following stipulation will be added to the grant:

"The Holder shall pay the BLM a minimum royalty of not less than _____ percent of the gross revenue received from the sale of energy produced from the wind under this right-of-way grant, if the annual rental payment is less than the minimum royalty. If the royalty provision becomes applicable within the year, the rental payment for that year shall be applied toward the royalty payment. The royalty shall be due and payable monthly on _____."

Wind Setback Agreement

"The wind access setback(s) shall not apply if an application is submitted with an agreement with adjacent landowner for the life of the right-of-way. In such an agreement, the adjacent landowner agrees to the elimination of the wind access setback(s) and will not develop his land in such a way as to decrease wind velocities or increase wind turbulence at the location of the proposed WTG siting."



Worker Camps

WORKER CAMPS

INTRODUCTION

Worker camps are temporary housing facilities built in support of construction projects granted under other rights-of-way. They can also be granted under other authorizations (such as 2920), i.e. plant site built on private land, camp on public land. State and local authorities have numerous roles in the construction and operation of worker camps. The Holder should communicate with state and local officials in order to meet their requirements and mitigate concerns and social and economic impacts.

DESCRIPTIVE OUTLINE FOR PLANS OF DEVELOPMENT

WORKER CAMPS

I. DESCRIPTION

- A. Activity supported.
- B. Expected duration (right-of-way, temporary use permit, sale).
- C. Number of workers/families.
- D. Number of vehicles, other equipment, supplies.
- E. Other facilities: Recreation, offices, wareyard, air strip.

II. RECONNAISSANCE AND LOCATION

- A. Access to towns, job site, and other facilities: Distances, types of transportation, routes.
- B. Planning decisions.
- C. Topography and soils: Aspect, flood plains, drainage.
- D. Alternate locations.
- E. Available utilities: Water, electricity, sewer.
- F. Available services: Medical, church, public transportation.
- G. Other resource considerations: Threatened and endangered species, visual impacts, cultural resources.

III. ANCILLARY RIGHTS-OF-WAY AND PERMITS

- A. Local government requirements: Bureau authorization contingent on local permits.
- B. Utility and road rights-of-way needed by the applicant.
- C. County and state health and safety.
- D. Material sources: Fill, gravel, aggregate.
- E. FAA review: Air strip, heliport: Reference Descriptive Outline for Plans of Development--Airports.
- F. Water rights (state), Section 404 Permits (Corps of Engineers).

IV. ENGINEERING SURVEY

- A. Site map.
- B. Centerlines, limits.
- C. Structure sites.
- D. Acreage calculations.
- E. Section corner ties, legal description.
- F. Roads: Reference Descriptive Outline for Plans of Development-Roads.

V. DESIGN

- A. Roads: AASHTO or BLM 9100 Manual (dirt, gravel, pavement)
- B. Building codes, sanitation standards, and solid waste disposal
- C. Dust, traffic load, snow removal, drainage.
- D. Lighting and security.
- E. Landscaping, screening.
- F. Water treatment.
- G. Expandability.
- H. Method of rehabilitation.

VI. PLANS AND SPECIFICATIONS

Specifications should reflect local or national building code standards.

- A. Site plan.
- B. Construction contract.
- C. Drainage plan.
- D. Utility access.
- E. Rehabilitation plan.
- F. Roads.
- G. Fencing.

VII. CONSTRUCTION

- A. Scheduling: Road, utilities, camp, and relationship to primary construction project.
- B. Roads.
- C. Inspection: Construction, health, law enforcement.

VIII. MAINTENANCE AND OPERATION

- A. Open or closed to public.
- B. Security, fire control, law enforcement.
- C. Health and sanitation systems.
- D. Road maintenance.
- E. Snow removal.

IX. STABILIZATION AND ABANDONMENT

- A. Stabilization requirements during use.
- B. Identify facilities to be removed or obliterated: Roads, power lines, water systems, camp area.
- C. Any future use: Ponds, landfill, permanent facility for Holder.
- D. Recontour, stabilize.
- E. Seeding, mulching.

SAMPLE STIPULATIONS

WORKER CAMPS

Wildlife Awareness

"The Holder shall inform its employees, agents, contractors, subcontractors, and their employees of applicable laws and regulations related to hunting, fishing, trapping, and wildlife harassment."

Fencing Requirements

"Camp pad and facilities shall be fenced with _____ fence to control (livestock, dogs, people, etc.)."

Occupancy

"Occupancy of camp shall not exceed the number of people or vehicles for which it was designed."



Guide Stipulations

GUIDE STIPULATIONS

I. INTRODUCTION

The realty specialist must recognize that stipulations in a grant must be based on sound judgment and good technical advice. Poorly worded stipulations will result in inconsistent interpretations and misunderstandings, and making enforcement difficult. It must be understood that stipulations are not specifications. Emphasis should be placed on stipulations that describe the desired results not the process. Exceptions to this may be for projects having minor involvement with public lands or small contractors having limited engineering and/or other technical expertise.

II. DEFINITIONS

- A. Stipulation - Term or condition in an agreement (right-of-way grant).
- B. Specification - Detailed and exact statement prescribing materials, dimensions, and workmanship for something to be built, installed, or manufactured.

III. PURPOSE OF STIPULATIONS

Right-of-way construction stipulations are often misinterpreted as construction specifications. In right-of-way actions, stipulations should be developed and incorporated into the grant for the following reasons:

- A. Administration - To describe how the right-of-way will be administered and define legal responsibilities.
- B. Mitigation of Resource and Other Conflicts - To define restrictions or other constraints necessary to make the proposal compatible with other resources or facilities.
- C. Encouragement of Good Construction Practice - To identify to the applicant those specific areas of concern or actions where standard engineering, construction, operation, and maintenance practices, if followed, would minimize environmental and resource problems.

The guide stipulations included in this section are those that are common to many projects and may be used with little or no revision. Many of the stipulations are introduced with explanations for their use and circumstances. These stipulations are representative of many that have been successfully utilized by the Bureau, other agencies, and industry. It is expected that many of these stipulations may be modified and used by applicants and incorporated in their plans of development, therefore eliminating the need for the Bureau specialist to add them.

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GUIDE STIPULATIONS

I. BONDS AND LIABILITY

A. Bonds

The Authorized Officer may require the holder of a right-of-way grant or temporary-use permit to furnish a bond or other security when an applicant has previously shown (e.g. other right-of-way grant) a lack of technical, financial, or performance capability, or for a new applicant on a project with complex or sensitive construction requirements.

The amount of the bond should be based on the approximate cost to satisfy the stipulations of the grant relating to mitigating measures. For example, a bond might be required for seeding and mulching two acres of disturbed area or for the entire length of the right-of-way. Two acres x \$1,500/acre = \$3,000.

The bond must be either a surety bond, individual bond, cash bond, or other securities and may be cancelled or the total reduced when the stipulation(s) has been satisfactorily completed. Bonds should have conditional release language.

Standard Stipulations

"The Holder shall deliver and maintain a surety bond in the amount of _____ Dollars or cash in the above amount or negotiable securities of the United States having a market value at time of deposit of not less than the above amount. Should the sureties or the bonds delivered under this grant become unsatisfactory to the Bureau, the Holder shall, within 30 days of demand, furnish a new bond with surety."

"A bond acceptable to the Authorized Officer shall be furnished by the Holder on _____, 19____ in the amount of _____ dollars (\$_____) to ensure removal of the improvements and cleanup of the site at the time the permit is terminated."

"The Holder's surety bond will be processed for release or deposits in lieu of bond will be processed for return within thirty (30) days after certification by the Bureau that all work is complete, and upon furnishing by the Holder the proof satisfactory to the Bureau that all claims for labor and materials has been paid or released and satisfied. The Holder agrees that all moneys deposited under this grant may, upon failure on Holder's part to fulfill all and singular the requirements herein set forth or made a part hereof, be retained by the United States to be applied as far as may be

needed to the satisfaction of Holder's obligations assumed hereunder, without prejudice whatever to any other rights and remedies of the United States."

Additional Work

"Prior to undertaking additional construction or alteration work not provided for in this right-of-way grant, the Holder shall deliver and maintain a surety bond in an amount set by the Authorized Officer which shall not be in excess of the estimated loss which the Government would suffer upon default in performance of this work."

B. Liability Reference: 43 CFR 2803.1-4, Liability.

Under certain circumstances a stipulation on liability may be warranted. In these instances the approval language in the CFR is recommended. All liability stipulations should be reviewed by your solicitor. The following stipulation should only be used with the concurrence of your Solicitor.

"Holder shall be fully liable to the United States for any damage or injury incurred by the United States in connection with the use and occupancy of the right-of-way or permit area which the Authorized Officer determines presents a foreseeable hazard or risk of damage or injury to the United States. The Holder or its subcontractors will be held liable as a result of injury, loss of life or damage to property in connection with construction, operation, maintenance, or termination of right-of-way grant. Strict liability is not imposed for damage or injury resulting primarily from an act of war or the negligence of the United States. To the extent consistent with other laws, strict liability shall extend to costs incurred by the United States for control and abatement of conditions, such as fire or oil spills, which threaten lives, property, or the environment, regardless of whether the threat occurs on areas that are under Federal jurisdiction. The maximum limitation shall not exceed \$1,000,000 for any one event, and any liability in excess of such amount shall be determined by the ordinary rules of negligence of the jurisdiction in which the damage or injury occurred.

In any case where strict liability is imposed and the damage or injury was caused by a third party, the rules of subrogation shall apply in accordance with the laws of the jurisdiction in which the damage or injury occurred."

"Holder shall be fully liable for injuries or damages to third parties resulting from Holders' activities or facilities on lands under Federal jurisdiction in which the damage or injury occurred."

II. ACCESSORY PERMITS AND REGULATIONS

The following reflect selected permits required by other Federal, state, and local agencies. These and other permits, if required, must be obtained prior to issuance of a Notice to Proceed.

A. Air Quality

Technical Report

"The Applicant shall submit for the Authorized Officer's approval a technical report addressing criteria and methodology of how the proposed facility will be located and designed to meet applicable Federal, state, and local ambient air quality standards."

Emission Standards

"The Holder shall meet Federal, state, and local emission standards for air quality."

Dust Control

"The Holder shall furnish and apply water or use other satisfactory means for dust control."

Air Quality Monitoring System

"The Holder shall establish an air quality monitoring system around the facility for monitoring air pollutants in accordance with the accepted state or Federal air quality standards."

B. Water Quality

Construction in Waters and Wetlands The following stipulation may apply to projects that require dredging or filling material in water:

"The Holder shall comply with the construction practices and mitigating measures established by 33 CFR 323.4, which sets forth the parameters of the "nationwide permit" required by Section 404 of the Federal Water Pollution Control Act. If the proposed action exceeds the parameters of the nationwide permit, the Holder shall obtain an "individual permit" from the appropriate office of the Corps of Engineers and provide the Authorized Officer a copy of that permit prior to issuance of the Notice to Proceed. Failure to comply with this requirement shall be cause for revocation of this right-of-way grant."

(Reference: U. S. Army, Corps of Engineers, EP 1145-2-1, Permit Program: A Guide for Applicants, latest edition)

Discharge or Spreading of Waste Water

"The Holder shall obtain approval or clearance from appropriate state or local agencies for disposal of waste water by spraying or irrigating (roadways, seedings, etc.)."

C. Water Rights

"The holder is required to comply with all appropriate state and Federal water rights legislation."

III. CONSTRUCTION ENGINEERING DETAILS

A. Plan of Development

For major construction projects, i.e., roads, distribution pipeline, plant sites, etc., reference the section on descriptive outlines for plans of development for the type of project proposed.

E. Incidental Construction

"As part of the Plan of Development, the Holder shall furnish the Authorized Officer a construction plan at least _____ days prior to the proposed or planned start of construction for written approval. The plan shall include location maps and typical drawings depicting construction."

C. Minor Construction, Minimal Environmental Concerns

"As part of the Plan of Development, the Holder shall furnish the Authorized Officer a construction plan at least _____ days prior to the proposed start of construction. The plan shall include location maps, typical drawings and drawings of existing ground profile, and plan and profile of construction. Drawings shall portray typical cross sections, drainage and erosion control, and other ancillary construction."

IV. CONSTRUCTION SCHEDULING AND RESTRICTIONS

A. Seasonal

"Construction activity and surface disturbance will be allowed only during the period from _____ to _____. This limitation does not apply to maintenance and operation of this right-of-way grant. Any exceptions to this requirement must be authorized in writing by the Authorized Officer."

B. Moisture

This stipulation should not be used without a good understanding of the soil resource. It should only be used on frail sites and specific soils. Rutting depth should relate to soil rehabilitation needs, off site damage, or operator safety. For example, 6 inch ruts may be acceptable on flat terrain where the ruts will only occur on the road bed which is planned for grading. Two inch ruts may be too deep on silty or clayey soils on steep slopes because heavy equipment will slide making it very unsafe for the operator. Off site damage could also be significant in these areas.

"No construction or maintenance activities shall be performed during periods when the soil is too wet to adequately support construction equipment. If such equipment creates ruts in excess of _____ inches deep, the soil shall be deemed too wet to adequately support construction equipment."

C. Construction Access

Use of Existing Roads

"Construction-related traffic shall be restricted to existing roads and approved rights-of-way. New access roads or cross-country vehicle travel will not be allowed unless stated in the Plan of Development or approved by the Authorized Officer. Authorized roads used shall be rehabilitated or maintained, when construction activities are complete, as stated in the Plan of Development."

Speed Limits

"Holder shall comply with established speed limits."

Special Areas

"Specific sites, e.g., archeological sites, areas with threatened and endangered species, or fragile watersheds, where construction equipment and vehicles shall not be allowed, shall be clearly marked onsite by the Holder before any equipment is brought in. The Holder shall be responsible for assuring that construction personnel are well trained to recognize these markers and understand the equipment movement restrictions involved."

D. Public Access

Access

"Holder shall permit free and unrestricted access to and upon the right-of-way for all lawful purposes, except areas designated as restricted by Holder with the approval of the Authorized Officer, (to protect public safety, wildlife, livestock, or facilities constructed within the right-of-way)."

Safety

"Holder shall provide for the safety of the public accessing the right-of-way. This includes barricades for open trenches, flagmen/women with communication systems for single-lane roads without inter-visible turnouts, manned gates for blasting operations, etc."

E. Other Facilities

"Disturbance of improvements (federal, state, or private) such as fences, roads, and watering facilities encountered during the construction and maintenance of the right-of-way must be minimized. The Holder is required to immediately restore any damaged improvements to at least their former state. Functional use of these improvements must be maintained at all times."

F. Authorized Survey Markers

Survey Monuments

Protection and restoration of public land survey corners is provided in the Terms and Conditions of the grant. This stipulation should be used to protect or restore other authorized survey monuments, both public and private, such as Coastal and Geodetic benchmarks and triangulation stations, other civil or military control monuments and authorized private survey monuments including mining claim monuments.

"Holder shall take all precautions to avoid obliteration or disturbance of survey monuments established by recognized civil or military authority. In the event of such obliteration or disturbance, Holder shall immediately report the incident, in writing, to the Authorized Officer and the respective installing authority, if known. The Holder shall be liable for replacement and other costs, as determined by the owner or agency responsible for the control monument."

V. STAKING AND SITE PREPARATION

A. Plan of Development

For major projects and those requiring extensive clearing and/or large cut and fill volumes and/or special topsoil mitigation procedures, reference the appropriate descriptive outline for plan of development.

B. Staking

Slope Stakes

For use where cuts and fills are an important part of the construction (roads, reservoirs, and some pipelines):

"Holder shall place slope stakes, culvert location and grade stakes, and other construction control stakes necessary to ensure construction of this structure in accordance with the plan of development. If stakes are disturbed, they shall be replaced before proceeding with construction."

Centerline Staking

For use where cuts and fills are minor and incidental to the construction such as flat-blading a pipeline or powerline right-of-way:

"Holder shall survey and clearly mark the centerline (and exterior limits) of the right-of-way."

Restrictions

For use when restricting activities around existing features:

"No surface disturbance or construction activity will be allowed within _____ feet of (specify feature). Any deviation from this requirement shall be approved in writing by the Authorized Officer."

C. Clearing and Stripping

"No right-of-way clearing will be allowed."

For use where cut and fill is a minor part of construction:

"Right-of-way clearing shall be limited to (_____ feet) (on each side of the centerline, the limits of the right-of-way, the limits of the cut and fill stakes.)"

For use when cut and fill is a major part of construction.

"Holder shall clear and strip all roots, woody plants (over _____ feet high), and other vegetative materials from the surfaces to be covered by embankments and disturbed by excavation. Clearing shall be accomplished without mixing topsoil with vegetation. Cleared materials shall be disposed of (in accordance with the plan of construction), excess materials may be stockpiled for disposal by the United States or used in construction when paid for by the holder."

Riparian Buffer

"A buffer strip of terrestrial vegetation shall be left between staging areas and riparian vegetation adjacent to streams."

D. Conservation of Topsoil

For use when topsoil is necessary for effective site rehabilitation:

"Suitable topsoil material removed in conjunction with clearing and stripping shall be conserved in stockpiles (within the right-of-way, at the following staked locations:). Topsoil shall be stripped to an average depth of _____ inches. (A total of _____ cubic yards of topsoil shall be stockpiled.)"

VI. COMMON CONSTRUCTION STIPULATIONS

A. Fences

For use when minor reconstruction of an existing fence is necessary:

"Fences, gates, and brace panels shall be reconstructed to the original construction standards of the existing fence. All materials shall be new and of the same quality as the existing fence."

For use when fence construction is a major construction item, or a deviation from the existing fence is desired:

"Fences shall be constructed as shown in the attached drawings and specifications or as approved in the plan of development."

"When construction activity in connection with the right-of-way breaks or destroys a natural barrier used for livestock control, the gap thus opened shall be fenced to prevent drift of livestock."

B. Cattleguards

For use in temporary, undeveloped, or low-volume roads:

"Cattleguards shall be a minimum of 8 feet by 12 feet and designed to a minimum of AASHTO H-20 standards. They shall be set on (timber, precast concrete, cast-in-place concrete) bases at right angles to the roadway. Backfill around cattleguards shall be thoroughly compacted. Bypass gates shall be provided in conjunction with cattleguard structures. Gate materials and construction shall conform to the requirements and details shown on the plans or described above."

For use in permanent or high-volume roads:

"Cattleguards shall be constructed and installed as shown on attached drawings and specifications or as approved in the plan of development."

C. Culverts

For noncritical installation:

"Holder shall furnish and install culverts of the diameter(s) and length(s) indicated and approved in the plan of development. Culverts shall be free of corrosion, dents, or other deleterious conditions. Culverts shall be placed on channel bottoms on firm, uniform beds shaped to accept them and aligned to minimize erosion. Backfill shall be thoroughly compacted. No equipment shall be routed over culverts until backfill is a minimum of one foot over the top of the culverts."

For critical installations (culverts over 48 inches and any installed in live water), reference the Descriptive Outline for Plan of Development--Roads.

D. Low-Water Crossings

"Low-water crossings shall be constructed to prevent any blockage or restriction of the existing channel. Material removed shall be stockpiled for use in rehabilitation of crossings."

E. Earthwork

For use where earthwork is incidental construction and involving only small quantities (cattleguards, communication sites, etc.):

"Earthwork areas shall be stripped of vegetation and the topsoil stockpiled for future rehabilitation. Slopes shall be constructed to blend with existing land contours. Prior to fill construction, existing surface shall be sloped to avoid sharp banks and allow equipment operations. No fills shall be made with vegetative materials or frozen or saturated soils. Materials shall be placed in uniform layers not to exceed eight inches and construction equipment shall be routed evenly over the entire width of the fill to obtain thorough compaction."

For larger earthwork projects (roads, plant sites, etc.), use the approved plan of development. Reference the descriptive outline for the type of project involved.

F. Access Roads

"Existing access roads on public lands blocked as the result of construction of project components shall be rerouted or rebuilt as directed by the Authorized Officer or as designated in the plan of development."

VII. STABILIZATION AND REHABILITATION

These stipulations are to be used for the stabilization and restoration of disturbed areas to minimize soil erosion and restore terrain features as nearly as practicable.

A. Plan of Development

"The Holder shall include in a plan of development a detailed description of methods and procedures for complete or partial restoration of disturbed areas. Such a plan shall include recontouring, topsoiling, mulching, seeding, specific erosion control measures and painting, when appropriate. Temporary erosion control shall be coordinated with permanent erosion control features to assure economical, effective, and continuous erosion control throughout the life of the project."

B. Recontouring

"Holder shall recontour the disturbed area, or designated sections, by rough grading to restore approximately the original contour of the ground to produce a pleasing appearance by forming natural, rounded slopes."

"Holder shall recontour the disturbed area and obliterate all earthwork by removing embankments, backfilling excavations, and rough grading to reestablish original contours.

C. Removal of Structures

"Materials and structures shall be broken down and removed. Burial will not be allowed unless prior approval by the Authorized Officer is obtained."

D. Topsoil

"Holder shall uniformly spread topsoil over all (unoccupied) disturbed areas (outside the ditch lines, fence lines, work areas). Spreading shall not be done when the ground or topsoil is frozen or wet."

"Holder shall prepare a seedbed by: (a) scarifying the disturbed area, (b) distributing topsoil uniformly, or (c) disking the topsoil." (select and use as appropriate)

Reference "Conservation of Topsoil" under Section V, Staking and Site Preparation.

E. Mulching

Local practice and soil conditions may dictate the use of mulch to ensure successful seeding.

"Holder shall mulch all disturbed areas. Type of mulch shall meet one of the following requirements:"

"Straw for mulching shall be from oats, wheat, rye, or other approved grain crops, and be free from noxious weeds, mold, or other objectionable material. Straw mulch shall be air dry and suitable for placing with mulch blower equipment."

"Hay shall be of approved herbaceous mowings, free from noxious weeds, mold, or other objectionable material. Hay shall be air dry and suitable for placing with mulch blower equipment."

"Wood cellulose fiber shall be natural or cooked wood cellulose fiber, shall disperse readily in water, and shall be nontoxic. The homogeneous slurry or mixture shall be capable of application with power spray equipment. A colored dye that is noninjurious to plant growth may be used when specified. Wood cellulose fiber shall be packaged in new, labeled containers."

F. Seeding

"Holder shall seed all disturbed areas with the seed mixture listed below, using 90-percent-pure, live seed. The Authorized Officer shall be notified 15 days prior to seeding. Seed shall be applied by a drill equipped with a depth regulator. Where drilling is impracticable, seed shall be broadcast and the area raked or chained to cover seed. Seeding should be done during (month) or (month) following construction and shall be repeated if a satisfactory stand, evaluated by the Authorized Officer after the first growing season, is not obtained.

Seed Mixture

Drilled Rate

(twice the drilled rate) - Broadcast

For seed mixture, contact the Authorized Officer."

G. Painting

"All above-ground structures not subject to safety requirements shall be painted by the Holder to blend with the natural landscape. The paint used shall be a color which simulates "Standard Environmental Colors" designated by the Rocky Mountain Five-State Interagency Committee. The color selected for this (site, project) is (name and Munsell Soil Color Number). (Color chart is attached.)"

H. Signing

"Upon completion of construction, Holder shall conspicuously post the BLM number assigned to this right-of-way grant at the following location _____"

I. Erosion Control

"The riparian zone of stream crossings shall be rehabilitated immediately after construction is complete. The disturbed area on each side of the stream shall be protected until riparian vegetation is established to minimize sediment entering the stream and erosion of the banks."

Special Treatment Materials

"The Applicant shall address the need and describe locations for special erosion control materials (fiber mats, netting, slope drains) in the plan of development. Prior to approval of the plan of development, the Applicant and Authorized Officer will negotiate and locate where these site-specific measures are required."

Waterbars

"The Holder shall construct waterbars on all disturbed areas to the spacing and cross sections specified below. Waterbars are to be constructed to: (1) simulate the imaginary contour lines of the slope, ideally with a grade of one or two percent; (2) drain down and away from the disturbed area; and (3) begin and end in vegetation or rock if possible."

Typical	% Side	Spacing
<u>Cross Section</u>	<u>Slope</u>	<u>Interval</u>

(Local experience will dictate the criteria.)

Terrace and Bench Construction

"Where site-specific slope stabilization requires significant terrace or bench construction, the Holder shall include engineering drawings for this work in the plan of development."

VIII. OPERATION AND MAINTENANCE

A. Plan of Development

"The Holder shall prepare and incorporate in the plan of development an operation and maintenance plan, to include stabilization and rehabilitation of the right-of-way. The plan must be approved by the Authorized Officer prior to the preconstruction conference. The Holder shall construct, operate, and maintain the facilities within the right-of-way grant in strict conformity with the plan of development. Any relocation, additional construction, or use that is not in accordance with this plan shall not be initiated without the prior written approval of the Authorized Officer. A copy of the grant stipulations and plan of development shall be available on location during operation and maintenance to all supervisory personnel and the Authorized Officer."

B. Use of Right-of-Way

"After construction is complete, Holder shall not use the right-of-way as a road for purposes other than routine maintenance as defined in the plan of development (unless it is constructed to standards established by the Authorized Officer for such purpose(s))."

C. Maintenance of Right-of-Way

"Holder shall maintain the right-of-way in a safe, usable condition, in accordance with the plan of development. (A regular maintenance program shall include (blading, ditching, culvert installation, surfacing)."

D. Snow Removal

"Holder shall remove all snow from the roadway to vegetated areas within or outside the right-of-way in a manner that will not disturb the surface of the ground. (Equipment used for snow removal operations shall be equipped with shoes to keep the blade _____ inches off the ground.) Holder shall take special precautions where the surface of the ground is uneven and at drainage crossings to ensure that equipment blades do not touch the ground surface."

E. Waste

General

"Construction sites shall be maintained in a sanitary condition at all times; waste at those sites shall be disposed of promptly. "Waste" means all discarded matter, including human waste, trash, garbage, refuse, oil drums, petroleum products, ashes, and equipment."

Litter Policing

"A litter policing policy shall be developed and approved by the Authorized Officer to cover all roads and sites associated with the project."

Waste Disposal

"Oil waste, toxic materials, and solid or liquid wastes shall be dumped only in authorized waste disposal sites. No burying of debris or waste materials will be allowed, except as specifically authorized by the Authorized Officer."

F. Fire Control

Fire Prevention and Suppression Plan

"Holder shall prepare a fire prevention and suppression plan, to be incorporated into the plan of development. Holder shall take into account such measures for prevention and suppression of fire on the right-of-way area and other public land used or traversed by the Holder in connection with operations as are required by applicable laws and regulations. Project personnel shall be instructed as to individual responsibility in implementation of the plan."

Spark Arrestors

"During construction, operation, and maintenance, during the period from _____ to _____, vehicles, gas-powered equipment, and flues shall be equipped with approved spark arrestors."

Restricted Operations

"During conditions of extreme fire danger, operations shall be limited or suspended in specific areas, or additional measures shall be taken, as required by the Authorized Officer. Welding, grinding, and smoking privileges shall be controlled in fire danger areas."

Fire Watch

"The Holder shall maintain a fire watch with fire-fighting equipment during construction at the following locations (specify locations)."

Availability of Equipment

"When requested by the Authorized Officer, the Holder shall make his equipment with operators, already at the site, temporarily available for fighting fires in the vicinity of the project. Payment for such services will be made by the Federal agency making the request at rates established in the grant."

Liability

"The Holder shall extinguish, without expense to the Government, all fires caused by him or his employees as a result of operations. Federal, state, or private interests shall be compensated by the Holder for suppression and rehabilitation expenses incurred in fighting Holder-caused fires as per existing statutes."

G. Weed Control

"The Holder shall be responsible for weed control on disturbed areas within the exterior limits of the right-of-way. The Holder is responsible for consultation with the Authorized Officer and/or local authorities for acceptable weed control methods (within limits imposed in the Additional Terms and Conditions, B-11, Pesticides)."

IX. ABANDONMENT

This section applies to items not covered under stabilization and rehabilitation.

A. Plan of Development

"The Applicant shall incorporate in the Plan of Development a description of the scope and degree of abandonment to be completed." (Examples of items to address are removal and salvage of culverts, pipe, buildings, and powerlines; total obliteration and recontouring of earthworks such as drilling platforms, roadways, railroads, industrial sites, man camps; and revegetation.)

"Prior to abandonment of the right-of-way, the Holder shall contact the Authorized Officer to arrange a preabandonment conference. This conference will be held to review the abandonment provisions of the grant or the plan of development."

B. Abandonment Plan

For use when abandonment is not covered in a plan of development:

" _____ (days, years) prior to abandonment of the right-of-way, the Holder shall contact the Authorized Officer to arrange a joint inspection of the right-of-way. This inspection will be held to agree to an acceptable abandonment (and rehabilitation) plan. This plan shall include (removal of facilities, drainage structures, or surface material; recontouring; topsoiling; mulching; seeding; etc.). The Authorized Officer must approve the plan in writing prior to the Holder's commencement of any abandonment activities."



**Other Surface
Disturbing
Activities**

OTHER SURFACE DISTURBING ACTIVITIES

The content of this section of the Handbook is included to demonstrate the potential for expansion of the concept used for rights-of-way. This section has not been developed nor refined to the extent it could be. The intent is merely to demonstrate the concepts potential future utility.

The mining activities and application for Permit to Drill included in this section will in most cases include several of the activities set out in the Handbook. These activities include roads, pipelines, powerlines, plant sites, etc. The mineral and APD activities can also utilize the "boiler plate" stipulations included on the grant as well as the guide stipulations. They can also use the plans of development approach as well as the 2800 actions.

MINERAL MATERIAL SITES

INTRODUCTION

Mineral material sites are generally approved under authority of the 43 CFR-Part 3600 - Mineral Materials Disposal and Bureau Manual 3600 - Mineral Materials Disposal. These regulations provide for disposal of common variety materials including sand, gravel, stone, pumice, cinders (scoria), and clay. These are materials commonly used in the construction of roads, railroads, plant sites, and other facilities. The need for mineral materials has been reflected in almost every project described in the Right-of-Way Handbook. Acquisition of these materials is a common requirement for holders of rights-of-way which would be used during the construction phase of the project. Therefore, these actions have been included in the Right-of-Way Handbook as a reference. The Realty Specialist must consult with geologist and mining engineers regarding these actions. This outline is representative of the larger sites such as open pit mines.

DESCRIPTIVE OUTLINE FOR PLANS OF DEVELOPMENT

MINERAL MATERIAL SITES

I. DESCRIPTION

- A. Applicant: governmental entity, non profit organization, contractor
- B. Type of mineral: sand, gravel, pumice clay, stone, cinder (scoria)
- C. Mining Plan: is one necessary or required? Mining practice to be used.
- D. Quality and quantity: determination of tonnage and characteristics of mineral material.
- E. Exploration and geologic reports: drilling reports
- F. Climatic conditions: seasonal restriction
- G. Administration: community pits, common use, free use, sales - competitive or non-competitive.
- H. Appraised Value.

II. RECONNAISSANCE AND LOCATION

The material site location will be dictated by the presence of the mineral. However, there may be questions regarding the quantity and quality of material and its suitability for the intended use.

- A. Adjudication: Is the site available?
- B. Land use planning decisions
- C. Hydrologic data: surface and underground water
- D. Alternate locations: other sources
- E. Access: new or existing
- F. Mineral status: leased tracts, mining claims, withdrawals.
- G. Other resource considerations: threatened and endangered species, cultural

III. ANCILLARY RIGHTS-OF-WAY AND PERMITS

- A. Water Rights: state permit
- B. Air Quality: state permit
- C. Mining Plan: state and Federal
- D. Noise: state and local permit
- E. Existing rights of way conflicts
- F. Corps of Engineers Section 404 Permit
- G. Ancillary Right of Way: Access Roads - (temporary and permanent)

IV. ENGINEERING SURVEYS

The location, description, design and removal of the mineral material will require specific surveys. These may require the supervision of a licensed engineer or surveyor. The type of surveys needed would be determined by method of measurement of quantities removed, i.e., by cubic yard or ton (volume or weight).

- A. Aerial Photographs: horizontal and vertical control, engineering scale.
- B. Topographic Surveys: 50 foot centers of pit area.
- C. Subdivision Surveys: monumented corners of legal subdivision
- D. Acreage Calculation
- E. Quantities Removed: cross section surveys, aerial photo measurement.

V. DESIGN

Generally mining plans are required and approved prior to authorization. The mining plan can be simple, for a small gravel sale, or complicated for larger sales.

- A. Mineralization Inventory: results of drilling programs and mineral reports.
- B. Long range or final pit design: define ultimate recovery of mineral, how and how much, and where.
- C. Time interval design applies to.
- D. Open pit design

- E. Short range pit design: pit geometry, stripping ratio, orderly mining sequences.
- F. Water drainage
- G. Dump space
- H. Support facilities: crushers, stockpiles, offices.
- I. Haul roads: see Descriptive Outline Plan of Development - Roads

VI. PLANS AND SPECIFICATIONS

The mining plan should completely describe all the operations, short and long term. Included should be:

- A. Ultimate pit configuration, side slopes, highwalls.
- B. Top soil and overburden: location and quantity
- C. Water lines
- D. Road
- E. Dust control
- F. Mining method and list of equipment
- G. Chemicals used and disposal methods.

VII. CONSTRUCTION

- A. Mining Plan: Basic operations procedure
- B. Large Pits: a licensed professional engineer will supervise the operation.
- C. Small Pits: a local supplier or contractor will operate the pit
- D. Scheduling: established seasonal restrictions for protection of watershed, wildlife, and other resource values.
- E. Disposal of waste materials
- F. Access Roads: refer to Descriptive Outline Plans of Development - Roads.
- G. Mitigation Measures: specific facilities and monitoring.

VIII. MAINTENANCE AND OPERATION

- A. Verification of Quantities: production reports, tonnage slips, load counts, surveys.
- B. Maintenance for Mitigation practices and facilities, compliance with other regulatory permits.
- C. Drainage control
- D. Water quality monitoring
- E. Dust
- F. Haul Roads

IX. RESTORATION AND ABANDONMENT

Restoration and abandonment will be described in a detailed Reclamation Plan as required.

- A. Maps: recontouring areas, slopes, backfills
- B. Description of Procedures: methods and schedules
- C. Ground water control
- D. Revegetation and stabilization of slope
- E. Safety: slopes, highways, slumps, subsidence
- F. Bonding
- G. Future purpose of BLM/others: stockwaters, recreation, reserves
- H. Removal of structures: buildings, scales, crushers.
- I. Obliteration of roads.

SAMPLE STIPULATIONS

MINES AND MINERAL MATERIAL SITES

Highwalls/Impoundments

Soft or unconsolidated materials (sand, gravel, scoria, etc.)

Use this stipulation if a permanent water impoundment is not planned:

"The final pit area shall be backfilled, graded, compacted and contoured to the extent necessary to return the land to approximate its original contour and produce natural, rounded slopes. Slopes in the reclaimed area shall not exceed the approximate premining slopes in the general vicinity. When completely recontouring of the area would create an unwarranted increase in the amount of disturbance, slopes greater than the approximate premining slopes may be approved by the Authorized Officer. All backfilling, grading, and contouring will be done in such a manner so as to preserve the original drainage or provide for approved substitutes. Terrace or benches may be used only when it can be shown to the Authorized Officer's satisfaction that other methods of contouring will not provide the required result."

Use this stipulation when a permanent water impoundment is planned:

"The exposed pit areas will be sloped, graded, and contoured to blend with the topography of the surrounding terrain and provide for access and revegetation. Artificially stabilize (e.q., riprap) areas where necessary to prevent erosion."

"When approved by the Authorized Officer, terracing or other techniques may be used to allow one-half (1/2) of a pit wall to remain, after reclamation as a portion of the shoreline."

Hard rock or consolidated material (clay, limestone, etc)

Use this stipulation if no permanent water impoundment is planned:

"The total pit area shall be backfilled, graded, and contoured considering the physical characteristics of the land and rock materials. Pitwalls shall be reduced, graded, and contoured to blend in with the topography of the surrounding terrain. Where it is not possible to reduce pitwalls, based on the character of the rock encountered or economic considerations, the pitwalls must be stabilized by terracing or other acceptable engineering techniques. The base of the pits which will be partially surrounded by highwalls must be graded, contoured and prepared for topsoil placement. Graded and contoured access to the base of such pits must be provided."

Use this stipulation if a permanent water impoundment is planned:

"All sources of potential water contamination within the pit will be isolated and covered with overburden or stabilized in such a manner so as not to contaminate the ground water or water in the resulting impoundment. Based on the characteristics of the rock, nature and extent of the mining operation, pitwalls extending above the protected water level within the pit area will be reduced, graded and contoured to blend with the topography of the surrounding terrain. Where it is not possible to reduce pitwalls, based on the character of the rock involved or economic feasibility of reducing the highwalls, the highwalls must be stabilized by terracing or other acceptable engineering techniques. Graded and contoured access to the impoundment will be provided. Backfilling, grading and contouring above the projected high water line will be accomplished."

Permanent Water Impoundments

"Permanent water impoundments shall be constructed in accordance with the following requirements:

- a. Dams will be constructed with an overflow notch and spillway stabilized with rock riprap or concrete.
- b. The slopes around all water impoundments will be graded to the extent necessary to eliminate safety hazards to humans, wildlife and livestock, and to accommodate revegetation. Variations must be approved by the Authorized Officer based on conditions existing at the specific site.
- c. Mineral seams and other sources of potential water contamination within the impoundment area must be covered with overburden or stabilized in a manner that prevents contamination."

Diversion System/Surface Hydrology

Diversion system - Unchannelized surface water and ephemeral streams:

"Surface water shall be diverted around the mining operation for the following purposes:

- a. To control water pollution.
- b. To control unnecessary erosion.
- c. To protect the on-going operation.
- d. To protect the water rights of down-stream users."

"Temporary diversion of surface runoff or diversions used for erosion control shall meet the following standards:

- a. In soils or other unconsolidated material, the sides of diversion ditches shall be no steeper than one and one-half to one (1½:1).
- b. In rock, the sides of diversion ditches shall not overhang.
- c. In soils or unconsolidated materials the diversion ditches shall be seeded.
- d. Rock riprap, concrete, soilcement, or other methods shall be used where necessary to prevent excessive erosion.
- e. Culverts or bridges shall be installed where necessary to allow access by the surface owner.
- f. Diversion ditches will be designed to carry peak runoffs from a two-year flood event, or larger.
- g. Diversion ditches will not discharge into topsoil storage areas, spoil or other unconsolidated materials.
- h. Permanent diversion structures will have the capacity to carry peak runoff from a 100 year flood event, or larger."

Diversion of intermittent and perennial streams.

"Spoil, topsoil, or other unconsolidated material will not be pushed into, or placed below the flood level of a perennial or intermittent stream except during the construction of the stream diversion."

"Diversion of a perennial stream classified as navigable will be approved by the State Engineer."

"Banks of a diverted perennial or intermittent stream shall be protected by planting approved vegetative species."

"The banks and channel of a diverted perennial or intermittent stream shall be protected by rock riprap, or similar measures to minimize channel erosion and degradation of water quality. Permanent diversions shall be designed and constructed to minimize erosion."

"Channels and flood plains will be designed to contain the 10-year flood event, if temporary; or the 100-year flood event, if permanent. Cross sections of the existing stream above, below, and within the disturbed area may be used to determine the flow capacities, channel configuration and shape."

DRILLING LOCATIONS

Introduction

Drill locations and related facilities are reviewed and approved under the 3109 Manual, existing Conservation Division Manuals, and Operating Order No. 1. These are mandatory procedures for mineral lease operations of Federal mineral ownership. This outline is presented to supplement other sources and provide users of the 2800 Manual a handy reference.

It is common for rights-of-way to be required to support drilling operations on nonfederal mineral leases, i.e. private mineral/Federal surface; state mineral/Federal surface; state or private mineral and surface ownerships. In these situations the realty specialist may become involved in the review of the right-of-way and the surface uses associated with the drilling proposal.

The realty specialist must be aware of complications associated with mineral development and the drilling operation. Poor judgment in the use of stipulation and enforcement could create serious safety problems for the drilling operations, that could result in government liability. Realty specialists must consult with mineral staff specialists.

DESCRIPTIVE OUTLINES FOR PLANS OF DEVELOPMENT

DRILLING LOCATIONS

I. DESCRIPTION

- A. Wildcat or infield development well
- B. Depth of well: This defines drilling time.
- C. Type of well: Oil, gas, geothermal, deep seismic, water.
- D. Size of platform: Reserve pit camps, size of rig, fracing areas.
- E. H₂S or high pressure.
- F. Access roads: Alternate location. Reference Descriptive Outline for Plans of Development - Roads.
- G. Lease expiration deadlines.
- H. Scope of cut and fill situation.

II. RECONNAISSANCE AND LOCATION

Well locations are selected by the lessee, or his designated operator, based on geologic reports and other analysis. Locations are administratively controlled by spacing orders issued by respective State Oil and Gas Commissions, and other requirements. There is some flexibility in location changes, significant relocation may require concurrence of lessee/operator and waivers from the State Oil and Gas Commission.

Significant changes normally are justified on the basis of unusual site conditions. Items normally considered are:

- A. Lease stipulations: Seasonal restrictions, slope restrictions.
- B. Construction problems: Minimum cut and fill.
- C. Rehabilitation potential.
- D. Reserve pit: Optimal layout.
- E. Slope stability, avalanche potential.
- F. Visual impacts.
- G. Impacts to ground or surface water.
- H. Laydown direction of rig.

III. ANCILLARY RIGHTS-OF-WAY AND PERMITS

- A. Roads.
- B. Disposal pits.
- C. Material site.
- D. Camp areas.
- E. Fuel lines.
- F. Water points.
- G. Power, telephone lines.

IV. ENGINEERING SURVEYS

The wells' location may require surveys by registered land surveyors. The need for additional surveys will be defined by the complexity of the well site, terrain features, and need for construction control.

- A. Well location: Based on legal subdivision of the section, including restoration of obliterated public survey corners.
- B. Topographic survey: Immediate and adjacent area.
- C. Drilling platform: Preliminary corner stakes to illustrate orientation.

V. DESIGN

Flexibility to design the drilling platform is limited by company policy, safety, wind direction and other items, specifically:

- A. Flat and gentle terrain: Basic orientation and typical layout.
- B. Steep terrain: Basic orientation, site specific layout, modified reserve pits, cross section, and earthwork quantity.
- C. Rig on cut or fill? May require concurrence with operator and special construction technique if on fill.
- D. Reserve pit: Lined or unlined, capacity, compaction, key-way.
- E. Producing well: Production facility layout.
- F. Slope stabilization.
- G. Drainage of work areas.

VI. PLANS AND SPECIFICATIONS

- A. Flat and gentle terrain: Typical platform layouts, representative cross sections.
- B. Steep terrain: Plan view with slope stakes plotted and detail of platform. Cross sections.
- C. Spoil and topsoil: Remove storage area, verify quantity.

VII. CONSTRUCTION

- A. Schedule: Estimated seasonal restrictions for protection of wildlife, watershed.
- B. Methods: Construction technique.
- C. Construction staking: Slope stakes, corner stakes.
- D. Stockpiles: Topsoil, spoil, where?
- E. Inspection - BLM/Operator: Verify qualifications.

VIII. MAINTENANCE AND OPERATION

- A. Cleanup.
- B. Safety.
- C. Site Security.

IX. ABANDONMENT AND STABILIZATION

- A. Producing site: Partial rehabilitation, stabilization, elimination of reserve pit, maintenance.
- B. Dry hole: Clean up and rehabilitation.

SAMPLE STIPULATIONS

DRILLING LOCATIONS

The following are sample stipulations to illustrate how a similar approach is applicable to mineral actions. A review of numerous Applications for Permit to Drill (APD's) and sundry notices indicate the presence of similar problems to those that created the need to revise the 2800 Rights-of-Way stipulation procedures:

1. Unenforceable stipulations.
2. Stipulations that are a rewording of regulations and operating orders.
3. Organization of permitting format would improve the APD.

Reserve Pit

"Reserve pits will be constructed of sufficient size and capacity for the necessary drilling fluids and to contain any runoff from the drill site. Pits will not be constructed within intermittent or perennial stream channels. Pits shall be constructed with half the capacity on the cut. Pit embankments will be constructed as follows:

1. The area on which the embankment is to be placed will be cleared of all materials including vegetative matter, topsoil, and unconsolidated soils.
2. A cutoff trench will be excavated in native material and backfilled with impermeable material and compacted to 95 percent AASHTO T99.
3. The embankment will be constructed, using impermeable materials. The materials will be compacted to 95 percent AASHTO T99.
4. The embankments will be free of frozen or vegetative materials and will be compacted in lifts no greater than 8 inches in thickness.
5. A minimum 2-foot freeboard should be maintained in the pit at all times during drilling operations. The pit will be fenced.
6. If heavy metal, toxic chemical ingredients, or contaminants are anticipated to be used, special care in handling, storage, containment, and disposal will be necessary. These contingencies will be discussed and prescriptions formulated on a site-specific basis."

Reserve Pit Fencing

"Fence the reserve pit on three sides during drilling and the fourth side at the time the rig is removed. The fence will conform to the attached drawing _____."

Burn Pits

"Cover and enclose the burn pit with small mesh wire, to prevent trash from being carried or blown off site. After the burn pit is no longer in use, cover it with a minimum of two (2) feet of earth."

Spud Date

"The spud date will be reported orally to the Authorized Officer within 48 hours after spudding. If the spudding occurs on a weekend or holiday, wait until the following regular workday to make this report."

Site Reclamation for Nonproducing Wells

"Rehabilitation of the entire site will be required and will commence as soon as practical, dependent upon prevailing weather conditions. Cut and fill slopes will be reduced and graded to blend to the adjacent terrain."

"Mud pits may be allowed to dry. Fluids that will not dry must be removed. All polluting substances or contaminated materials such as oil, oil saturated soils, and gravels will be buried with a minimum of 2 feet of clean soil as cover, or be removed to an approved site."

"Drainages will be reestablished and temporary measures will be required to prevent erosion to the site until vegetation is established."

"After final grading and before replacement of topsoil, the entire surface of the site shall be scarified to eliminate slippage surfaces and to promote root penetration. Topsoil will then be spread over the site to achieve an approximate uniform, stable thickness consistent with the established contours."

Site Reclamation for Producing Wells

"Site reclamation for producing wells will be accomplished for portions of the site not required for continued operation of the well. All disturbed surfaces will be treated to prevent erosion and to compliment the visual resources of the area. A new site plan will be required encompassing the facilities required for operation and interim reclamation measures. The following measures are typical reclamation requirements:

1. Mud pit reclamation.
2. Polluting substances and contaminated materials buried.

3. Cut and fill slope vegetation.
4. Berm removal and site grading.
5. Site fencing."

Site Fencing

"A temporary fence will be constructed by the holder around the site until vegetation is established. The fence will conform to the attached drawing _____. The fence will then be removed."

Abandonment and Plugging

Before the well is plugged a determination should be made as to the availability and quality of water in the well and if there is a beneficial use for such water.

"In the event abandonment of the well is desired, an oral request may be granted by this office but must be timely followed within 15 days with a "Notice of Intention to Abandon" (form 3160-5, formerly 9-331). Unless the plugging is to take place immediately upon receipt of oral approval, the Authorized Officer must be notified at least 48 hours in advance of the plugging of the well, in order that a representative may witness plugging operations."

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