SECTION 100 - GENERAL INFORMATION

SECTION 100 - GENERAL INFORMATION

110.00 ROADWAY DESIGN SECTION

The headquarters Roadway Design section (organization chart) is managed by the Roadway Design Engineer and has general overall responsibility for statewide project development.

120.00 ROADWAY DESIGN MISSION AND FUNCTION

Roadway Design is committed to maintain quality and provide assistance to the Highway Development program while leading the Idaho Transportation Department in the growth, development, and evolution of the art and science of highway engineering.

The function of the Roadway Design section is to:

- coordinate the statewide design activities,
- facilitate District and headquarters project development activities,
- aid in resolving design conflicts,
- process design exceptions, and
- ensures that state, local and American Association of State Highway and Transportation Officials (AASHTO) Standards are met or have been approved.

130.00 ROADWAY DESIGN ORGANIZATION

The Roadway Design section responsibilities are organized as follows:

130.01 Area Engineers. Each area engineer acts as a liaison between the Districts and Headquarters relative to matters concerning concept analysis, feasibility studies, project development, geometrics, project plans, specifications, estimates, reviews, preparation of advertisement and award of contracts.

130.02 Consultant Administration /Local Roads. The Consultant Administration /Local Roads (CAU) coordinate all agreements with consultants for development of projects on the State Highway and Local Roads Systems. The CAU is also a resource to other sections of the department for Professional Agreements as outlined in the Professional Service Agreement Procedures. Should consultant services be desired, a Request for Consultant Services, ITD 2760, should be completed and sent to the CAU.

130.03 Specialties. A specialties engineer in hydraulics is available to provide valuable assistance in this specialty.

A project management supervisor oversees support specialties including scheduling, location, aerial photography and programming and develops standards and training.

130.04 Engineering Support. The geometric engineer assists and supports districts on projects with complex design issues including compliance of state and national design standards regarding curves, speed, sight distance, safety, roadside, alignment, etc. and is an expert on roadside safety features. The development and maintenance of Standard

Engineering Drawings are also the responsibility of the geometrics engineer. Engineering support provides engineering expertise, solutions, and support through the use of computerized methods. The unit includes CADD and engineering programming support.

130.05 Contract Administration and Award. All contracts are advertised and awarded, per rules and regulations, from the Roadway Design section through the PS&E Unit.

Special projects are completed throughout the Roadway Design Section as assigned.

140.00 ENVIRONMENTAL SECTION

The Environmental section works very closely with the Roadway Design section and is managed by the Environmental Manager. The section prepares, reviews, and approves environmental documents and recommends actions concerning environmental clearances for the Federal Highway Administration. The Environmental section provides expertise in design of projects that require special protection measures for environmental elements and for compliance with permits.

140.01 Illustration. Under the direction of the Environmental Manager, illustration services are provided to headquarters and the Districts.

150.00 FHWA OVERSIGHT

An Oversight Agreement has been entered into by the Federal Highway Administration (FHWA) and the Idaho Transportation Department (ITD). A stewardship plan has been developed as part of this agreement through a joint effort by FHWA and ITD.

The Oversight Agreement indicating the ITD/FHWA oversight responsibility and FHWA approval on each phase of project development and construction is shown in Figure 1-1.

The following documents are not to be sent to FHWA unless specifically requested:

ITD Administered Projects-

Materials Phase Reports

Notice to Contractors

Pre-construction Conference Notice

Construction Inspection Reports

Record of Change order Authorization (ITD 2317)

Change Order to Contractor (ITD 400)

Quantity Variance Request (QVR) (ITD 2243)

Estimate Voucher/Final Inspection and Review of Final Estimate & Records

Statement of Elapsed Time and Status of Work

NPDES Storm Water Permit Project Checklist for Construction (ITD 2784)

All Projects (ITD Administered and FHWA Full Oversight)-ROW Plans

155.00 VALUE ENGINEERING

Section 106(g) of Title 23, United States Code provides: “The Secretary shall establish a program to require States to carry out a value engineering analysis for all projects on the National Highway System [NHS] with an estimated total cost of $25 million or more.”

The FHWA will assure that a VE study is preformed on all Federal-aid funded NHS projects with an estimated cost (includes design, right-of-way, and construction costs) of $25 million or more, and on other Federal-aid projects where its employment has high potential for cost savings. In addition, FHWA will strongly encourage State Departments of Transportation to use VE throughout highway project development, design, and construction.

Value Engineering is defined as the systematic application of recognized techniques by a multi-disciplined team to identify the function of a product or service, establish a worth for that function, generate alternatives through the use of creative thinking, and provide the needed functions to accomplish the original purpose of the project, reliably, and the lowest life-cycle cost without sacrificing safety, necessary quality, and environmental attributes of the project.

Project is defined as a portion of a highway that a State proposes to construct, reconstruct, or improve as described in the preliminary design report or applicable environmental document. A project may consist of several contracts or phases over several years.

ITD has developed a Value Engineering Guide to assist in determining the need for and provide guidance through a value engineering study.

The FHWA Value Engineering Policy, Regulations and Process can be found at http://www.fhwa.dot.gov/ve/index.cfm

Additional guidance on Value Engineering may be found in Part 627 of Title 23 Code of Federal Regulations [CFR].

160.00 DESIGN MANUAL USE

The Design manual has been written for use by District Design sections. Any reference to "the District" may be replaced with "consultant," etc., depending on what entity is responsible for the development of the project being designed.

170.00 ELECTRONIC FORMS

Most of the referenced forms are available in electronic .doc or .xls format. To complete these forms electronically, click on the word document or excel worksheet version button. This will allow the documents to be saved for future use. Most forms in this manual are also available on this disc in Appendix D, for ITD employees they are also available on the Intranet under form finder. The forms are listed by ITD number or other identifying notation. For further assistance to change a form, or make suggestions, contact the Roadway Design section.

180.00 DESIGN MANUAL CHANGES

Use the ITD 0063, Request to Change Manual, for any recommended changes. Complete the form and send it to the Roadway Design Engineer. Approved changes will be incorporated in the next manual update.

190.00 ACRONYMS

AASHTO	American Association of State Highway and Transportation Officials
ACHP	Advisory Council on Historic Preservation
ADT	Average Daily Traffic
AERO	Bureau of Aeronautics
AHERA	Air Hazard Emergency Response Act
BA	Biological Analysis
BLM	Department of Interior, Bureau of Land Management
BMP	Best Management Practices
CADD	Computer Aided Drafting and Design
CAPA	Critical Aquifer Protection Area
CE	Categorical Exclusion
CFR	Code of Federal Regulations
CO	Carbon Monoxide
COE	Corps of Engineers
CRSI	Concrete Reinforcement Steel Institute
DBA	Decibels
DEQ	Division of Environmental Quality
DHV	Design Hourly Volume
DHW	Department of Health and Welfare
DOI	Department of Interior
DOL	Department of Lands
DWR	Department of Water Resources
EA	Environmental Assessment
EIS	Environmental Impact Statement
EO	Executive Order
EPA	Environmental Protection Agency
ENV	Environmental

F.A.	Federal-Aid
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
FERC	Federal Energy Regulatory Commission
FHWA	Federal Highway Administration
FONSI	Finding of No Significant Impact
FTA	Federal Transit Authority
FWCA	Fish and Wildlife Coordination Act
FWPCA	Federal Water Pollution Control Act
FWS	Fish and Wildlife Service
GLO	Government Land Office
GREEN BOOK	A Policy on Geometric Design of Highways and Streets
HUD	Housing and Urban Development
IC	Idaho Code
ITD	Idaho Transportation Department
LOS	Level of Service
LPA	Local Public Agency
LPC	Local Projects Coordinator
MAP	Mean Annual Precipitation
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
MPO	Metropolitan Planning Organization
MUTCD	Manual of Uniform Traffic Control Devices
NAD27	North American Datum of 1927
NAD83	Idaho Coordinate System Datum
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NGS	National Geodetic Survey
NMFS	National Marine Fisheries Services
NOAA	National Oceanic and Atmosphere Administration
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resource Conservation Service
NWP	Nationwide Permit

PLS	Pure Live Seed
PM-2.5	Particulate Matter (2.5 microns or smaller)
PM-10	Particulate Matter (10 microns or smaller)
POE	Port of Entry
PS&E	Plan Specification and Estimate
REMEL	Reference Energy Mean Emission Levels
ROD	Record of Decision
RW	Right-of-way
SDWA	Safe Drinking Water Act
SHPO	State Historical Preservation Office
ST	State Projects
STIP	Statewide Transportation Improvement Plan
STURAA	1987 Surface Transportation and Uniform Relocation Assistance Act
TIP	Transportation Improvement Plan
TLTWO	Two-Lane, Two-Way Operation
TCP	Traffic Control Plan
UMTA	Urban Mass Transit Administration
USBR	United States Bureau of Reclamation
USDOT	United States Department of Transportation
USFS	United States Forest Service
USGS	United States Geological Survey
UST	Underground Storage Tanks
WFLHD	Western Direct Federal Division of Federal Highway Administration

B
C D
Manuals Menu
Cover Page