ESTIMATE
FOR
PRELIMINARY ENGINEERING

Project No.	Project Name
Description:	

	For Negotiation		*For Agreement*

Prepared by:	
Organization:	
Date:	

ADA COUNTY HIGHWAY DISTRICT
3775 Adams Street – Boise ID 83714

Note: These items are for example only and can be modified to reflect the type of work or project being undertaken.

		TOTAL M-D	PRIN M-D	ENGINEER M-D	DESIGN M-D	DRAFT M-D	FIELD M-D	CLRCL M-D
I – FIELD SURVEYS								
A.	**ROADWAY SURVEYS**							
1	Project reconnaissance							
2	Establish horizontal PI's for P-line							
3	Survey and reference P-line							
4	Benchmark circuit							
5	X-Section P-line							
6	Obtain existing topography							
7	Search for existing property and section corners							
8	Tie found corners to P-line							
B	**BRIDGE SITE SURVEYS**							
1	Establish base line							
2	Establish benchmarks							
3	X-section stream channel							
II – **DESIGN OF ROADWAY**								
A	**PRELIMINARY DESIGN**							
1	Pre-operational conferences							
2	Reduce field notes							
3	Plot preliminary topo base map							
4	Set preliminary horizontal alignment							
5	Plot X-sections							
6	Plot ground line profile							
7	Set preliminary profile grade							
8	Preliminary earthwork studies							
9	Revise alignment and/or grade							
10	Preliminary intersection studies							
11	Preliminary drainage studies							
12	Prepare/submit preliminary design review plans							
13	Preliminary design review attendance							
14	Revisions to pre-design, as required by review							
15	Set preliminary right-of-way and easements							

		TOTAL M-D	PRIN M-D	ENGINEER M-D	DESIGN M-D	DRAFT M-D	FIELD M-D	CLRCL M-D
16	Preliminary ownership search							
17	Prepare preliminary ownership map							
18	Liaison and conferences							
B	**FINAL DESIGN**							
1	Finalize horizontal alignment							
2	Adjust profile grade							
3	Finalize profile grade							
4	Final intersection design							
5	Final drainage and irrigation design							
6	Establish state plane coordinate on L-line							
7	Establish state plane coord cntrl on sec & prop lns							
8	Plot cut and fill slope limits							
9	Set final right-of-way and easement lines							
10	Calculate right-of-way requirements							
11	Prepare final total ownership map							
12	Write descriptions for right-of-way acquisition							
13	Final approach design and location							
14	Design of traffic control devices							
15	Determine location of utilities							
16	Description of spec appurt (i.e. retaining walls, special irrigation or drainage, structures, etc.							
17	Calculate final roadway quantities							
18	Final design on Mylar							
19	Prepare roadway quantity & pipe summary sheets							
20	Prepare typical section sheets							
21	Acquire special permits, clearances, etc. (i.e. Fish & Game, Airport. Water Admin, etc)							
22	Prepare special provisions							
23	Prepare construction cost estimate							
24	Final plan assembly and review							
25	Final design review attendance							
26	Final corrections as required from review							
27	Final corrections as required for right-of-way negotiations							
28	Liaison and conferences							
	TOTAL MANDAYS							

		TOTAL M-D	PRIN M-D	ENGINEER M-D	DESIGN M-D	DRAFT M-D	FIELD M-D	CLRCL M-D
III – SOILS AND MATERIALS INVESTIGATION								
1	Project reconnaissance							
2	Locate test holes/determine elevations, dig, log, sample							
3	Prepare soils profile							
4	Submit soils data and request materials conference							
5	Attend materials conference							
6	Liaison and conferences							
	TOTAL MAN-DAYS							
IV – STRUCTURE DESIGN								
A	**PRELIMINARY DESIGN**							
1	Reduce field survey notes							
2	Plot topo and contours of site survey							
3	Complete hydraulic studies							
4	Complete hydrologic studies							
5	Prepare/submit stress typical section for approval							
6	Prepare/submit hydraulic report for approval							
7	Establish horizontal alignment							
8	Establish profile grade							
9	Prepare foundation investigation sheet							
10	Prepare situation layout sheet							
11	Submit for preliminary design approval							
12	Liaison and conferences							
B – FINAL DESIGN								
1	Revise situation layout sheet							
2	Revise foundation investigation sheet							
3	Design superstructure							
4	Design substructure							
5	Detail structure							
6	Calculate quantities							
7	Final design on Mylar							
8	Prepare bar diagram							
9	Prepare special provisions							

		TOTAL M-D	PRIN M-D	ENGINEER M-D	DESIGN M-D	DRAFT M-D	FIELD M-D	CLRCL M-D
10	Prepare construction cost estimate							
11	Complete special design (channel change, riprap, etc.)							
12	Obtain permits and clear (Fish & Game, Water Admin, RR)							
13	Assemble and review final drawings							
14	Final corrections							
15	Liaison and conferences							
	TOTAL MAN-DAYS							
SUMMARY								
I	FIELD SURVEYS							
II	ROADWAY DESIGN							
III	SOILS AND MATERIAL INVESTIGATION							
IV	STRUCTURE DESIGN							
	TOTAL MANDAYS							

SALARY COST								
A	**SUMMARY ESTIMATED MAN-DAY TIME AND SALARY COST**							
	1. Principal		Man-Days or		Man-Hours @		=	$
	2. Engineer		Man-Days or		Man-Hours @		=	$
	3. Designer		Man-Days or		Man-Hours @		=	$
	4. Draftsman		Man-Days or		Man-Hours @		=	$
	5. Fieldman		Man-Days or		Man-Hours @		=	$
	6. Clerical		Man-Days or		Man-Hours @		=	$
						TOTAL SALARY COSTS		$

B – PAYROLL BURDEN AND FRINGE BENEFIT COSTS			
	1	Direct payroll costs – Payroll burden (_____ x _____)	$
	2	General Overhead & Direct Job Cost (_____ x _____) (*see attached sheet)*	$
	3	Net Fee – Computed at _____% of Assigned Engineering Costs (_____) (_____ + _____ - _____)	$
	4	Out-of-Pocket Costs – Materials Testing Laboratory *(as per attached letter)*	$
	5	Summary of Costs	
		a. Employee Payroll	$
		b. Payroll Burden and Fringe Benefit	$
		c. General Overhead and Direct Job Costs	$
		d. Net Fee	$
		e. Out-of-Pocket Costs	$
		TOTAL	$
		TOTAL DESIGN FEE	$

Note: This sheet is for illustrative purposes only and is taken from the Idaho Transportation Department methodology. The consultant may submit a separate form for approval by ACHD.

TYPICAL PAYROLL BURDEN AND FRINGE COSTS	
F.I.C.A	$
State Unemployment Compensation	$
Federal Unemployment Compensation	$
Group Insurance	$
Workmens Compensation	$
Holidays _____; Vacation _____; Sick Leave _____	$
TOTAL PAYROLL BURDEN AND FRINGE COSTS	$

TYPICAL COMPOSITION OF GENERAL OVERHEAD	
	Percentage of Total Overhead to Base Assignable Salaries
Field Supplies Expense	%
Stationery and Supplies Expense	%
Drafting Supplies Expense	%
Computer Supplies Expense	%
Laboratory Testing Supplies	%
Postage Expense	%
Printing Expense	%
Meals and Lodging Expense	%
Vehicle Expense	%
Professional Dues, Meetings & License Expense	%
Travel Expense	%
Insurance – General Expense	%
Published Data Expense	%
Telephone Expense	%
Rent Expense	%
Electric Expense	%
Cleaning Supplies and Janitor Service Expense	%
Security Protection	%
Freight Expense	%
Auditor Expense	%

TYPICAL COMPOSITION OF GENERAL OVERHEAD	
	Percentage of Total Overhead to Base Assignable Salaries
Depreciation Expense	%
Service Fee Expense	%
Moving Employee Expense	%
Attorney Fees Expense	%
Idaho Sales Tax Expense	%
Personal Property Tax Expense	%
Real Estate Tax Expense	%
Mileage Expense	%
Water and Sewer Expense	%
Misc. Expense on Office and Field Machines	%
Fuel Expense (offices)	%
Computer Service Expense	%
Construction Services Expense	%
Non-productive Salaries Expense	%
Secretarial Salaries Expense	%
Supervisory and Administrative Salary Expense	%
PERCENTAGE OF TOTLA OVERHEAD TO JOB ASSIGNABLE SALARIES	%