

**Avon, Indiana  
Section 14**

**Appendix C:  
Cost Engineering**

**WALLA WALLA COST ENGINEERING  
MANDATORY CENTER OF EXPERTISE**

**COST AGENCY TECHNICAL REVIEW  
CERTIFICATION STATEMENT**

For Project No. 457309

**LRL – Town of Avon, Indiana South County Road 625  
Section 14 – Emergency Streambank Protection**

The Town of Avon, Indiana South County Road 625 Section 14 – Emergency Streambank Protection as presented by Louisville District, has undergone a successful Cost Agency Technical Review (Cost ATR), performed by the Walla Walla District Cost Engineering Mandatory Center of Expertise (Cost MCX) team. The Cost ATR included study of the project scope, report, cost estimates, schedules, escalation, and risk-based contingencies. This certification signifies the products meet the quality standards as prescribed in ER 1110-2-1150 Engineering and Design for Civil Works Projects and ER 1110-2-1302 Civil Works Cost Engineering.

As of February 28, 2019, the Cost MCX certifies the estimated total project cost:

FY20 Project First Cost:	\$1,492,000
Fully Funded Total Project Cost:	\$1,522,000
Federal Cost of Project:	\$1,090,000

It remains the responsibility of the District to correctly reflect these cost values within the Final Report and to implement effective project management controls and implementation procedures including risk management through the period of Federal participation.



**FOR** Michael P. Jacobs, PE, CCE  
**Chief, Cost Engineering MCX**  
**Walla Walla District**

\*\*\*\* TOTAL PROJECT COST SUMMARY \*\*\*\*

PROJECT: **Town of Avon, Indiana, South County Road 625 East**  
PROJECT NO: **457309**  
LOCATION: **Avon, IN**

DISTRICT: **Louisville District**

PREPARED: **2/22/2019**

POC: **CHIEF, COST ENGINEERING, Jim Vermillion**

This Estimate reflects the scope and schedule in report; Section 14 DRAFT Detailed Project Report and Environmental Assessment, 2/9/18

Civil Works Work Breakdown Structure		ESTIMATED COST				PROJECT FIRST COST (Constant Dollar Basis)					TOTAL PROJECT COST (FULLY FUNDED)				
WBS NUMBER	Civil Works Feature & Sub-Feature Description	COST (\$K)	CNTG (\$K)	CNTG (%)	TOTAL (\$K)	ESC (%)	COST (\$K)	CNTG (\$K)	REMAINING COST (\$K)	2020 1-Oct- 19 Spent Thru: <b>1-Oct-17</b> (\$K)	TOTAL FIRST COST (\$K)	ESC (%)	COST (\$K)	CNTG (\$K)	FULL (\$K)
02	RELOCATIONS	\$57	\$17	29.47%	\$74	2.0%	\$58	\$17	\$76		\$76	2.0%	\$60	\$18	\$77
16	BANK STABILIZATION	\$797	\$235	29.47%	\$1,032	2.0%	\$813	\$240	\$1,053		\$1,053	2.0%	\$830	\$245	\$1,074
	<b>CONSTRUCTION ESTIMATE TOTALS:</b>	<b>\$855</b>	<b>\$252</b>		<b>\$1,107</b>	2.0%	<b>\$872</b>	<b>\$257</b>	<b>\$1,129</b>		<b>\$1,129</b>	2.0%	<b>\$889</b>	<b>\$262</b>	<b>\$1,151</b>
01	LANDS AND DAMAGES	\$10	\$3	25.00%	\$13	2.0%	\$10	\$3	\$13		\$13	0.5%	\$10	\$3	\$13
30	PLANNING, ENGINEERING & DESIGN	\$214	\$27	12.59%	\$241	4.2%	\$223	\$28	\$251		\$251	1.4%	\$226	\$28	\$254
31	CONSTRUCTION MANAGEMENT	\$85	\$11	12.59%	\$96	4.2%	\$89	\$11	\$100		\$100	4.1%	\$92	\$12	\$104
	<b>PROJECT COST TOTALS:</b>	<b>\$1,164</b>	<b>\$292</b>	<b>25%</b>	<b>\$1,456</b>		<b>\$1,194</b>	<b>\$299</b>	<b>\$1,492</b>		<b>\$1,492</b>	2.0%	<b>\$1,218</b>	<b>\$305</b>	<b>\$1,522</b>

- \_\_\_\_ CHIEF, COST ENGINEERING, Jim Vermillion
- \_\_\_\_ PROJECT MANAGER, Keith Keeney
- \_\_\_\_ CHIEF, REAL ESTATE, Veronica Hiriams
- \_\_\_\_ CHIEF, PLANNING, Sharon Bond
- \_\_\_\_ CHIEF, ENGINEERING, John Bock
- \_\_\_\_ CHIEF, OPERATIONS, Tim Fudge
- \_\_\_\_ CHIEF, CONSTRUCTION, Kirk Dailey
- \_\_\_\_ CHIEF, CONTRACTING, Denise Bush
- \_\_\_\_ CHIEF, PM-PB, xxxx
- \_\_\_\_ CHIEF, DPM, Linda Murphy

**ESTIMATED TOTAL PROJECT COST: \$1,522**  
ESTIMATED FEDERAL COST: **65%** \$990  
ESTIMATED NON-FEDERAL COST: **35%** \$533

**22 - FEASIBILITY STUDY (CAP studies): \$100**  
ESTIMATED FEDERAL COST: 100% **\$100**  
ESTIMATED NON-FEDERAL COST:

**ESTIMATED FEDERAL COST OF PROJECT \$1,090**

\*\*\*\* TOTAL PROJECT COST SUMMARY \*\*\*\*

\*\*\*\* CONTRACT COST SUMMARY \*\*\*\*

PROJECT: Town of Avon, Indiana, South County Road 625 East

DISTRICT: Louisville District

PREPARED: 2/22/2019

LOCATION: Avon, IN

POC: CHIEF, COST ENGINEERING, Jim Vermillion

This Estimate reflects the scope and schedule in report;

Section 14 DRAFT Detailed Project Report and Environmental Assessment, 2/9/18

WBS Structure		ESTIMATED COST				PROJECT FIRST COST (Constant Dollar Basis)				TOTAL PROJECT COST (FULLY FUNDED)				
		Estimate Prepared: <b>26-Feb-19</b>				Program Year (Budget EC): 2020								
		Estimate Price Level: 1-Oct-18				Effective Price Level Date: 1-Oct-19								
WBS NUMBER A	Civil Works Feature & Sub-Feature Description B	COST (\$K) C	RISK BASED		TOTAL (\$K) F	ESC (%) G	COST (\$K) H	CNTG (\$K) I	TOTAL (\$K) J	Mid-Point Date P	ESC (%) L	COST (\$K) M	CNTG (\$K) N	FULL (\$K) O
			CNTG (\$K) D	CNTG (%) E										
<b>02</b>	RELOCATIONS	\$57	\$17	29.47%	\$74	2.0%	\$58	\$17	\$76	2021Q1	2.0%	\$60	\$18	\$77
<b>16</b>	BANK STABILIZATION	\$797	\$235	29.47%	\$1,032	2.0%	\$813	\$240	\$1,053	2021Q1	2.0%	\$830	\$245	\$1,074
<b>CONSTRUCTION ESTIMATE TOTALS:</b>		\$855	\$252	29.5%	\$1,107		\$872	\$257	\$1,129			\$889	\$262	\$1,151
<b>01</b>	LANDS AND DAMAGES	\$10	\$3	25.0%	\$13	2.0%	\$10	\$3	\$13	2020Q2	0.5%	\$10	\$3	\$13
<b>30</b>	PLANNING, ENGINEERING & DESIGN													
2.0%	Project Management	\$17	\$2	12.59%	\$19	4.2%	\$18	\$2	\$20	2020Q2	1.0%	\$18	\$2	\$20
1.0%	Planning & Environmental Compliance	\$9	\$1	12.59%	\$10	4.2%	\$9	\$1	\$11	2020Q2	1.0%	\$9	\$1	\$11
15.0%	Engineering & Design	\$128	\$16	12.59%	\$144	4.2%	\$133	\$17	\$150	2020Q2	1.0%	\$135	\$17	\$152
1.0%	Reviews, ATRs, IEPRs, VE	\$9	\$1	12.59%	\$10	4.2%	\$9	\$1	\$11	2020Q2	1.0%	\$9	\$1	\$11
1.0%	Life Cycle Updates (cost, schedule, risks)	\$9	\$1	12.59%	\$10	4.2%	\$9	\$1	\$11	2020Q2	1.0%	\$9	\$1	\$11
1.0%	Contracting & Reprographics	\$8	\$1	12.59%	\$9	4.2%	\$8	\$1	\$9	2021Q1	4.1%	\$9	\$1	\$10
2.0%	Engineering During Construction	\$17	\$2	12.59%	\$19	4.2%	\$18	\$2	\$20	2021Q1	4.1%	\$18	\$2	\$21
2.0%	Planning During Construction	\$17	\$2	12.59%	\$19	4.2%	\$18	\$2	\$20	2020Q2	1.0%	\$18	\$2	\$20
	Adaptive Management & Monitoring			12.59%										
	Project Operations			12.59%										
<b>31</b>	CONSTRUCTION MANAGEMENT													
10.0%	Construction Management	\$85	\$11	12.59%	\$96	4.2%	\$89	\$11	\$100	2021Q1	4.1%	\$92	\$12	\$104
	Project Operation:			12.59%										
	Project Management			12.59%										
<b>CONTRACT COST TOTALS:</b>		\$1,164	\$292		\$1,456		\$1,194	\$299	\$1,492			\$1,218	\$305	\$1,522