

**Iowa Public Works Service Bureau, Phase 2**

**Research Proposal Number: N/A**

**PWSB**  
Public Works Service Bureau



Submitted to Research Program Manager, Iowa Department of  
Transportation, Research and Analytics, 800 Lincoln Way, Ames, Iowa  
50010

# Summary Page

**Submitted By:**

**Paul Wiegand, P.E. – Principal Investigator (PI)**

Institute for Transportation (InTrans)

Iowa State University (ISU), 2711 S Loop Dr Ste 4700, Ames, Iowa 50010

Telephone: 515-294-7082, E-mail: [pwiegand@iastate.edu](mailto:pwiegand@iastate.edu)

ORCID: 0000-0002-4175-8307

**Beth Richards – co-author**

Institute for Transportation (InTrans)

Iowa State University (ISU), 2711 S Loop Dr Ste 4700, Ames, Iowa 50010

Telephone: 515-294-2869, E-mail: [brich@iastate.edu](mailto:brich@iastate.edu)

ORCID: 0000-0001-8498-9255

**Abstract (Maximum 300 words)**

The Iowa Highway Research Board funded a study (IHRB Project TR-761) to determine the feasibility of an Iowa Public Works Service Bureau. As a part of that study, a questionnaire was emailed to representatives of all cities with a population exceeding 250 people to determine if there was interest in developing a public works service bureau. The questions dealt with a city's interest in web applications including elements such as a database of city contacts, asset management, organizational charts, job descriptions, pay levels, sample ordinances, sample policies, and communications with the Iowa DOT. Over 80% of the respondents indicated that they were highly or somewhat likely to use those applications.

With that indication of interest, potential organizational structures and funding were evaluated. Based on those evaluations, a majority of the Technical Advisory Committee recommended pursuing a project to establish the Iowa Public Works Service Bureau within the Statewide Urban Design and Specifications program with permanent funding from the street construction portion of Iowa's Road Use Tax Fund. Due to the time required to work with the Governor's office and the legislature to establish the permanent funding, a two-year Phase 2 project was recommended with funding from the IHRB. This project will involve creating the website elements, hiring two programmers to establish the applications, establishing a permanent advisory committee, and working to establish permanent funding with a Road Use Tax off-the-top allocation.

**Project Cost:** \$480,000

**Proposal Date:** November 10, 2020

**Keywords:** Iowa cities, public works, public works service bureau, efficiency, quality of live, sustainable communities

## TABLE OF CONTENTS

Problem Statement .....	4
Background Summary .....	4
Objectives .....	5
Research Plan.....	5
Products.....	7
Implementation/Technology Transfer .....	7
Benefits .....	8
Time Schedule .....	8
Staffing.....	9
Iowa DOT or Local Jurisdiction Involvement .....	9
Budget.....	9

## **Problem Statement**

With over 900 cities in the state and each with differing activities within their public works departments, the ability to communicate and exchange information statewide is lacking. A public works service bureau would provide a mechanism to establish the much needed communication and would be an organization conscious of and able to respond to on-going and emerging public works initiatives and concerns in a more efficient and effective manner.

Since no other such organization exists for public works departments, establishing the Iowa Public Works Service Bureau (IPWSB) will be a daunting task. The Iowa County Engineer's Association Service Bureau is the only current example of a similar application. Establishing the organization's activities and funding will involve marketing the program to many cities and organizations, as well as establishing long term financing with a change in the law establishing an off-the-top allocation from the street construction portion of Iowa's Road Use Tax Fund. Due to the current pandemic, this task will be even more challenging due to the decrease in Road Use Tax revenue caused by the decrease in vehicle miles traveled. In addition, understanding the different needs of small communities and large cities alike will be paramount to establish the value and use of the public works service bureau. Another important task will be developing the governance of the IPWSB within the SUDAS program. Developing an active, diverse, technical advisory committee to identify beneficial web applications is also critical to establish the value for having a service bureau.

## **Background Summary**

In order to determine the feasibility of an urban service bureau in Iowa, the Iowa Highway Research Board initiated a study (TR-761) in 2018. The study was conducted by the SUDAS staff within the Institute for Transportation at Iowa State University. The primary focus of the study was to determine if there was interest in developing a statewide service bureau to serve public works official's needs. Initial work involved a literature search to determine whether any similar organizations existed across the country, as well as setting up a questionnaire to be sent to all cities with a population above 250 people. It was determined no similar organizations exist.

The questionnaire addressed whether users were likely to use general applications containing contacts from other agencies, asset management, management tools, sample ordinances and policies, and communication with the Iowa DOT. Over 80% of the respondents indicated that they were highly or somewhat likely to use those applications. Based on those responses, the project team developed potential organizational structures and associated costs. The results indicated establishing the IPWSB within the SUDAS program was the least costly alternative due to existing funding for the current staff. Funding sources were evaluated and it was determined the best source of revenue would be an off-the-top allocation of 1/8 of 1% from the street construction portion of Iowa's Road Use Tax Fund.

The final recommendation from TR-761 was to pursue establishing the IPWSB within the SUDAS program with funding from Iowa's Road Use Tax Fund. In addition, TR-761 recommended a Phase 2 to provide funding for establishment of the IPWSB while the permanent funding was being pursued.

## Objectives

The objectives of the Phase 2 project include providing for these general concepts:

- Assist public works departments across the state in streamlining essential services to their local communities.
- Improve efficient use of public resources, since new or expanded revenue sources are unlikely, in order to maintain each community's infrastructure, which is critical to the long-term sustainability of each community.
- Provide public works staff and civic leaders with specific data to allow them to make informed decisions and policies to improve the quality of life in Iowa communities.
- Maintain stable and sustainable communities through the in-depth understanding of the workings of Iowa public works departments.
- Improve infrastructure operational efficiencies by cultivating communication between agencies.

## Research Plan

The objectives of this project will be achieved through completion of the following proposed research tasks:

- Task 1: Project Management
- Task 2: Website Development
- Task 3: Hire Database Manager
- Task 4: Marketing
- Task 5: Applications
- Task 6: Hire Programmer
- Task 7: Establish Governance
- Task 8: Permanent TAC
- Task 9: Final Report

The detailed deliverable(s) and time schedule for each task are presented separately in the Products section and Time Schedule section of this proposal.

### ***Task 1: Project Management***

Conduct project management activities throughout the duration of the project. Work with a technical advisory committee (TAC) and provide project updates on a quarterly basis. Conduct approximately four meetings with the TAC:

- Examine the project plans and provide initial input on the applications to develop. The TAC will also provide guidance for the marketing plan development.
- Review website development, hire new database manager, review application development, and reflect on marketing efforts and proposed next steps.
- Evaluate all aspects of application development and marketing efforts, and hire new programmer.
- Final review of all project activities, provide input on potential members for permanent TAC, and review draft report.

**Task 2: Website Development**

Update SUDAS website to include IPWSB content identified in Phase 1.

**Task 3: Hire Database Manager**

Initiate the process of hiring a database manager. The initial activities of the database manager will be to direct the work of the website development; determine the data needs for the cities; and to ensure the data entering processes are clear, concise, and intuitive.

**Task 4: Marketing**

Conduct discussions with all stakeholders to present the advantages of the Iowa Public Works Service Bureau and the proposed funding element. Make presentations to city representatives concerning the value gained in comparison to cost. Identify key legislators and Governor's staff to initiate discussions regarding the legislation necessary to establish the off-the-top Road Use Tax funding. Work with ISU, Iowa DOT, and other lobbyists to help pass the legislation.

**Task 5: Applications**

Develop applications identified in Phase 1 or through early marketing efforts to show the value of information exchange. Initiate other applications identified by the TAC as valuable.

**Task 6: Hire Programmer**

Complete IPWSB staff by hiring a computer programmer to implement work applications desired by the users.

**Task 7: Establish Governance**

Work with the existing SUDAS Board of Directors to appoint two representatives from each of the six districts to the IPWSB Advisory Committee. Representation will be from a diverse group of large and small cities. Advisory members from organizations such as the Iowa League of Cities, the Iowa County Engineer's Association Service Bureau, and the Iowa DOT Local Systems Bureau would also be included. This governance group will be responsible for policy and budget recommendations. The recommendations would be sent to the SUDAS Board of Directors for final action.

**Task 8: Permanent TAC**

Up to 15 individuals selected by interest, expertise, diversity in size of organization, geographical diversity, and diversity in organization level will form a permanent IPWSB TAC to provide guidance for future application development. Additionally, organizations such as the American Public Works Association Iowa Chapter, Iowa County Engineers Association, Iowa League of Cities, Iowa Water Environment Association, the Iowa DOT, MPO's, RPA's, Iowa Society of Solid Waste Operators, and others with similar interests would be invited to provide input into potential applications that would add value to the Iowa Public Works Service Bureau.

### **Task 9: Final Report**

Complete work on final report summarizing the actions taken on this project. Assuming favorable action by the legislature and Governor’s office regarding permanent funding, the final report would identify the specific steps to permanently establish the IPWSB. Those steps would include developing a funding agreement with the Iowa DOT for transfer of Road Use Tax Funds, modifications to the SUDAS Board of Directors bylaws to add the IPWSB Advisory and Technical Advisory Committees, and changes to the Articles of Incorporation for the SUDAS Corporation in conjunction with the Iowa Secretary of State’s office.

## **Products**

Products from this study are summarized in Table 1.

**Table 1. Summary of deliverables/products**

<b>Work Task</b>	<b>Deliverable(s)/Product(s)</b>
1	<ul style="list-style-type: none"><li>• Quarterly reports to the project TAC</li></ul>
2	<ul style="list-style-type: none"><li>• Updating website to include IPWSB content</li></ul>
3	<ul style="list-style-type: none"><li>• Onboarding of database manager</li></ul>
4	<ul style="list-style-type: none"><li>• Marketing tools</li><li>• IPWSB logo</li></ul>
5	<ul style="list-style-type: none"><li>• Web applications</li><li>• Databases</li></ul>
6	<ul style="list-style-type: none"><li>• Onboarding of new programmer</li></ul>
7	<ul style="list-style-type: none"><li>• Bylaws/governance documents</li></ul>
8	<ul style="list-style-type: none"><li>• Establish permanent TAC</li></ul>
9	<ul style="list-style-type: none"><li>• Draft final report</li><li>• Final report</li><li>• Technology Transfer Brief</li></ul>

## **Implementation/Technology Transfer**

The successful completion of this project will result in the establishment of the service bureau, development of initial tools and services, and securing permanent funding for the IPWSB. The permanent funding will involve modifying the street construction portion of Iowa’s Road Use Tax Fund to allocate an off-the-top amount of 1/8 of 1%. The IPWSB will be available for use by all cities in Iowa. The end product will provide information to improve the connectivity, knowledge, and efficiency of those public works departments. As time goes on the TAC will identify additional applications to expand and improve upon the program based on stakeholder needs. The Iowa DOT, particularly the Local Systems Bureau, will be able to utilize the contacts within the program to communicate with the cities across the state; these may be regulatory activities or information regarding responses to emergency situations.

The findings of the study will also be presented at relevant local conferences for organizations such as the APWA Iowa Chapter and Iowa League of Cities. Opportunities to contribute newsletter articles to those organizations will also be explored.

## Benefits

This study will provide the following benefits:

- Invaluable tools and resources for public works departments across the state, who provide essential services in their local communities.
- Efficient use of public resources to maintain each community’s infrastructure, which is critical to the long-term sustainability of each community.
- Provide public works staff and civic leaders with specific data to allow them to make informed decisions and policies to improve the quality of life in Iowa communities.
- Stable and sustainable communities through the in-depth understanding of the workings of public works departments.
- Improved infrastructure operational efficiencies by cultivating communication between agencies.

## Time Schedule

The estimated time for completing the proposed research is 24 months from notice to proceed (see Table 2).

**Table 2. Proposed project schedule**

Work Item	Month																								
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
Project Management	M									M						M								M	
Website Development																									
Hire DB Manager																									
Marketing																									
Applications																									
Hire Programmer																									
Establish Governance																									
Permanent TAC																									
Final Report																									

M: Meeting with TAC

## **Staffing**

The project team is well experienced in subject areas related to the proposed research tasks. The following are summaries of the management plan and the relevant qualifications of the proposed team members.

### **Management Plan**

- Paul Wiegand, P.E. will serve as the PI and primary author on the project. Paul will manage and direct the project.
- Beth Richards will serve as a co-author on the project. Beth will coordinate various activities of the project and will provide technical editing of all materials produced.
- Additional staff will be hired during the 24 month project.

### **Qualifications**

- Paul Wiegand has nearly 50 years of experience in the public works profession. He served in various positions within city engineering for 33 years and has worked at the Institute for Transportation for the past 15 years, the last 10 of which as the Statewide Urban Design and Specifications (SUDAS) program director. The SUDAS program provides uniform design guidelines and construction specifications for Iowa's urban public improvement projects. The Iowa Public Works Service Bureau will be an expansion of the unique SUDAS program. In addition, Paul is a lifetime member of the American Public Works Association (APWA) - a group who will be instrumental in getting the Iowa Public Works Service Bureau up and running.
- Beth Richards has 17 years of experience working on the SUDAS program and is the only person to have served in this capacity. Her vast experience with the SUDAS program and in the public works profession will make her a valuable member to the team. Beth is also a member of APWA and an officer on the Iowa Chapter Executive Committee.

## **Iowa DOT or Local Jurisdiction Involvement**

Iowa DOT, city, county, and consultant representatives will be included on the TAC. TAC activities will include quarterly updates and four meetings (either in person or electronic). The research team will be working with as many local jurisdictions as possible to encourage maximum participation in the Iowa Public Works Service Bureau.

## **Budget**

The estimated funding required for this project is \$480,000 for the project period of 24 months (See Table 3). Salaries/benefits for Paul Wiegand and Beth Richards will be covered by their current funding. Funds allocated for "communication services" are for the InTrans Publications Costs Center, which includes service fees for initial website development, graphic designers for marketing materials, and editors for project reports. Also included in "other direct costs" are estimated printing/copying costs for various marketing materials.

**Table 3. Proposed budget**

Key Personnel	Hourly Rate	# hours Year 1	# hours Year 2	Year 1	Year 2	TOTAL
				\$83,523	\$153,537	\$237,060
Paul Wiegand	\$0.00	0.00	0.00	\$0	\$0	\$0
Beth Richards	\$0.00	0.00	0.00	\$0	\$0	\$0
Database Manager	\$40.00	2088.08	2088.08	\$83,523	\$83,523	\$167,046
2nd Programmer	\$33.53	0.00	2088.08	\$0	\$70,013	\$70,013
<b>Subtotal: Salaries and Wages</b>				<b>\$83,523</b>	<b>\$153,537</b>	<b>\$237,060</b>
<b>Fringe Benefits</b>	Rate			<b>\$28,816</b>	<b>\$52,971</b>	<b>\$81,787</b>
Paul Wiegand	34.5%			\$0	\$0	\$0
Beth Richards	34.5%			\$0	\$0	\$0
Database Manager	34.5%			\$28,816	\$28,816	\$57,632
2nd Programmer	34.5%			\$0	\$24,155	\$24,155
<b>Subtotal: Salaries, Wages, and Benefits</b>				<b>\$112,339</b>	<b>\$206,508</b>	<b>\$318,847</b>
<b>Other Direct Costs</b>				<b>\$58,970</b>	<b>\$3,136</b>	<b>\$62,106</b>
Printing/Copying Costs				\$600	\$636	\$1,236
Communication Services				\$58,370	\$2,500	\$60,870
<b>Subtotal: Total Direct Costs (TDC)</b>				<b>\$171,309</b>	<b>\$209,644</b>	<b>\$380,953</b>
<b>Subtotal: Modified Total Direct Costs</b>				<b>\$171,309</b>	<b>\$209,644</b>	<b>\$380,953</b>
<b>Indirect Costs</b>				<b>\$44,540</b>	<b>\$54,507</b>	<b>\$99,048</b>
			26.0%	\$44,540	\$54,507	\$99,048
<b>Total Direct + Indirect Costs</b>				<b>\$215,850</b>	<b>\$264,151</b>	<b>\$480,000</b>

1. ISU employees are salaried. This estimate is based on the FY2021 base rates. Annual increases (July 1) and/or midyear promotions or rate changes may affect the level of effort possible under this budget.
2. Fringe rates for FY2021 are as follows: Faculty - 27.3%; P&S - 34.5%; Postdocs-32.3%; Merit - 44.1%; Research Assistants - 7.7%; non student hourly - 17%; registered students hourly - 0.6%.
3. ISU charges indirect on all direct costs shown above except equipment items over \$5000, sponsor paid tuition, and each subcontract's cost over \$25,000. Indirect rate is determined by a negotiated agreement between Iowa State University and the Department of Health and Human Services. ISU's policies that pertain to research or intellectual property can be found at <http://www.vpresearch.iastate.edu/policy/>. Basic institutional information can be found at <http://www.ospa.iastate.edu/proposal/institutional.html>.
4. Iowa State University charges salaries to sponsored projects on a percentage of effort basis. This documentation method is based on monthly faculty and staff personnel appointments and verified by semi-annual effort reports. The hourly rates used are estimates derived by dividing a month's base salary by 174, using the rates in effect for FY2020. Annual increases (July 1) and/or midyear promotions or rate changes may affect the level of effort possible under any budget.