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Prepared for:
Montana Department
of Transportation

A twin-engine propeller airplane is shown in flight, banking to the right. The background features a scenic landscape with a mountain range, a waterfall, and a field of pink flowers in the foreground. The text "MONTANA" is overlaid in large white letters, and "ECONOMIC IMPACT OF AIRPORTS" is overlaid in large blue letters. The word "UPDATE" is overlaid in white letters at the bottom right of the main image area.

MONTANA

ECONOMIC IMPACT OF AIRPORTS

UPDATE

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Expect More. Experience Better.



SECTION 3: SCOPE OF SERVICES

3.1 Scope and Objectives

The Montana Department of Transportation (MDT) is seeking to calculate the economic impacts of the state's airports. These impacts were previously determined in a 2007/2008 Economic Impact of Airports Study. This study summarized the quantitative and qualitative contributions of the airports in a technical report and statewide executive summary, as well as individual airport reports for the larger airports with more activity.

The focus of the Montana Economic Impact of Airports Update (EIS Update) project is to update the previous study and identify new information to convey the economic importance of airports and how airports generate benefits. This information is useful to the state, airports, and communities that sponsor airports to understand the wide range of impacts and benefits that are derived from airport operations. The information is also useful as MDT evaluates airport investments and how they contribute to the economy. While transportation investments typically consider safety, congestion, and accessibility, they also are considered in the context of promoting economic activity and development.

Since completing the 2007/2008 study, economic impact analyses have changed the general presentation of the data and some nomenclature, although the methodologies remain fairly consistent. The previous study presented data in terms of first-round, second-round, and total annual impacts, with the second-round representing the multiplier impacts and reflecting induced impacts. The results of airport economic impact analyses are now typically presented as on-airport (tenants, visitors, and capital improvements), multiplier impacts and/or indirect and induced (both determined through use of multipliers), and total impacts without the "round" of impacts indicated. However, the primary difference from the 2007/2008 study is how the visitor expenditures are treated, with these impacts included as on-airport not indirect impacts. Indirect impacts are generated when airport tenants, the airport administration, and businesses that capture visitor spending use part of their revenues and budget to purchase supplies and services from other businesses in Montana. Since the methodologies are still relatively consistent, the total economic impacts developed in 2015/2016 can still be compared to those from 2007/2008 for each airport and on a statewide basis.

In addition to updating how the data is presented, MDT anticipates significant changes to impacts as a result of other factors such as the national economic downturn that occurred in the 2008-2009 timeframe; changes in Northeast Montana due to development of the Bakken Oil Field; and changes in airline service including the merger of Delta and Northwest, change in Essential Air Service from Great Lakes to Cape Air, growth in low-cost carrier Allegiant service, and other trends. Montana's passengers have increased from around 3 million in 2007 and 2008 to over 3.6 million in 2014. Early data for 2015 shows continued growth in passenger activity throughout the state.

It will also be important to measure changes in general aviation activity, which has experienced drastic deviations that are both positive and negative. Overall nationally, pleasure-related general aviation activity has been declining due to the advanced age of both the pilot population and type of aircraft used for pleasure flying. Conversely, business general aviation is growing, especially at the higher end of the spectrum with more business jet activity. This includes fractional ownership, which is continuing to rise and is experienced at more airports than in the past.

It is important that Montana's airport economic impact data and presentation is updated to reflect these conditions and that analysis allows for comparison of the previous data. By updating the impact data, the state and the airports will have supporting documentation of the positive quantitative and qualitative impacts of aviation on all levels.



3.2 Problem Statement, Background Summary and Benefits/ Business Case

PROBLEM STATEMENT

Airports have a tremendous impact on the national economy but are viewed in a more general sense as simply a mode of transportation. While many people are familiar with commercial service airports because they use airline service to fly for work, vacation, or other leisure purposes, the vast majority of the U.S. population does not understand general aviation (GA) airports either from a contribution perspective or their relationship to business activity. The purpose of an economic impact study is to quantify the impacts associated with the airport or system that is being studied, but it is also important that the more qualitative aspects of airports are identified to provide a holistic view of the importance of airports to the economy, transportation system, and our general day-to-day lives.

Montana conducted the 2007/2008 Economic Impact of Airports study to evaluate and quantify the impact of its airport system and provide documentation to the MDT and airports. Kimley-Horn Project Manager Pam Keidel-Adams managed this study, which was used to communicate the impacts through products such as a Technical Report, Executive Summary, PowerPoint presentation, and individual airport brochures for 72 airports. This study is now outdated due to numerous changes at airports, within Montana's economy as well as the national economy, and even in the presentation of economic impact analyses terminology. The age of the data also renders the analysis less useful in communicating the importance of airports and the relationship of investments to increased economic activity.

BACKGROUND SUMMARY

Airports enhance the movement of people, goods, and services throughout the U.S. and globally, allowing the economy to operate more effectively and efficiently. As identified in the FAA's August 2011, *The Economic Impact of Civil Aviation on the U.S. Economy*:¹

From live traffic reports sent from helicopters to just-in-time delivery of life saving organs for transplant, civil aviation has become an integral part of the U.S. lifestyle and commerce. In challenging economic times, the services that air transportation provides are essential among the building blocks for recovery and economic growth.

The linkages between investing in airports and other transportation modes and economic activity are generally understood; however, in recent years there has been a greater emphasis on estimating and evaluating economic impacts as it relates to funding decisions. The September 2013 publication from the Connecticut Department of Transportation, *Analyzing the Economic Impacts of Transportation Projects*, conducted by the Connecticut Academy of Science and Engineering identified the causes of this change:²

- A decline in the availability of funding for transportation projects has led to increased competition for limited federal and state resources.
- A paradigm shift in implementing transportation projects from seeking funding to obtaining financing, resulting in an increased need for transportation agencies to justify the economic value of transportation projects in comparison with other priorities for competing bonding or other financing.

1. U.S. Department of Transportation, Federal Aviation Administration, *The Economic Impact of Civil Aviation on the U.S. Economy*, August 2011. http://www.aci-na.org/sites/default/files/files/FAA_Economic_Impact_Rpt_2011.pdf

2. The Connecticut Academy of Science and Engineering, *Analyzing the Economic Impacts of Transportation Projects*, September 2013. <http://www.ct.gov/dot/lib/dot/documents/dresearch/ct-2279-f-13-13.pdf>



- A growing call at the federal and state levels for funding/financing projects based on performance-based criteria, such as the potential for investment in a program or project to result in economic development.
- Investing in transportation to promote economic development of a region.

Montana quantified the economic impact of its airports in 2007/2008; however, since that time there have been numerous changes and the information must be updated. This project will update the economic impacts of each airport and quantify the statewide impact of the airport system, while also identifying the qualitative impacts that are associated with the operation of the system and utilizing the latest techniques and terminology in the presentation.

We conducted a preliminary literature search as part of the proposal preparation. Our literature search identified the existence of numerous state and airport-specific economic impact analyses, as well as studies of national aviation economic impact. In addition to the previously referenced FAA publication, which has since been updated in June 2014³, Airports Council International-North America also quantified the impact of U.S. commercial service airports in its September 2014, *The Economic Impact of Commercial Airports in 2013*⁴. The FAA also analyzed national airport impacts in its January 2015, *The Economic Impact of Civil Aviation on the U.S. Economy Economic Impact of Civil Aviation by State*.⁵ This publication, also referred to as the "The State Report" utilizes the same methodology as "The National Report" and represents "direct and indirect expenditures on aviation-related economic activities." In this report, the term "primary impacts" is used to reflect direct and indirect expenditures and the types of civilian economic activity analyzed include the following:⁶

- Airline operations
- Airport operations
- General aviation
- Aircraft-related manufacturing
- Air couriers
- Visitor expenditures
- Travel arrangements

The State Report also quantifies "secondary impacts" (also referred to as induced impacts) using the Regional Input-Output Modeling System (RIMS II) to quantify the multiplier effects on economic output, earnings, and jobs. RIMS II is also used to estimate "value-added activities," reported "as a percent of state GDP, representing aviation's contribution to the state's economy."⁷

Also completed but not yet publicly available through Transportation Research Board's (TRB's) ACRP is ACRP 03-28, *The Role of U.S. Airports in the National Economy*. This project, completed by Kimley-Horn team member EDR Group and managed by Steve Landau, "quantifies the economic impact of U.S. public use airports and the national airport system ("airports") to the national economy in order to communicate the national

3. U.S. Department of Transportation, Federal Aviation Administration, *The Economic Impact of Civil Aviation on the U.S. Economy*, June 2014. http://www.faa.gov/air_traffic/publications/media/2014-economic-impact-report.pdf

4. CDM Smith, *The Economic Impact of Commercial Airports in 2013*, September 2014. http://www.aci-na.org/sites/default/files/economic_impact_of_commercial_aviation-2013_update_final_v10.pdf

5. U.S. Department of Transportation, Federal Aviation Administration, *The Economic Impact of Civil Aviation on the U.S. Economy Economic Impact of Civil Aviation by State*, January 2015. http://www.faa.gov/air_traffic/publications/media/2015-economic-impact-report.pdf

6. *Ibid.*

7. *Ibid.*



aggregate value of airports to communities and to aviation stakeholders.”⁸ This research project contains an extensive literature review on national and airport-specific economic impact studies including airport economic impact studies based on survey data and input-output models and those based on regression modeling. The differences in these two types of modeling are important to consider for Montana, with a preference for survey data and input-output modeling to allow for detailed analytical evaluation of impacts on a smaller scale.

Other research on the national level includes ACRP’s Document 20: *Estimating the Economic Impact of Air Cargo Operations at Airports*, that contains a User’s Guidebook and Research Report to provide “guidance and tools to practitioners who estimate the economic value of air cargo facilities and operations to their communities and regions.”⁹ ACRP 03-28 also contains data on air cargo, in addition to considering “how aviation contributes to national productivity by linking with other modes as a vital link in national supply chains.”

The preliminary literature review indicates that the vast majority of airport economic impact studies use data on airport activity, combined with survey data of on-airport and off-airport businesses and visitors. The proposed methodology for this study that is outlined by task in Section 3.3 beginning on the following page is consistent with the methodologies utilized by other states and airports and is in line with aviation economic impact analysis based on regression modeling.

BENEFITS/BUSINESS CASE

The benefits of updating the economic impact analysis of Montana’s airports include additional knowledge and recognition of the relationship between the airports, economy, and the airports’ wide-reaching contributions to the health, welfare, and safety of its citizens and visitors. This data is not currently available through other resources on an airport-by-airport basis. The research results can be used on all levels—state, regional, and local—to relate the economic value of airports and stress the importance of maintaining and improving the airport system. This information will help support aviation as a form of transportation and also as a driver in the state’s economy. As previously referenced, the Connecticut Academy of Science and Engineering noted that there is an “increased need for transportation agencies to justify the economic value of transportation projects in comparison with other priorities for competing bonding or other financing.”¹⁰ As MDT continues to fund airport improvement projects, even as a match for funding from the Federal Aviation Administration (FAA), it is valuable to have data on the economic contributions of airports to demonstrate the financial and economic benefits of these investments. While neither a benefit-cost study nor a project by project analysis, the study does provide information on the airport’s contributions as a whole and how the airports provide tangible benefits to everyone in the state whether they fly on airplanes or not.

The EIS Update could be delayed further, but with the significant changes in the economic conditions on a national and Montana-specific level, it is timely to conduct the study while the economy is continuing to improve. Improved support for airport funding on the national, state, and local levels is expected to be a primary result of the research.

8. Transportation Research Board, ACRP 03-28 description, <http://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=3248>

9. Transportation Research Board, Airport Cooperative Research Program, ACRP 03-16
http://onlinepubs.trb.org/onlinepubs/acrp/acrp_webdoc_020.pdf

10. The Connecticut Academy of Science and Engineering, *Analyzing the Economic Impacts of Transportation Projects*, September 2013. <http://www.ct.gov/dot/lib/dot/documents/dresearch/ct-2279-f-13-13.pdf>

3.3 TASKS

The RFP identifies eight tasks and a series of deliverables and meetings. Descriptions of these tasks and others that are recommended for inclusion in the EIS Update are provided below.

TASK 3.3.1 REVIEW CURRENT STUDY

The first task includes a review of the 2007/2008 Economic Impact of Airports Study. The products of the prior Study included a Technical Report, Executive Summary, PowerPoint presentation, and individual airport brochures for 72 airports. We have reviewed this study in preparation of this proposal, focusing on the general methodologies, data presentation, and approach utilized to estimate the economic impacts. It is important to note that **Pam Keidel-Adams, the proposed Project Manager for this project, served in the same role in the 2007/2008 study prior to joining Kimley-Horn.** She brings knowledge of Montana's airport system and the previous study's methodology, process, and products, as well as experience on a national level conducting other statewide and airport-specific economic impact analyses and presenting at conferences throughout the U.S. on airport economic impact analyses. **This experience provides the Kimley-Horn team with continuity between study efforts and an ability to ensure accurate comparisons of the prior study results and recommended updates suggested as part of the proposed work plan.**

Upon initial review of the study, we noted several elements that merit discussion with MDT prior to proceeding with the analysis. One of the key elements to be confirmed with MDT is presentation of the airports by classification or grouping. The prior study divided the airports into the following groupings for data gathering and analysis purposes:

- Primary Commercial Service
- Commercial Essential Air Service (EAS)
- High Volume General Aviation (GA)
- Other Select GA
- Rural Community GA

These classifications and each airport's placement in a classification will be reviewed and discussed with MDT for their continued appropriateness relative to changes that have occurred in the system since 2007/2008. In addition to groupings for data gathering and analyses, the tiering process and classifications used to evaluate GA visitor expenditures will also be reviewed and discussed with MDT. Finally, as discussed later, the Kimley-Horn team would also like to discuss using regions in concert with analyzing each airport's impact and the statewide impact for calculations and presentation purposes.

A more detailed, thorough review of the previous documentation will take place immediately after selection and prior to the Kick-off Meeting. The results of the review will be used to contribute to development of draft survey instruments, questions on presentation, and an agenda for use at the Kick-off Meeting. Members of the Team have led many airport economic impact studies and possess a library of surveys that can be considered in addition to those previously utilized, adapted for this update to ensure we gather the most relevant, necessary data. The agenda for the Kick-off Meeting will also include an item to discuss a thorough review of communication needs between the Kimley-Horn team PM and Research PM, Quality Assurance/Quality Control (QA/QC) procedures, and the schedule. This task will conclude with the summary of a study process that follows current FAA guidelines and methods that are agreed upon by MDT and the Kimley-Horn team.

TASK 3.3.2 ECONOMIC METRICS

We will conduct an overview of the economic conditions in Montana in concert with initiating the economic analysis. This overview will focus on factors that correlate with aviation activity such as population, employment, industry trends, and air freight shipped to and from Montana by commodity sector. We will also review the overall role of aviation in supporting the Montana economy on both statewide and regional perspectives. It will be important to highlight changes in Montana's economy since 2007/2008 such as the Bakken Oil Field Development and other activities to correlate the changes in airport economic impact. This content will serve as background information and highlight the overall economic condition of the state and introduce the economic metrics that are important for analysis. The Kimley Horn team, which includes the University of Montana's Bureau of Business and Economic Research (BBER) and EDR Group, is uniquely qualified to understand and explain this altered economic landscape and how these changes affect the demand for airport services. **Dr. Patrick Barkey of the BBER published "The Boom that Hasn't Gone Bust: The Maturation of the Oil Economy of the Bakken" and has contributed to the BBER's award-winning business magazine, Montana Business Quarterly.**

The previous study utilized three primary metrics which continue to be appropriate:

- Jobs (or Employment)
- Payroll (or Earnings or Labor Income)
- Economic Activity (or Business Sales)

As discussed above, these metrics will be calculated for each airport and by classification as determined through coordination with MDT. These metrics are calculated for the following types of impacts:

- Direct impacts
- Indirect impacts
- Induced impacts
- Total impacts (the sum of direct, indirect, and induced impacts)

When discussing metrics, in both oral presentations and in reports, it is important that clear English is used to explain precisely what is meant by confusing jargon such as:

- Direct impacts are initial transactions, including business sales and budget expenditures of airport revenue, as well as visitor spending;
- Indirect impacts are generated when airport tenants, the airport administration, and businesses that capture visitor spending use part of their revenues and budget to purchase supplies and services from other businesses in Montana; and
- Induced impacts are created by workers, whose wages are earned from the direct or indirect activities, spending their incomes in Montana.

Communicating Results of Airport Economic Impact Analysis

As previously discussed in this proposal, it is recommended that instead of classifying the impacts as first-round and second-round, the terminology be updated to the following:

- On-airport impacts (tenants, visitors, and capital improvement plan or CIP)
- Indirect and induced impacts (both determined through use of multipliers)
- Total impacts

This classification is common in presenting economic impact analysis of airports and clearly communicates to policy makers, state officials, and the public how airports contribute to the state economy.

Considering that this study will be evaluated by multiple stakeholders across Montana, we propose presenting the impacts by airport, using regional as well as statewide multipliers. While the 2007/2008 study presented all results using statewide multiplier impacts, in our experience it is equally relevant to show and explain the economic contribution of airports to regional economies as well as to the overall state economy. For example, the role of airports in Eastern Montana will likely differ considerably from the contribution of airports in Northwestern Montana, in terms of industries served and affected and overall impacts. This is due to the economic differences between the two regions in terms of the mix of industries and labor. As a result, multiplier effects in one region will differ from the multiplier effects in another region.

The regional impact of each airport will be of interest to state legislators in terms of their districts, as well as mayors, regional officials, chambers of commerce, and other local and regional stakeholders. More importantly, a regional analysis will be a tool that will allow each airport manager and sponsor to convey the importance of their airport to the general public in their communities. The statewide analysis, which will be comparable to the 2007/2008 report, will be of primary interest to state officials and legislatures when considering the statewide role of airports.

In past studies, EDR Group routinely developed regional analyses as part of statewide studies. **For example, impacts in Oregon, Colorado, and South Dakota were developed for pre-existing regions (similar to the five MDT regions) so that the airport analysis would be coordinated with other DOT or regional economic development efforts.** In Virginia and elsewhere, EDR Group has worked with the Departments of Aviation staff to identify regions specific for each airport. As discussed in Task 3.3.1 on page 7, the Kimley-Horn team will work with MDT staff to develop a regional structure that will best meet your needs.

An example airport report is shown below. This report provides estimates of impacts from each airport to its region and to the state. These tables would primarily be used in individual airport or regional presentations,

MONTANA AVIATION IMPACT STUDY

Airport Role in the Regional and State Economy

EFFECT	JOBS		PAYROLL		BUSINESS ACTIVITY (OUTPUT)	
	REGIONAL	STATE	REGIONAL	STATE	REGIONAL	STATE
Direct Effects of On-Airport Activities and Visitor Spending						
1. On-Airport (incl. FBO and air related tenants and CIP)						
2. Total Off-Airport Visitor Spending						
SUBTOTAL- DIRECT						
Spin-off Effects: Supplier Purchases and Income Re-spending						
3. Due to On-Airport Aviation						
4. Due to Visitor Spending						
SUBTOTAL - SPIN-OFF						
TOTAL AIRPORT/ AVIATION-RELATED IMPACTS						



with only the state impacts presented as part of statewide depictions. This is just a representative example and the Kimley-Horn team will work with you to provide an airport impact template that meets your needs.

Direct impacts will be based on survey data while the multiplier or “spin-off effects” (indirect and induced impacts) will be calculated through implementation of the IMPLAN model (see Task 3.3.3 on page 13 for more description of the model). The survey efforts necessary to collect and evaluate the on-airport impacts are described below.

Data Collection

ON-AIRPORT IMPACTS – TENANTS AND CIP

Accurate data collection is the foundation of any defensible economic impact analysis. Gathering accurate data includes employing simple and effective methodologies that do not require a significant time commitment on the part of the client or the airport. The steps to collect data for direct on-airport impacts include:

- Review existing data sources including previous Montana study and compile listing of all airport contacts
- Distribute airport management and tenant surveys (mail-in and web-based online options)
- Conduct airport on-site visits for high activity system airports and those with unique activities to discuss the study’s purpose and needs, confirm data and survey results, obtain additional information on qualitative impacts, and secure photography that can be utilized in the final deliverables
- Administer follow-up phone calls to verify and collect additional data

Outreach to all airport sponsors is an important first step in notifying the airports of the EIS Update and requesting their assistance. It is important that this outreach identifies the benefits of the EIS Update and the products that will be provided to the airports when the study is complete. This step will stress that airport participation is a necessity for a comprehensive study. During this outreach, we will request that airports provide contact information for their on-airport tenants. These tenants include on-airport businesses that serve airlines, support GA, and contribute to off-airport agriculture and industry such as commercial air service providers, fixed-base operators (FBOs), air cargo operators, flight schools, charter and aircraft rental companies, corporate flight departments, aircraft sales, agricultural sprayers, and other specialty providers. Tenants in airport terminals also provide services to airline and GA passengers, pilots, and crew, including retail establishments, restaurants, and pilot shops.

Electronic media including web-based online surveys and email will be utilized, as appropriate through coordination with MDT Aeronautics, to obtain data and expedite the study process. **In Missouri, Kimley-Horn realized a much higher than average response rate by providing opportunities to complete the survey electronically such as using a QR code that provides direct survey access.**

In addition to providing contact information for airport sponsors, each airport’s management will be asked to provide the following additional information in a survey format:

- Employment, payroll, operating expenses, and capital improvements for the airport (sponsor-related)
- Company names and contacts for non-aviation businesses in their market area that rely on the airport to support their business operations and an estimate of their employment
- A summary of changes at the airport since 2007/2008



- Data on tenant gross sales (as available if required in leases)
- Non-quantifiable benefits such as health, safety and welfare and the role the airport plays in supporting activities such as search and rescue, law enforcement, disaster relief, and emergency medical needs
- Various on-site aviation activities such as military, air ambulance, news/traffic, etc.
- Flight training and air charter activity

Some of this data such as the estimated employment and gross sales will also be requested from the tenants. Having the airport management's estimate or actual data as available through leasing report requirements provides data when tenants do not provide information.

Once the contacts for all airport tenants are provided, a separate survey will then be implemented to collect study-related information from all other on-airport tenants (excluding airport management). These tenants will be asked to provide information such as the following through the survey:

- Current on-airport employment
- Annual payroll
- Average annual capital investment (five years)
- Type of business
- Qualitative benefits of the airport

MDT will have input into developing and authorizing all surveys, and will review and approve these surveys before they are distributed to airport managers and tenants. **The Kimley-Horn team is proposing to have draft survey instruments at the Kick-off Meeting for discussion and review.**

Within one week after the airport management surveys are disseminated, we will follow up with each of the airport sponsors to ensure they received the survey. At that time, the Kimley-Horn team will answer any initial questions and notify each airport when/if a visit will occur. If a visit is planned, we will then arrange a meeting time and place.

Based on a review of historical data and current activity as well as the prior study, we recommend visiting approximately 50 Montana airports. These airports include all commercial service airports, high-volume GA airports, and several other select GA airports. It is likely that these airports will have on-airport employment such as an FBO, full-time manager, or other aviation-related business (are attended), or the airport will have a unique feature that will be helpful to visit to obtain additional information. These visits will confirm the types of activities at the airport, specific details on tenants, and information to help verify the accuracy of the data. Airports that are not visited (primarily the unattended) will still receive a survey and follow-up will be made via phone calls and email to ensure collection of all data and any additional information that may be needed. We will consult with MDT Aeronautics to provide any information that may be available from its extensive knowledge of the airports and their activities.

For non-respondent tenants, databases such as Dunn and Bradstreet are available to validate employment, payroll, and sales information. This is used as a last resort if we cannot obtain information to ensure 100% representation of on-airport tenants.



ON-AIRPORT IMPACTS – VISITORS

Visitors arrive at an airport via either commercial service or GA aircraft. For each airport, we will estimate the following:

- Number of annual enplaned commercial passengers that are visitors using each airport
- Number of general aviation aircraft that are true visiting aircraft
- Number of passengers and pilots per visiting GA aircraft

These factors will be determined using airport-specific records, data from MDT Aeronautics, data from USDOT and FAA databases, and information from this study's surveys. The Kimley-Horn team will also research information on visitor travel patterns and spending that is currently available from various secondary data sources in the state.

Estimates of expenditures by visitors who arrive via commercial airlines are derived from information collected through a commercial service passenger survey and secondary data sources. Passenger surveys are anticipated at all of the commercial service airports. The surveys at the larger commercial service airports (Billings, Butte, Bozeman, Great Falls, Helena, Kalispell, and Missoula) will be conducted in-person over a two-day period. For the eight EAS airports (Glasgow, Glendive, Havre, Lewistown, Miles City, Sidney, West Yellowstone, and Wolf Points), the surveys will be coordinated with the airport managers and the commercial service airline serving each of these airports. We will leave return postage-paid surveys (with a web-based online completion option) at the commercial service airline ticket counter for passengers to complete.

To complete this task, we will seek the following information from the surveys:

- Passenger type (resident or visitor)
- Trip purpose (business or leisure)
- Length of stay
- Expenditures for lodging/food/ground transportation/entertainment/retail

The passenger survey will be conducted economically to ensure data is obtained most efficiently, most likely through coordination with the airports and airline(s) serving the airports. It is anticipated that these surveys will be discussed with airport management and the airlines, and that the surveys will be delivered to the airports during the on-site visits.

We will also seek information from aircraft operators who arrive in Montana via GA aircraft. These surveys will be postage paid and have a web-based online completion option so that they can be directly returned to the Kimley-Horn team for analysis. The Kimley-Horn team will work with MDT Aeronautics to identify approximately 30 FBOs to participate in this effort. Information collected in the GA aircraft operator survey will be similar to the information collected during the commercial airline passenger survey as well as other data on airport usage, frequency, etc. Additional coordination will be necessary with these FBOs to ensure they understand the reason for the survey, the request for their assistance, how to promote the survey, and how to return the surveys. It is anticipated that the Kimley-Horn team will coordinate with the Aircraft Owners and Pilots Association (AOPA), National Business Aircraft Association (NBAA), and other groups to encourage participation. In previous efforts, these groups have assisted by discussing the importance of the survey in some of their communications such as email blasts, newsletters, or through other means.

TASK 3.3.3 MODEL

To calculate the multiplier impact, including both the indirect and the induced effects, we will purchase multipliers that are specific to Montana to use in this analysis. Similar to the previous plan, the IMPLAN model will be used to calculate the multiplier impacts; however, we propose a different approach to multipliers for this study.

The IMPLAN model will be calibrated for each region, as well as for the state of Montana. **It is critical to note that EDR Group team members are nationally recognized experts at applying the IMPLAN model, which is the most widely used econometric modeling package in the United States. EDR Group is the only private-sector firm in the United States that works directly with the IMPLAN source code.** This allows EDR Group staff to work “under the hood” to calibrate the model to fit unique activity and use patterns. With this expertise, clients can be sure that EDR Group’s use of IMPLAN does not consist of entering data in a user interface, pressing return, and blindly reporting results. The firm’s work passes scrutiny by academicians as well as policy makers.

The model will be used in two fundamental ways. First, when data is collected for jobs but incomplete for payroll and economic activity (output), we will use IMPLAN to fill in the missing direct metrics. Similarly, the data collected for visitor spending analyses comprises the amounts of spending and IMPLAN will be used to estimate jobs and payroll generated from the spending levels. Note that a regional analysis is important in this aspect because it more accurately balances jobs, payroll, and business activity on a regional scale than a simple statewide average, which would assume that the whole state is a single economy.

Second, IMPLAN will calculate indirect and induced multiplier impacts to show how impacts re-circulate through the economies of each region and the state, creating and supporting additional employment, payroll, and spending.

The products of the model will enable us to present total economic impacts in terms of the following three economic impact measures: payroll, employment, and total economic activity (output). These three impact measures are interrelated, but must be expressed separately. The total payroll, employment, and economic activity impact measures comprise direct, indirect, and induced (multiplier) impact types.

TASK 3.3.4 RUN MODEL

As discussed in Task 3.3.3 above, we will run the IMPLAN model to calculate the full direct, indirect, and induced impacts for each airport. It will also be used estimate jobs and payroll generated from the visitor spending levels.

TASK 3.3.5 QUALITATIVE BENEFITS

The qualitative benefits of the airports and the state airport system will be determined through data collected from airport management, tenant, and other survey efforts described in Task 3.3.6 on page 14. The qualitative benefits are tangible and include real and vital contributions in terms of safety, security, health, recreational opportunities, and the general quality-of-life in local communities throughout Montana. We will request examples of specific qualitative activities at each airport during survey efforts to document these benefits. Several potential benefits likely include facilitating emergency medical transport, providing police support, supporting youth-outreach activities, conducting search-and-rescue operations, and supporting the U.S. military and other government organizations. These qualitative benefits are equally as important as the quantitative benefits but are typically less visible and not always recognized. These benefits will be summarized by airport and on a statewide basis for potential inclusion in the brochures.



TASK 3.3.6 VALUE-ADDED BENEFITS

The Kimley-Horn team will work with MDT to define a series of analyses that will tell the story of how airports add value to Montana industries. We propose to begin with a survey of non-aviation businesses similar to what was developed in the 2007/2008 study. In that study, approximately 1,500 businesses were surveyed, allowing the study team to review the importance of business travel to Montana industry sectors. The University of Montana's BBER will conduct a more comprehensive business survey aimed at obtaining better details on business use and reliance on aviation. The University is extremely skilled and experienced in conducting statewide surveys such as this and will utilize a method outlined in "Internet, Mail, and Mixed-Mode Surveys: The Tailored Design Method" by Don Dillman et al., John Wiley & Sons, 2009. This method uses up to four mail contacts to maximize the response rate, as well as an online component using the University's licensed web survey product, Qualtrics. These methods typically result in a higher response rate (up to 40%) as opposed to more traditional survey techniques. The value of this survey is to identify specific businesses and their relationship to aviation demand, focusing on their reliance to quantify and qualify the importance of airports to businesses throughout the state.

To complement the survey, the Kimley-Horn team will analyze the importance of airfreight shipments shipped from outside of Montana that are entering the state. EDR Group will apply their proven methodology that combines trade flow data from IMPLAN with additional data from the Freight Analysis Framework, the United States Census Foreign Trade Database (assembled by WISER Trade), and Oak Ridge National Laboratories to assess the economic contribution of airfreight to the Montana economy. Combined with the passenger survey results, this analysis will profile how airports support state businesses as these businesses depend on area airports to ship final goods and/or receive manufacturing imports, receive critical spare parts, or for the transport of their personnel.

The Kimley-Horn team also has the unique capacity to develop targeted industry and regional studies to convey the importance of airports to the state. **For example, by leveraging the research experience of the University of Montana's BBER and the economic development and freight expertise of EDR Group, we can provide a detailed discussion and calculation of the importance of aviation in supporting the Bakken Oil Field.** Our team can also analyze air spraying from the perspective of the value of Montana crops that are being protected (total crop and grain sales in Montana exceeded \$4.2 billion in 2012, according to the U.S. Census of Agriculture). This would be in addition to the airside economic impacts of crop dusting, which will be included in on-airport impacts. We can also examine specific recreational industries. In previous studies, EDR Group has conducted analyses of the contributions of airports to the ski industry in Colorado and pheasant hunting in South Dakota. We look forward to talking with you about enhancing the airport-related economic impact study with evaluations of how airports contribute to important sectors to the state economy.

The Kimley-Horn team also proposes updating the hospital survey and contacting the Montana Department of Natural Resources Aviation Division regarding wildland firefighting and the relationship of aviation to these two sectors. These two efforts provide specific details on benefits of aviation that are more qualitative in nature, but invaluable for health, safety, and the welfare of Montana's residents, visitors, and natural scenic beauty.

TASK 3.3.7 BROCHURES

Two brochures are proposed to depict the study's findings: an individual airport report brochure and a statewide executive summary. These two brochure types are discussed below. For both brochures, the anticipated format is InDesign, but the Kimley-Horn team will work with the technical panel to determine the best format and software based on cost and ease of use. As part of the budget, no brochure printing has been estimated as the RFP did not indicate printing of any type, only provision of documents in formats such as Microsoft Word, .PDF, and .JPG.



We will prepare an individual airport report brochure for each airport as a final deliverable. The individual brochures will present information that is public relations-oriented describing the impact types measured in terms of earnings, employment, and economic activity in the airport's region, as well as in the state; a short description of the study approach, methodology, fieldwork, survey process, and multiplier model; and presentation of each airport's economic impacts to both the region and state. We will use graphs, charts, tables, photos, and maps to depict the information in a user-friendly, non-aviation format that clearly communicates the study's findings.

The individual airport report brochures from the previous EIS Update have been used effectively to promote the economic impact of the airports. It is recommended that these brochures be provided to the airports in electronic format on a CD that contains the following:

- Technical Report
- Statewide Executive Summary/Summary Report
- Summary PowerPoint
- Individual Airport Report Brochure

In addition to the individual airport report brochures, a statewide executive summary is proposed. The statewide executive summary (not to exceed 16 pages) will highlight the study's findings. The statewide executive summary will be prepared in a format conducive to general public understanding and distribution. The following will be included in the statewide executive summary at a minimum:

- A public relations-oriented narrative that describes the direct, indirect, and induced impacts of aviation
- A short description of the study approach, the study methodology, field work, the survey process, and IMPLAN methodology
- Clearly designed and easily understood graphs, charts, tables, and maps that illustrate the findings of the study including a table depicting each airport's economic impact and a summary of the statewide economic impact of aviation

As previously noted, the RFP did not delineate any printing or numbers of copies to be provided so electronic deliverables have been assumed for purposes of this proposal. The Kimley-Horn team is prepared to print and produce any or all of the deliverables as desired by MDT.

TASK 3.3.8 PRESENTATION

To convey the economic impact process in easily understandable terms, we will prepare a PowerPoint presentation for the MDT Aeronautics to use, as well as individual airports and airport management. Instead of simply a recap of the study's results, we propose an "Economics 101" PowerPoint to explain how economic impacts were calculated, what the terminology means, and identify the statewide economic impact results. This statewide-focused portion of the PowerPoint will also contain slides at the end that can be customized for individual airports. **As part of the project, we will prepare airport-specific slides for two airports as a sample for MDT Aeronautics. MDT Aeronautics can then give these samples to the airports for inclusion in the PowerPoint if they choose to use the statewide presentation for their own purposes.** We will develop a script to accompany the presentation for the presenter to follow when giving the presentation. The presentation will only include MDT's logo and will follow MDT's newly required public document guidelines.

TASK 3.3.9 TECHNICAL (OR FINAL) REPORT

Identified in Task 3.4.1.2.3, Final Report and Cover Picture, a technical/final report task is included to document the EIS Update efforts. When all tasks of the study are complete, we will produce a draft technical/final report for review and comment. The process for deliverables review, comment, and response are summarized in Task 3.4.1 on page 17, which follows the RFP language.

The Technical/Final Report will be submitted to meet the requirements of MDT including a cover picture, appropriate title page with the identified credit reference, technical report documentation page, and disclaimer. It will be ordered as follows:

- Table of contents
- Summary
- Introduction
- Work plan
- Findings and conclusions
- References

TASK 3.4.1 DELIVERABLES

The primary deliverables of this project are as follows:

- Technical/Final Report
- Statewide Executive Summary/Summary Report
- Summary PowerPoint
- Individual Airport Report Brochures

In addition, MDT requests the following deliverables:

- Task Reports (which will be compiled into the Technical/Final Report)
- Research Project Summary Report
- Implementation Report
- Performance Measure Report

The process to submit, review, comment, and produce final versions of the deliverables will follow MDT's RFP language as summarized below:

- All deliverables will be submitted first in draft format and expressed in English units. Draft deliverables represent the Kimley-Horn team's vision of the complete and final deliverables.
- Second draft deliverables will be submitted within two weeks following receipt of MDT's comments on the first draft deliverables. All future revisions will be submitted no later than one week following receipt of MDT's comments.
- For each deliverable, a line item response to each comment is required.
- Deliverables are considered drafts until MDT provides notice of acceptance.
- Consultant will submit all deliverables in their entirety in both Microsoft Word and PDF format, as well as formats such as InDesign for the brochures as approved by MDT.
- Deliverables will be of exceptional quality and prepared in conformance with the following:
 - Section 5.1, Project Level Reporting, of the March 2011 Research, Development, and Technology Transfer Guidelines for the Montana Department of Transportation, which can be found at: <http://www.mdt.mt.gov/other/research/external/docs/rmuguide.pdf> and
 - Montana Department of Transportation's Report Writing Requirements, which can be found at: http://www.mdt.mt.gov/other/research/external/docs/report_guidelines.pdf.



QUALITY ASSURANCE/QUALITY CONTROL (QA/QC)

All deliverables will be reviewed using Kimley-Horn's established QA/QC process. To ensure MDT's QA/QC policies are strictly followed, we have developed a tailored QA/QC plan for this project. This QA/QC plan incorporates MDT guidelines and addresses the following:

- Grammar and spelling
- Format (consistent with MDT requirements)
- Technical accuracy
- Conformance to work scope
- Graphic standards
- Clear and reproducible text and graphics
- Incorporation of comments
- Document control (electronic and hard copies)
- Schedule adherence

A multi-layered QA/QC process will be utilized to ensure high-quality deliverables. We will provide written documentation verifying compliance with the QA/QC plan to the MDT PM with each work product. This QA/QC process will involve the following layers of review:

- Level 1 – Initial review by preparer
- Level 2 – Consultant Contract Manager/principal author review
- Level 3 – Quality assurance manager/project director

This process ensures that all deliverables conform to the project's scope and are void of errors and omissions, including spelling, grammar, and format consistency.

In addition to these deliverables, MDT requires other study deliverables that are more administrative in nature. These are summarized below.

1. Monthly Progress Reports

Monthly Progress Reports will be submitted with our invoices by the 15th of each month. These reports will follow the MDT's Progress Report Template and will include the following:

- Discuss each of the major tasks outlined in the Proposal and whether they have been completed or are still in progress
- Plan an actual time schedule for each of the tasks, including the overall percent complete using the expended versus planned budget
- Discuss problems (financial, staff, equipment, technical) as they affect the individual tasks, as well as their resolution or attempts at resolution
- Discuss major accomplishments or discoveries and their significance especially with respect to implementation
- Discuss fiscal expenditures

2. Task Reports

Task Reports will be submitted by the end of the month following completion of each task and will be prepared with sufficient detail as to be compiled into the Technical/Final Report.

3. Final Report

The Technical/Final Report was previously described in Section 3.3.9 on page 16 and will meet all MDT requirements.

4. Research Project Summary Report

The Research Project Summary report will include the following sections: introduction, what we did, what we found, and what the researchers recommend. The report will only contain text and graphics and will be based on the sample report provided by MDT.

5. Implementation Report

The Implementation Report will include the following sections: introduction and purpose, implementation summary, and implementation recommendations. The report will only contain text and graphics and will be based on the sample report provided by MDT.

6. Performance Measure Report

A Performance Measure Report will be prepared based on the sample report provided by MDT and will include both qualitative and quantitative output and outcome performance measures. As appropriate, a TR News Research Pays Off article may be developed.

TASK 3.4.3 MEETINGS

Three in-person meetings were identified in the RFP:

- ➔ Kick-Off
- ➔ Final Oral Presentation
- ➔ Implementation Meeting

In addition, an “Interim Meeting” is proposed prior to the Final Oral Presentation to discuss the draft study findings, including a review of each airport’s draft economic impact with a comparison to the prior economic impact prepared for the meeting. Our team has found this Interim Meeting to be extremely useful in discussing the changes in economic impact, specific questions about airports, and validating assumptions that are impacting the results, especially in an update to a previous study such as this.

At least two weeks prior to each scheduled meeting, the Kimley-Horn team will seek input from the MDT Research Project Manager and then prepare and submit the meeting agenda and other materials for review and comment. All materials will be submitted at least two weeks prior to the meeting.

REGULAR COMMUNICATION

In addition to traditional scheduled in-person meetings, teleconferences, web-based meetings, and other communication forms are always available for use in coordinating the project. The Kimley-Horn team effectively utilizes these resources on many projects. We have also found that at least monthly and possibly bi-weekly conference calls between the key team members including the consulting team and the MDT team are useful to ensure the project remains on schedule and that issues or questions that arise are quickly resolved. We propose these types of meetings in addition to the four in-person meetings. **The entire Kimley-Horn team is committed to serving MDT on this project throughout its entirety whether in person or through other communication forms. We are extremely responsive and available to you when you need us.**

The four proposed in-person meetings are summarized below.

1. Kick-Off Meeting

The Kick-Off Meeting will be used to discuss the scope of work, data requirements, and timelines. As previously discussed, the Kimley-Horn team will prepare meeting materials to discuss the classification of airports, determine the airports to be visited, draft surveys, and answer any questions from MDT.

2. Final Oral Presentation

The Final Oral Presentation will be to formally present the project and results to MDT employees and others that are interested in the study. A PowerPoint presentation will be prepared, which will be submitted for review at least two weeks in advance.



3. Interim Meeting

Once all airport economic impacts have been drafted, a meeting will be scheduled with MDT to review and discuss the draft impact numbers. This meeting will also be used to discuss draft layouts and concepts for the individual airport report brochures, statewide executive summary, and PowerPoint presentation.

4. Implementation Meeting

The Implementation Meeting will be used to review the Kimley-Horn team's implementation recommendations, determine which of those recommendations or parts of the recommendations will be implemented, discuss additional items to be implemented, and review any unmet research needs. This meeting may be held in conjunction with the Final Oral Presentation or may be scheduled separately by conference call. The Implementation Report will be provided to MDT within two weeks of this meeting.

3.4 Deliverables and Meetings

Pages 16-18 in Section 3 identify the proposed deliverables outlined in the RFP as well as a statewide executive summary that was not included. Four meetings are also proposed as detailed on pages 18 and 19 in Section 3.

Detailed Schedule

Below is Kimley-Horn's detailed project schedule as requested on page 12 of the RFP. We developed our schedule based on the project scope and will work with MDT to refine or adjust the schedule as needed to best serve MDT.

SCHEDULE

MONTHS AFTER NTP	1	2	3	4	5	6	7	8	9	10	11	12
ASSUMED MONTH/YEAR	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
	2015						2016					
Task Name												
Review Current Study	█											
Economic Metrics	█	█	█	█								
Model				█	█							
Run Model				█	█	█						
Qualitative Benefits					█	█						
Value-Added Benefits							█	█				
Brochures							█	█	█			
Presentation										█		
Technical (or Final) Report									█	█	█	
Deliverables												
Monthly Progress Reports	📄	📄	📄	📄	📄	📄	📄	📄	📄	📄	📄	📄
Task Reports	📄				📄	📄		📄	📄	📄	📄	
Final Report (See Task 3.3.9)											📄	
Research Project Summary Report												📄
Implementation Report												📄
Performance Measure Report												📄
Meetings												
Kick-Off	🗓️											
Interim							🗓️					
Final Oral Presentation												🗓️
Implementation Meeting												🗓️



SECTION 4: OFFEROR QUALIFICATIONS

4.1 State's Right to Investigate and Reject

Kimley-Horn understands and will comply with the state's right to investigate and reject proposals as described on page 17 of the RFP.

4.2 Offeror Qualifications

4.2.1 REFERENCE QUESTIONNAIRE

Kimley-Horn has requested complete references from the following three separate clients that represent the work of our team in the last five years via the online survey:

- Missouri Department of Transportation
- North Carolina Department of Transportation
- Virginia Department of Aviation

We have been advised that all three clients have successfully completed the surveys. We are hopeful that the completed surveys will provide MDT with information on our team's comprehensive knowledge of statewide economic impact analyses, as well as our ability to successfully complete projects for these clients.

4.2.2 COMPANY PROFILE AND EXPERIENCE

The following provides general profiles of each firm on the Kimley-Horn team, followed by the firm's relevant experience. A copy of Kimley-Horn's current Montana Board of Professional Engineers & Land Surveyors license is included in our Appendix to serve as documentation establishing Kimley-Horn's qualification to provide the services specified in the RFP.

Kimley»Horn Kimley-Horn (Offeror) is an employee-owned multidisciplinary firm that has been providing exceptional planning and engineering consulting services to clients nationally and internationally for 48 years. Founded in 1967, Kimley-Horn was originally known for expertise in transportation planning and traffic engineering. Since then, the firm has built an impressive track record in airport planning and design, regional and urban area transportation planning, traffic impact analysis, parking planning and design, traffic control system design, and statewide and local traffic operations and safety studies. Kimley-Horn has provided state and metropolitan transportation planning services throughout the U.S. Together with our aviation team, we have experienced planners that cover the full spectrum of transportation modes and understand the linkages between these modes.

Kimley-Horn's aviation experience includes airport and systems planning, economic analyses, design, construction administration, site selection, environmental assessment, and Part 150 noise studies, to name a few. **We pride ourselves on our ability to provide comprehensive services tailored to our clients' specific needs, including policy analyses such as economic impact, strategic, and business planning to support airport development.** Kimley-Horn has more than 125 aviation professionals with national and international experience.

Kimley-Horn's 2,200 employees are assigned to six geographic regions, each managed by a team of representatives from production, marketing, administration, and practice building. Setting overall direction and policy is the firmwide management committee, which assists the regional teams, as needed. The primary responsibility of the regional teams and management committee is to provide support to our project managers, who are responsible for every facet of a project from beginning to end—contracting, planning, scheduling, quality control, and client service. The **Management Organization** chart on the following page

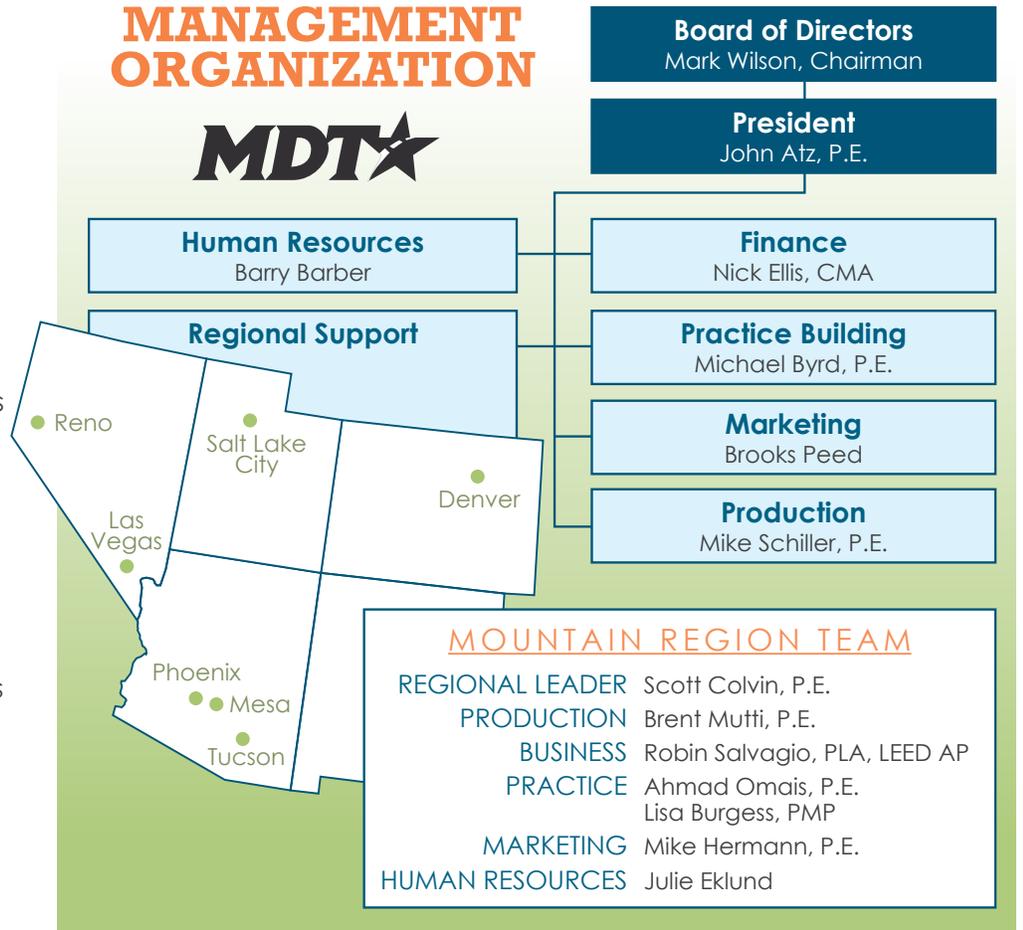


details the structure of our national and regional management teams. Kimley-Horn has had two previous firm names: J.W. Horn and Associates, Inc. (1958) and The Kimley-Horn Group, Inc. (1983).

Our aviation system planning experience includes serving as an on-call system planning consultant to Florida DOT's (FDOT) Aviation and Spaceports Office since 2009. We provide services ranging from commercial airline service analyses to compatible land use, general aviation business planning, and airports GIS, as well as other planning services needed to support FDOT's goals for its large airport system. We have also recently served the aviation offices of both Missouri DOT and North Carolina DOT with system planning and economic impact analyses in the last year and are just

starting a System Plan for Washington State Department of Transportation's Aviation Division. **With the addition of Pam Keidel-Adams, Kimley-Horn's aviation system planning capabilities have been greatly expanded.**

MANAGEMENT ORGANIZATION



SUBCONSULTANTS

The Kimley-Horn team is further strengthened by our highly qualified subconsultants: EDR Group for economic modeling, KLJ Engineering (staff of former Stelling Engineers) for data collection, and the University of Montana's BBER for state-specific economic knowledge, quality control, and contributions related to value-added analyses. Profiles of each of these firms are provided below. Letters of intent can be found in the Appendix.



EDR Group focuses specifically on applying state-of-the-art tools and techniques for evaluating economic development performance, impacts, and opportunities. The firm was founded in 1996 as a Massachusetts Corporation by a core group of economists and planners who specialize in evaluating economic impacts and benefits of transportation infrastructure, services, and technology. EDR Group has grown to a staff of 15, and the firm serves clients across the United States and Canada, as well as overseas.

EDR Group is internationally recognized as a pioneer for developing and applying economic evaluation techniques and methods for program and project evaluation. They are leaders in the field of transportation economics, with a history of performing studies of the economic impacts of air, road, sea, and railroad modes of travel including economic benefits, development impacts, and benefit/cost relationships.



The firm's work is organized into three areas: planning studies including impact, opportunities, and benefit/cost assessment; general research on investment benefit and productivity implications; and evaluation including cost-effectiveness implications. EDR Group has prepared studies that examine broad-based impacts of transportation investments aimed at establishing economic benchmarks for analyzing the costs and benefits of implementing mechanisms for transportation revenue generation.

EDR Group has prior experience consulting for MDT. This included developing a model that shows the extent to which Montana industries rely on transportation—inputs of which were drawn from interviews conducted by EDR Group with Montana business leaders. In another study for MDT, the firm analyzed the potential economic impacts of Montana's TranPlan 21 Update, emphasizing how this plan has the ability to affect the economy of Montana.

EDR Group's aviation consulting practice has included individual and statewide economic studies covering over 500 airports in the U.S., Canada, China, Japan, Singapore, Scotland, and South Africa. These consisted of assessing economic impacts of individual airports and airport systems, land development and intermodal opportunities associated with airports, economic development opportunities associated with new and expanding airports, tax revenues generated by airports or associated with changes in airports, and benefit/cost studies for proposed airport investments. **A notable element of EDR Group's aviation practice is their ability to recognize broad economic impacts of airports and aviation and incorporate them into airport reports.**

EDR Group is also nationally recognized for state-of-the-art analysis products, including the Airport Benefit-Cost/Community Benefits Assessment system and the Transportation Economic Development Impact System (TREDIS) framework for multimodal transportation projects and policies.



Since 1938, **KLJ Engineering** has provided multidisciplinary engineering-based solutions for national, large-scale operations, with the local expertise to drive projects forward and deliver successful results. They have completed planning and construction projects at more than 75 airports ranging from small GA facilities to large commercial service airports. KLJ's Aviation Group includes nearly 60 professionals dedicated to completing airport planning, engineering, and FAA coordination at general and commercial aviation airports in Montana and throughout the region. **The key team members dedicated to this project are strategically located in their Billings and Kalispell offices, providing convenient logistics for data collection at all Montana airports.**

KLJ Engineering has a long history working with the MDT Aeronautics Division on two of its state-owned airports: Lincoln and Yellowstone. KLJ Engineering staff completed a wide variety of projects at each of these airports for more than 10 years and KLJ Engineering is currently serving as the engineer for the Lincoln Airport. **KLJ Engineering staff completed the last Montana Aviation System Plan Update in 2012 for pavement condition surveys and offer experience on similar statewide projects including the 2012 Montana Aviation System Plan Update and the 2010 North Dakota Economic Impact of Aviation Update.**

KLJ Engineering understands that Montana's economy has changed significantly since the 2007/2008 study. Their understanding of energy impacts and active service to airports in eastern Montana that experience impacts from the Bakken oil industry will serve MDT well on this important project.



University of Montana's BBER is the primary research unit in the School of Business Administration. Established in 1948, its mission is to serve the general public by providing an understanding of the economic environment in which Montanans live and work. As the most visible and respected economic research center in Montana, BBER has extensive experience and capacity in survey research, economic analysis, impact analysis, and transportation-related research. For 40 years it has conducted a very successful Economic



Outlook program during the winters that now visits nine cities each year. BBER researchers regularly testify before the legislature and are quoted in state media. The BBER has published its award-winning business magazine, *Montana Business Quarterly*, since 1976.

BBER has conducted numerous studies that are relevant to transportation and transportation planning. These include border crossing studies, railroad expansion studies, and urban planning analyses. **Since 2002 the BBER has regularly surveyed both key stakeholders and the general public as part of MDT's Transportation Planning process to assess priorities in transportation as well as satisfaction.** The BBER also has considerable experience in impact analysis, and has used the REMI model for eight years. The BBER owns a five-region REMI model of the state of Montana.

KIMLEY-HORN TEAM SIMILAR PAST PROJECTS

Kimley-Horn is currently providing aviation system planning and economic impact services to Florida and North Carolina, and we recently completed the Missouri Statewide Airport Economic Impact Study in late 2013. These and other relevant system planning projects are highlighted below.

North Carolina Aviation System Plan (NCASP)

The NCASP was prepared to assist the Division of Aviation with an analysis of the statewide airport system that will produce an extensive assessment of the condition of the current system, as well as a plan for meeting its current and future needs. From separate task orders that included inventory, goals and performance measures, and forecasts, the last task order includes recommendations and implementation plan. The recommendations will include examination of unmanned aerial systems (UAS) related to development of the State's public airport infrastructure. During the study, North Carolina State's Institute for Transportation Research and Education performed an economic impact analysis. Kimley-Horn staff member Pam Keidel-Adams reviewed the methodology and results on behalf of the Division of Aviation, making recommendations that were incorporated into the final report. The results of this study were also integrated into individual airport brochures that were produced at the conclusion of the study, providing each airport with system plan and economic impact data for use in promoting the airport.

During the NCASP, North Carolina's legislature transformed the aviation system's funding, making the evaluation of future needs even more imperative. Identifying the needs and recommendations for how the future system should be maintained and improved will provide North Carolina DOT with the data necessary to best evaluate true needs. This will also ensure projects are well-positioned for funding in this new era of increased justification and support by new stakeholders that do not have the breadth of understanding of aviation infrastructure needs. The NCASP included updating the Program Guidance Handbook to provide airports with critical information on the new funding system and priorities. It also included development of deliverables including capital improvement plans that ensure compliance with updated FAA and North Carolina Department of Transportation (North Carolina DOT) facility standards and categories, and an implementation plan outlining roles and responsibilities.

➔ **Dates:** 2012–2015

➔ **Client:** North Carolina DOT Division of Aviation, Bobby Walston – Director

Missouri Statewide Airports Economic Impact Study

The Missouri Statewide Airports Economic Impact Study examined the quantitative and qualitative benefits of Missouri's system of 108 airports, calculating the economic impact contribution of the system. In addition to traditional economic impact analysis, which quantifies the direct, indirect, and induced benefits of each airport, other products included an electronic impact calculator, brochures for all airports, a statewide



executive summary, and a PowerPoint presentation for use by the airports in presenting the study's results for their airport in user-friendly, non-technical terms. The study required extensive coordination with the airports and Missouri DOT, as well as use of multiple data collection methods to derive the economic impacts. Data from both St. Louis and Kansas City airports were evaluated and extrapolated to determine the economic impact of all airports in the state.

- **Dates:** 2012–2013
- **Client:** Missouri DOT Aviation Section, Amy Ludwig – Director

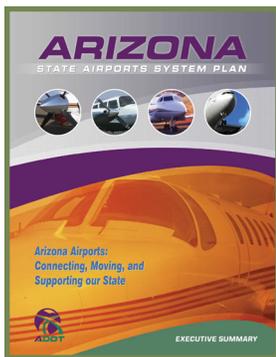


Florida On-Call Aviation System Plan

Kimley-Horn was originally selected in 2009 by the Florida DOT Central Office for a three-year contract for aviation consulting services; we were selected again in 2012. Services that have been or will be provided include planning, financial, information technology, environmental, engineering, emergency response, security, and technical analysis and services related to the statewide aviation system and airports and/or spaceports. To date, we have provided services on more than 25 projects. Several of these projects include the Statewide Airport Pavement Management System (APMS), Aviation Emergency Response Guidebook, Airport Compatible Land Use Guidebook, Analysis of Commercial Air Service in Florida, and General Aviation Airport Security Assessments.

- **Dates:** 2009–Present
- **Client:** Florida DOT, Aviation and Spaceports Office, Aaron Smith – Director

Arizona State Airports System Plan (SASP)



Through a previous employer, Pam Keidel-Adams served as the project manager for the comprehensive Arizona SASP. The SASP provides a framework for the integrated planning, operation, and development of the State of Arizona's aviation assets. The SASP was comprised of nine work tasks that are standard as part of a system planning process, with additional elements such as policy analysis and recommendations, identification and history of privately owned airports, a priority rating evaluation, and an expansion of a data management tool that relates projects to performance measures to track and monitor the changes in the measures with the completion of projects. The system also allows for sorting and compilation of costs by performance measure, as well as rapid response to "How is the system performing?" and "How has this investment improved performance?" Focus areas of the SASP included review and update of goals and

performance measures from the previous system plan (State Aviation Needs Study), implementation of a quantitative approach to airport roles, and extensive research and analysis of policies.

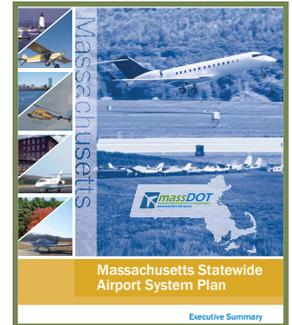
Since 1998, Pam Keidel-Adams has provided numerous planning services to the Arizona Aeronautics Division (now Multimodal Planning Division). These projects included the Airport Small Community Economic Development & Transportation Program (ASCET), two Rural Air Service Studies (1999 and 2006), the Airport System Manager (electronic), and the SASP (2009). **The ASCET study looked at each of the commercial service airports in the state, evaluating the economic conditions and primary activities, and recommended specific programs to support economic development activities.**

- **Dates:** 1998/1999, 2006, 2008–2009
- **Client:** Arizona DOT Aeronautics Section, Mike Klein – Director



Massachusetts State Airport System Plan

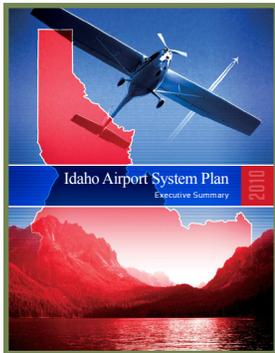
Through a previous employer, Pam Keidel-Adams served as the lead technical manager for the SASP for Massachusetts. The project included traditional system planning elements such as goals and performance measures, airport roles, and system analyses. In addition, a brief pavement review, aviation employment report, and environmental summary were included to provide additional information to MassDOT on their system. Through a project management team, the project solicited wide-ranging input from these stakeholders that represent aviation industry, FAA, airports, other modal MassDOT agencies, and economic development. Through working with this team and the client, over 50 performance measures were chosen to provide a significant level of analysis of the state airport system's capabilities and existing facilities. **The study also included a preliminary aviation employment report that served as the baseline for a subsequent economic impact study.**



➔ **Dates:** 2009–2010

➔ **Client:** Massachusetts DOT, Aeronautics Division, Chris Willenborg – Director

Idaho Airport System Plan



Prior to joining Kimley-Horn, Pam Keidel-Adams served as the project manager for an update to the statewide airport system plan for Idaho. The update to the Idaho Airport System Plan (IASP) was developed using an approach articulating the current status of aviation and the aviation system in Idaho. The update assessed current and future system deficiencies, while evaluating the impact of new technologies related to aviation. **Three significant studies were included as part of the IASP – a statewide airport system plan, an economic impact analysis, and development of aviation-related land use compatibility guidelines.** These three analyses provided the Division of Aeronautics with recommendations to continue developing its aviation system, as well as identifying the economic value of individual airports in Idaho.

One key update element was identifying state, region, and local airport issues. All issues identified were categorized by potential aviation system impact and analyzed to evaluate current trends; which airports the issue is likely to impact; and the degree of the impact on future development at the airport. The system evaluation provided a report card for performance and serves as a baseline for future aviation system needs analysis. Performance measures and benchmarks were established and cost estimates for improving the performance of the airport system were also provided.

Since 1998, Pam Keidel-Adams has provided numerous planning services to the Idaho Aeronautics Division. **These projects included the 1998 State Airport System Plan and Economic Impact Analysis, the 2003 Air Service Study, and the 2010 Airport System Plan/Economic Impact Analysis/Land Use Compatibility Guidelines.**

➔ **Dates:** 1998, 2003, 2009–2010

➔ **Client:** Idaho Transportation Department, Aeronautics Division, Bill Statham

South Dakota State Aviation System Plan

For the South Dakota Department of Transportation's Office of Aeronautics, EDR Group (under subcontract to Mead & Hunt) assessed the contribution of airports to the state economy through the development of the 2010 South Dakota State Aviation System Plan. The economic analysis included measuring the economic impacts of public use airports within the state, including commercial and general aviation travelers,



airport administration, and on-airport businesses. The analysis utilized a combination of IMPLAN data, access programming, surveys (airport managers and tenants, commercial and GA visitors, and off-airport dependent businesses), GIS and proprietary databases. **Beyond a traditional impact assessment, EDR Group developed focused modules of the study to analyze the economic contribution of airports to the annual Sturgis Motorcycle Rally and South Dakota's pheasant hunting season, and the degree to which businesses in South Dakota rely on air transportation for business travel and cargo movement.** In addition, the study was developed on three levels, including customized catchment regions for each airport from South Dakota's four established economic development regions and statewide.

➔ **Dates:** 2010–2011

➔ **Client:** South Dakota Department of Transportation, Andy Vandel – Aviation Facilities Planning Engineer

Virginia Airport System Economic Impact Study



For the Virginia Department of Transportation's Department of Aviation (DOAV), EDR Group, under subcontract to ICF SH&E, assessed the economic impact and community benefits for commercial and GA airports throughout Virginia, covering commercial and GA travelers, airport businesses, and aviation-

dependent businesses. **In part, this study was a follow-up to the 2004 economic impact study also conducted by EDR Group, with two major differences. The 2011 study was developed in coordination with the multimodal analysis of VDOT's Six Year Investment Plan that was recently completed by EDR Group.** In that study, EDR Group applied TREDIS to fully evaluate the benefits of Six Year Plan investments in the state's highways, ports, airports, rail, and transit systems. At the conclusion of the analysis, EDR Group provided VDOT with a calibrated model (coordinated with TREDIS) of the public use airport system and each airport. The aviation model allows VDOT to develop "desktop" analyses of future landside and airside changes that occur by airport so that systemwide and airport specific estimates of aviation system economic impacts remain current, and allows VDOT to conduct annual updates of the economic contribution of airports and the 66 public use airport system in Virginia. These capabilities increase the ability of DOAV to communicate the value of aviation across Virginia and to provide support to individual airports.

➔ **Dates:** 2010–2011

➔ **Client:** Virginia Department of Aviation, Rusty Harrington

Economic Development Impacts of Montana Highway Reconfiguration



For the MDT, EDR Group (under subcontract to Cambridge Systematics) developed tools to measure and to predict the economic impacts of proposed highway improvements. This project included identification of key economic sectors (from the previous study described above), assessment of economic development attraction and expansion opportunities, evaluation of market accessibility deficiencies, and estimation of the economic development benefits of highway system expansion and reconfiguration.

➔ **Dates:** 2002–2005

➔ **Client:** Montana Department of Transportation, Dick Turner – Project Manager

Economic Development Implications of the State Multimodal Transportation Plan for Montana

For MDT, EDR Group (under subcontract to Dye Management) conducted an assessment of the competitive economic position of Montana, and identified opportunities for enhancing it through strategic investments in air and ground transportation infrastructure. The analysis included a study of the performance of key

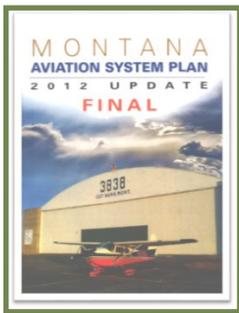


industry sectors, associated commodity flows, import and export trends among various industries and districts in Montana, as well as identification of additional opportunities and vulnerabilities. The study also identified implications of these economic trends for demand for different modes of freight and passenger transport.



- **Dates:** 2001–2002
- **Client:** Montana Department of Transportation, Dick Turner – Project Manager

Montana State Aviation System Plan 2012 Update (Pavement Condition Index Evaluations)

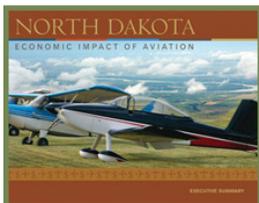


The project involved the inspection and evaluation of pavements at 57 GA airports in Montana utilizing the Pavement Condition Index (PCI) procedure developed at the US Army Corps of Engineers Research Lab (USACERL). The PCI is a numerical index from 0 to 100 that describes the pavement's overall structural integrity and operational condition, with 100 assigned to a new pavement with no flaws and zero to a highly degraded pavement. The PCI is based on the types, severities, and quantities of pavement distresses identified during on-site visual inspections. The PCI is developed by conducting visual inspections of samples of different pavements at each airport and then entering the distress type, quantity, and severity into a database called MicroPaver. The MicroPaver database calculates PCIs by applying various deducts for each type, quantity, and severity of distress. After PCI ratings were calculated, the results were summarized in the 2012 State Aviation System Plan.

It is noted this project was completed by Stelling Engineers, Inc. (SEI) prior to SEI being acquired by KLJ in 2013. The staff responsible for completing this project are now part of KLJ's Aviation Services Group.

- **Dates:** 2012–2013
- **Client:** MDT Aeronautics Division, Debbie Alke – Administrator

North Dakota Aviation Economic Impact Study (2010)



In 2010, the North Dakota Aeronautics Commission selected KLJ and CDM Smith to prepare the third update to the North Dakota Aviation Economic Impact Study. North Dakota's airport system plays a vital role in the state's economy. With eight commercial service airports and 81 GA airports providing access and aviation services throughout the state, the economic benefit from these airports is significant.

The purpose of the study was to estimate the economic benefits these 89 airports provide the state, as well as the impacts from other businesses that make use of aviation, such as aerial applicators, manufacturing and hospitals. The study developed estimates of the number of jobs, payroll and economic output supported by each airport. Various taxes associated with aviation were assessed. Individual airport summaries were developed that were hosted on the state's website. Outreach to each of the commercial service airports were completed at the study's conclusion in December.

- **Dates:** 2010
- **Contact:** North Dakota Aeronautics Commission, Kyle Wanner – Director

In addition to these relevant projects completed by the Kimley-Horn team members, EDR Group has a substantial resume in TRB's Cooperative Research Programs. The **TRB Cooperative Research Programs Projects** table on the following page lists these projects, many of which are related to economic impact. All information pertaining to Key Project Personnel outlined on page 18 of the RFP is included in Section 4.2.3 beginning on page 29.



TRB COOPERATIVE RESEARCH PROGRAMS PROJECTS

ACRP

Projects EDR Group Primed

ACRP Synthesis 13: Effective Practices for Preparing Airport Improvement Program Benefit-Cost Analysis

ACRP Project 03-19 (Active): Passenger Value of Time, Benefit-Cost Analysis, and Airport Capital Investment Decisions

ACRP Project 03-28 (Completed): The Role of U.S. Airports in the National Economy

Projects EDR Group was on Team

ACRP Project 01-15 (Active): Assessing and Implementing Innovative Revenue Strategies--A Guide for Airports

ACRP Project 03-31 (Active): Aligning Community Expectations with Airport Roles

NCHRP

Projects EDR Group Primed

NCHRP Synthesis 290: Current Practices for Assessing Economic Development Impacts from Transportation Investments

NCHRP Synthesis 329: Integrating Tourism and Recreation Travel with Transportation Planning and Project Delivery

NCHRP Report 786: Assessing Productivity Impacts of Transportation Investments

NCHRP Project 20-05 (Active): Economic and Development Implications of Transportation Disinvestment

Projects EDR Group was on Team

NCHRP Report 463: Economic Implications of Congestion

Guidance on Using Existing Analytic Tools for Evaluating Transportation Investments (part of NCHRP Project 2-19)

NCHRP Report 456: Guidebook for Assessing the Social and Economic Effects of Transportation Projects

NCHRP Report 586: Rail Freight Solutions to Roadway Congestion

NCHRP 8-36, Task 61 Report: Monetary Valuation of Hard-to-Quantify Transportation Impacts

NCHRP 8-36, Task 62 Report: Best Practice Methodology for Calculating Return on Investment for Transportation Programs and Projects

NCHRP 08-36, Task 103: Mining Recovery Act Data for Opportunities to Improve the State of Practice for Overall Economic Impact Analysis of Transportation Investments

NCHRP Report 755: Comprehensive Costs of Highway-Rail Grade Crossing Crashes

SHRP2

Projects EDR Group Primed

SHRP 2 Report S2-C03-RR-1: Interactions Between Transportation Capacity, Economic Systems, and Land Use

SHRP 2 Report S2-C11-RW-1: Development of Tools for Assessing Wider Economic Benefits of Transportation

SHRP2 Project C32: Enhancement and Outreach for TPICS and Other Economic Analysis Tools

Projects EDR Group was on Team

SHRP2 Project C55: Capacity Implementation Support

AASHTO Project with CH2MHill

NCFRP

Projects EDR Group was on Team

NCFRP Report 12: Framework and Tools for Estimating Benefits of Specific Freight Network Investments

NCFRP Report 15: Dedicated Revenue Mechanisms for Freight Transportation Investment

NCFRP Report 17: Multimodal Freight Transportation Within the Great Lakes-Saint Lawrence Basin

TCRP

Projects EDR Group Primed

TCRP Project H-50 (Active): Local Economic Development Measurement Tool for Transit

Projects EDR Group was on Team

TCRP J-11, Task 7: Economic Impact of Public Transportation Investment



SAMPLE REPORT

In our Appendix we have included the Missouri Statewide Airports Economic Impact Study Technical Report and Executive Summary Report, as well as the accompanying economic PowerPoint and two brochures. Pam Keidel-Adams served as Project Manager for this study.

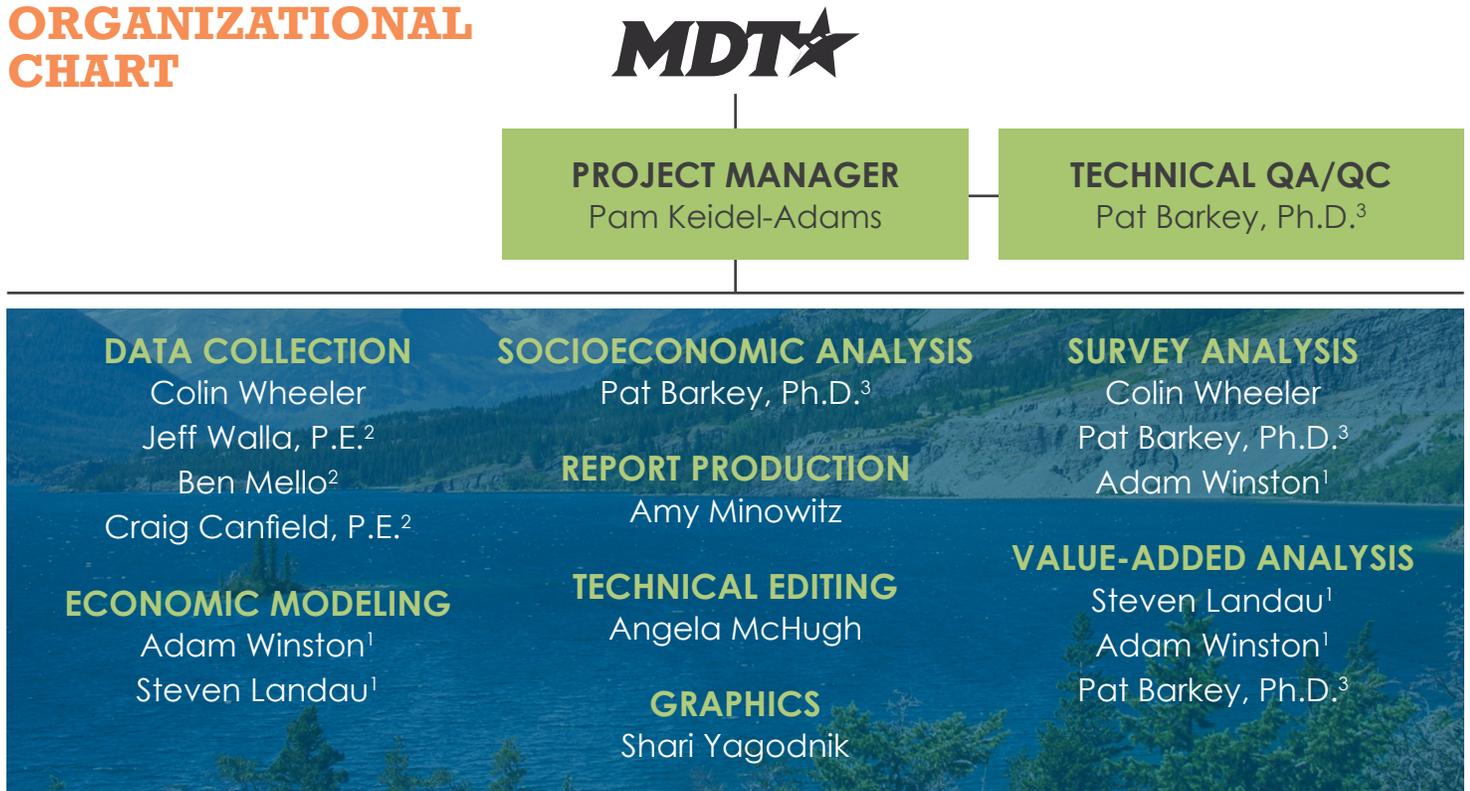
4.2.3 STAFFING

Ultimately, it is the people, the team of professionals who serve you, who are most important to the successful completion of any project. We know how important it is to provide personnel and services that satisfy the requirements and expectations of MDT. The Kimley-Horn team will commit the qualified staff necessary to deliver a comprehensive and successful study.

The Kimley-Horn team provides MDT with experienced personnel with deep and relevant qualifications. Our Kimley-Horn team will be led by Project Manager Pam Keidel-Adams, who will be responsible for contract management, direction, and administration, and serve as Principal Investigator. As previously noted, Pam served MDT as Project Manager for the 2007/2008 Montana Economic Impact of Airports study. Pam is located in Kimley-Horn's Phoenix, Arizona office.

The Organizational Chart below shows the key personnel associated with the primary tasks for this project and identifies their specific roles. The Project Staffing Matrix on page 38 shows the amount of hours per task for key team members and potential additional non-key support staff, as well as their percent of time allocated to the entire project.

ORGANIZATIONAL CHART



SUBCONSULTANTS 1. EDR Group 2. KLJ Engineering 3. University of Montana – BBER



Availability and Resources

Key Kimley-Horn team members' present/predicted workload is presented in the **Workload** table below. **Our team has ample availability and resources to serve MDT through the duration of this important project.**

WORKLOAD

NAME OF STAFF	CLASSIFICATION	PRESENT/PREDICTED COMMITMENTS (% OF TIME)	MT EIS UPDATE COMMITMENT (% OF TIME)
Pam Keidel-Adams	Principal Investigator	30%	9%
Colin Wheeler	Sr. Planner	56%	5%
Amy Minowitz	Planner	61%	15%
Shari Yagodnik	Graphic Designer	10%	5%
Angela McHugh	Technical Editor	15%	5%
Steven Landau (EDR Group)	Principal Economist	41%	13%
Adam Winston (EDR Group)	Economist I	57%	9%
Craig Canfield P.E. (KLJ Engineering)	Engineer IV	64%	1%
Jeff Walla, P.E. (KLJ Engineering)	Engineer III	61%	4%
Ben Mello (KLJ Engineering)	Planner II	48%	1%
Patrick Barkey (University of Montana – BBER)	Sr. Researcher	60%	8%

Key Team Member Resumes

The resumes on the following pages describe our key team members' roles and responsibilities, qualifications, education, and years of experience. **Our team, led by Project Manager Pam Keidel-Adams, offers significant experience serving MDT, which we will leverage to produce a high-quality and successful EIS Update.**

Pam will build upon her prior work leading the 2007/2008 study—there will be no learning curve for the Kimley-Horn team.





PAM KEIDEL-ADAMS

ROLE: PROJECT MANAGER

EXPERIENCE

- 2 years with Kimley-Horn / 26 years total

Managed the
**2007/2008 Montana
Economic Impact of
Airports Study**

PROFESSIONAL CREDENTIALS

- Bachelor of Arts, Urban Administration, University of Cincinnati

QUALIFICATIONS AND RELEVANT PAST PROJECT EXPERIENCE

Pam, a leading expert in the field of aviation system planning, joined Kimley-Horn as part of our commitment to providing high-quality airport planning and system planning skills. Pam is nationally recognized for her extensive experience in the field of aviation system planning, including employing innovative methods in the areas of performance measures and airport role analyses. During her career, she has conducted system planning related assignments in more than 27 states, a depth of experience unmatched in the industry. In terms of economic impact studies, Pam managed economic impact studies in Montana, Georgia, Idaho, New Mexico, and Pennsylvania. She also served in a principal role for economic impact studies in Florida, Massachusetts, and Utah. Pam has served an important quality role in ensuring that the economic impact studies were conducted so the general public could understand and utilize the results. Pam has served as a speaker at national conferences on General Aviation Airport Economic Impacts. Pam recently provided input for the Alliance for Aviation Across America's economic analysis that was presented to the American Association of State Highway and Transportation Officials (AASHTO).

In addition to aviation system planning, air service analyses are a specialty of Pam's. Within the context of statewide and individual airport studies, she has conducted air service analyses for over 100 airports. Her working knowledge of airline industry trends has been integral to the development of sound recommendations that have resulted in service implementation. She has worked cooperatively with airports and airlines throughout the U.S. in air service development.

Pam serves on the TRB as chair of the TRB's Intergovernmental Relations in Aviation Committee and member of the Aviation System Planning committee. In addition, she has made presentations on aviation, planning, economic impact, and air service issues at national conferences including FAA, AAEA, and TRB, as well as numerous state aviation conferences.

Provided system planning services to
27 STATES and has **26 YEARS** of
EXPERIENCE
including
10 YEARS SERVING MDT



COLIN WHEELER

ROLE: DATA COLLECTION / SURVEY ANALYSIS

EXPERIENCE

- 1 year with Kimley-Horn / 6 years total experience

PROFESSIONAL CREDENTIALS

- Master's Degree in Urban and Regional Planning, University of Minnesota, Twin Cities
- Bachelor of Science, History, University of St. Thomas, St. Paul, MN

QUALIFICATIONS AND RELEVANT PAST PROJECT EXPERIENCE

Colin Wheeler has over six years of professional airport planning experience, joining Kimley-Horn in 2014. Colin has worked on several commercial and GA airport master plans, airside and landside improvement projects, and environmental documents adhering to National Environmental Policy Act (NEPA) guidelines. His background in airport, city/regional, and transportation planning with an emphasis on statistical analysis, economic development, and documentation provides additional depth to his airport planning capabilities. He has helped prepare or modify reports and plans for client and other public meetings, including presentations to a wide variety of agencies and public entities. **His specific areas of expertise include analysis of airport facilities, development of forecasts of aviation demand, and financial evaluations.** Colin's relevant project experience includes airport planning projects for Bentonville Municipal (AR), Mena Intermountain Municipal (AR), and McClellan-Palomar (CA). Prior to joining Kimley-Horn, Colin also completed airport planning projects for Aspen/Pitkin County (CO), Outagamie Regional (WI), St. Cloud (MN), Eastern Iowa Airport (IA), Green Bay Airport (WI), and Spokane International (WA).





AMY MINOWITZ

ROLE: REPORT PRODUCTION

EXPERIENCE

- 1 year with Kimley-Horn / 2 years total

PROFESSIONAL CREDENTIALS

- Master of Urban and Environmental Planning, Arizona State University
- Master of Science, Sustainability, Arizona State University
- Bachelor of Science, Biology, Emory University

QUALIFICATIONS AND RELEVANT PAST PROJECT EXPERIENCE

Amy is an analyst who has worked in both transportation planning and environmental planning. Prior to joining Kimley-Horn, Amy worked with the Arizona DOT Environmental Planning Group on preparing and reviewing NEPA documents pertaining to biological resources. She had also been a researcher as part of Reinvent Phoenix, a project funded by the US Department of Housing and Urban Development (HUD) that involved conducting sustainability-oriented community visioning for the future of communities along the Phoenix Light Rail corridor. **Her current project experience includes analyzing the performance of North Carolina's aviation system, including preparing the final technical report, statewide executive summary, and individual airport reports for 72 airports.** She is also assisting with an economic analysis of the Chandler Municipal Airport in Arizona. Her experience includes bicycle and pedestrian planning, Intelligent Transportation Systems (ITS) planning, sustainability, and airport planning.



SHARI YAGODNIK

ROLE: GRAPHICS

EXPERIENCE

- 8 years with Kimley-Horn / 14 years total

PROFESSIONAL CREDENTIALS

- Bachelor of Fine Arts, Graphic Design, Florida Atlantic University

QUALIFICATIONS AND RELEVANT PAST PROJECT EXPERIENCE

Shari has over 14 years of experience in graphic design and related software. She has led the design efforts on multiple print and web-based projects including extensive public outreach. Shari excels at creating simplified graphic solutions to convey complex ideas, messages, and concepts that the target audience can easily comprehend. Her expertise includes branding/identity systems, marketing campaigns, illustration, photography, photo simulations, public involvement, and advertising. **She served as lead designer for the North Carolina Aviation System Plan, preparing the statewide executive summary and designing 72 individual airport brochures.**



ANGELA MCHUGH

ROLE: TECHNICAL EDITING

EXPERIENCE

- 9 years with Kimley-Horn / 16 years total

PROFESSIONAL CREDENTIALS

- Bachelor of Arts, English and Biology, University of Iowa

QUALIFICATIONS AND RELEVANT PAST PROJECT EXPERIENCE

Angela is a senior staff person in Kimley-Horn's marketing division and provides marketing and technical editing and writing support to Kimley-Horn's six offices throughout the Mountain Region. Her 16 years of experience include technical writing, editing, and researching efforts on numerous project reports. She also has extensive experience developing multimedia presentations for clients. Her marketing experience includes producing proposals, interactive presentations, newsletters, brochures, advertisements, flyers, and trade show booths. **Angela has conducted technical reviews of a multitude of aviation deliverables, including the recent North Carolina Aviation System Plan.**



ADAM WINSTON (EDR GROUP)

ROLE: ECONOMIC MODELING / VALUE-ADDED ANALYSIS / SURVEY ANALYSIS

EXPERIENCE

- 6 years with EDR Group / 12 years total

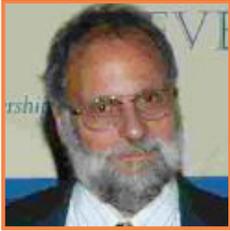
PROFESSIONAL CREDENTIALS

- Masters of Business Administration, Boston University
- Bachelor of Arts, Economics, Brigham Young University

QUALIFICATIONS AND RELEVANT PAST PROJECT EXPERIENCE

Adam is an expert in analyzing the economics of transportation infrastructure investment, including investment alternatives analyses and economic impact and benefit-cost studies. He focuses on evaluating production, supply chain, and economic development strategy issues with a special emphasis on estimating economic impact, conducting multiplier analysis, assessing economic forecasts and their impact on transportation systems, developing transportation-related database and modeling tools, and statistical analysis.

Adam's work at EDR Group has spanned aviation, airport systems, logistics, surface transportation, and other economic development issues for public and private clients. He has played an integral role as an economic analyst for several airport and aviation system studies as well as national transportation research—many of which involved organizing large data sets and utilizing economic impact analysis tools (e.g., IMPLAN). Prior to joining EDR Group, Adam worked for the Boston Redevelopment Authority where he developed an economic supply and demand analysis to support local economic growth and development.



STEVEN LANDAU (EDR GROUP)

ROLE: ECONOMIC MODELING / VALUE-ADDED ANALYSIS

EXPERIENCE

- 14 years with EDR Group / 29 years total

PROFESSIONAL CREDENTIALS

- Masters, City Planning, Massachusetts Institute of Technology
- Bachelor of Arts, US History, University of Massachusetts

QUALIFICATIONS AND RELEVANT PAST PROJECT EXPERIENCE

Steven leads EDR Group's aviation economics practice. He specializes in analyzing economic impacts of transportation projects and policies, concentrating on the role of aviation as an economic catalyst for regions and localities. His expertise is in the cross-over of transportation and economic development evaluation. **He has designed and adapted database and economic impact modeling tools for decision-makers and economic development practitioners and has evaluated the economic impacts of transportation investments in local areas, regions, and states—including refined decision support tools for individual airports.** He has also developed original case study research on the economic roles of airport in local, state, and regional contexts, and the changing interrelationship of airports in domestic and international travel and economic development implications.

Steven has been a featured speaker at professional conferences and workshops with topics including the economic impact of airports, options for inter-regional transportation, and transit options to serve airports. At EDR Group he has conducted numerous economic evaluation studies for programs including transportation and public works programs. These include economic impact evaluations for state airport systems and individual airports in Arizona, Colorado, Oregon, South Dakota, Virginia, and Vermont.

Additional examples of Steven's accomplishments include studies of airport and aviation-related freight; economic development and airport development issues including business reliance on Boston's Logan Airport; local, state, and multistate regional economic contributions of Hartsfield–Jackson Atlanta International Airport; on-airport revenue generation of a state's public-use airports, economic impact, and benefit-cost studies of individual airports; business analysis of South Carolina airports; and feasibility analysis of airport development proposals.



JEFF WALLA, P.E. (KLJ ENGINEERING)

ROLE: DATA COLLECTION

EXPERIENCE

- 1 year with KLJ Engineering / 22 years total

PROFESSIONAL CREDENTIALS

- Bachelor of Science, Civil Engineering and Business, Montana State University
- Registered Professional Engineer in MT (#11435PE) and ID

QUALIFICATIONS AND RELEVANT PAST PROJECT EXPERIENCE

Jeff has comprehensive experience in project management, planning, environmental, land acquisition, project engineering, and construction management at over a dozen airports in Montana. He has completed complex airport master plans at Lincoln Airport, Stevensville Airport, and Kalispell City Airport, as well as major planning updates at Havre Airport, Polson Airport, Ronan Airport, and Circle Town/County Airport. Jeff is currently leading tribal land acquisition, environmental, and planning efforts at the Polson Airport.

Jeff is located in the Kalispell office and currently manages KLJ's western Montana aviation clientele. He is experienced in all phases of airport development from planning through construction including master plans, Airport Layout Plan (ALP) updates, Disadvantaged Business Enterprise (DBE) programs, airport influence area regulations, environmental documents, and land acquisition.



BEN MELLO (KLJ ENGINEERING)

ROLE: DATA COLLECTION

EXPERIENCE

- 2 years with KLJ Engineering / 18 years total

PROFESSIONAL CREDENTIALS

- Bachelor of Environmental Science, University of Cincinnati
- Masters courses in Public Administration, University of Alaska

QUALIFICATIONS AND RELEVANT PAST PROJECT EXPERIENCE

Ben graduated from the University of Cincinnati with a Bachelor of Science degree in environmental science. He has extensive experience in aviation system planning, airport master planning, and environmental analysis. He has also conducted statewide system planning and air service assignments in numerous states. Ben has experience completing environmental reviews, capital improvement programming, passenger facility charge planning, terminal master plans, and Part 139 certification. He has also developed requests for proposals for planning and construction work.



CRAIG CANFIELD, P.E (KLJ ENGINEERING)

ROLE: DATA COLLECTION

EXPERIENCE

- 10 years with KLJ Engineering / 31 years total

PROFESSIONAL CREDENTIALS

- Bachelor of Science, Civil Engineering, Colorado State University
- Registered Professional Engineer in MT (#9511PE)

QUALIFICATIONS AND RELEVANT PAST PROJECT EXPERIENCE

Craig has worked as design engineer and project manager on a wide array of civil engineering projects throughout eastern Montana. He is experienced in planning, design, environmental documentation, construction administration, land acquisition, and equipment acquisition for airport improvement projects. As the Billings office manager and senior project manager/engineer, he maintains overall responsibility for client satisfaction, project management, and quality assurance/quality control.



PATRICK BARKEY, PH.D. (UNIVERSITY OF MONTANA – BBER)

ROLE: TECHNICAL QA/QC / SOCIOECONOMIC ANALYSIS / SURVEY ANALYSIS / VALUE-ADDED ANALYSIS

EXPERIENCE

- 7 years with University of Montana – BBER / 30 years total

PROFESSIONAL CREDENTIALS

- Ph.D., Economics, University of Michigan
- Master of Social Work, School of Social Work, University of Michigan
- Bachelor of Arts, Economics and Political Science, University of Michigan

QUALIFICATIONS AND RELEVANT PAST PROJECT EXPERIENCE

Patrick Barkey, Ph.D., will be BBER's lead representative for this project. **He has been director of the BBER since 2008, and has 30 years of experience in forecasting and public policy analysis.** His experience encompasses econometrics, economic modeling, forecasting and dynamic policy simulation, health care, labor economics, and survey research. BBER and Patrick's expertise and high quality print and electronic publications have earned respect from stakeholders throughout Montana and its peers throughout the nation. Patrick is technically proficient in SAS programming on Windows, MVS and VMS platforms, using base SAS, STAT, IML, GRAPH, and AF modules.



PROJECT STAFFING MATRIX

NAME OF STAFF	Pam Keidel-Adams	Colin Wheeler	Amy Minowitz	Shari Yagodnik	Angela McHugh	Steven Landau	Adam Winston	Derek Cutler	Rita Hendrickson	Craig Canfield	Jeff Walla	Ben Mello	Steve Brown	Amanda Anderson	Patrick Barkey	TOTAL HOURS BY TASK
CLASSIFICATION	Principal Investigator	Sr. Planner	Planner	Graphic Designer	Technical Editor	Principal Economist	Economist I	Economist II	Admin	Engineer IV	Engineer III	Planner II	Engineer I	Admin	Sr. Researcher	
Review Current Study	6	8	8	4	0	4	8	0	0	0	0	0	0	0	0	38
Economic Metrics	32	40	80	12	4	40	64	24	8	20	72	20	479	34	60	989
Model	6	0	0	0	0	40	80	24	16	0	0	0	0	0	0	166
Run Model	6	0	0	0	0	16	32	0	0	0	0	0	0	0	0	54
Qualitative Benefits	8	12	40	0	0	0	0	0	0	0	0	0	0	0	0	60
Value-Added Benefits	12	0	0	0	0	40	0	24	8	0	0	0	0	0	177	261
Brochures	32	40	148	60	32	8	16	0	0	0	0	0	0	0	0	336
Presentation	12	4	4	12	2	16	0	8	2	0	0	0	0	0	0	60
Technical (or Final) Report	16	0	0	8	40	40	16	8	16	0	0	0	0	0	40	184
Deliverables																
Monthly Progress Reports	12	0	0	0	0	6	0	0	0	0	0	0	0	0	0	18
Task Reports	8	8	16	4	12	1	1	0	0	0	0	0	0	0	0	50
Final Report (see Task 3.3.9)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Research Project Summary Report	6	4	12	4	12	1	1	0	4	0	0	0	0	0	0	44
Implementation Report	6	0	24	4	6	1	1	0	4	0	0	0	0	0	0	46
Performance Measure Report	6	0	16	4	6	1	1	0	4	0	0	0	0	0	0	38
Meetings																
Kick-Off	12	0	12	0	0	24	0	0	0	0	10	0	0	0	4	62
Interim	16	0	16	0	0	24	0	0	0	0	10	0	0	0	4	70
Final Oral Presentation	12	0	0	0	0	24	0	0	0	0	0	0	0	0	0	36
Implementation Meeting	8	0	0	0	0	24	0	0	0	0	0	0	0	0	0	32
Total Hours	216	116	376	112	114	310	220	88	62	20	92	20	479	34	285	2544
Percent of Project Time	8%	5%	15%	4%	4%	12%	9%	3%	2%	1%	4%	1%	19%	1%	11%	100%

SECTION 5: COST PROPOSAL

5.1 Submittal of Proposed Budget

The Kimley-Horn team's budget was developed based on the description of tasks in Section 3.3 beginning on page 7 and is included on the following page. For ease of review, we have structured our budget response to include three tables:

- The **Summary of Costs** table below shows the cost breakdown by firm including direct labor, overhead, profit, and expenses.
- The **Proposed Budget** table on the following page summarizes our total hours by firm and by key team member and potential non-key support staff for each project task. This table identifies hourly rates and total direct labor costs.
- The **Expenses** table on page 41 summarizes expenses by type and by firm.

Our total project cost is estimated to be \$376,588.

We understand that the project budget will require a breakdown by state and federal fiscal year within one day of request and the Kimley-Horn team is prepared to provide this breakdown.

5.2 Project Funding

The Kimley-Horn team understands that MDT does not have a "set" funding for this project.

5.3 Budget Revisions

The Kimley-Horn team understands that if there are any changes in budget or timeline that would impact the proposed State and federal fiscal year expenditures that we will be required to revise the expenditure breakdown for the duration of the project.

SUMMARY OF COSTS

	KIMLEY-HORN	EDR GROUP	KLJ	UNIVERSITY OF MONTANA	TEAM TOTAL
Overhead (by Firm)	194%	145%	162%	45%	N/A
Fixed Fee	10%	10%	10%	0%	10%
Total Firm Labor Hours	934	680	645	285	2544
Total Direct Labor Cost	\$38,440	\$35,886	\$23,694	\$29,116	\$127,136
Overhead Cost	\$74,636	\$52,035	\$38,346	\$13,102	\$178,120
Fixed Fee Cost	\$11,308	\$8,792	\$6,204	\$-	\$26,304
Expenses	\$10,453	\$14,088	\$7,780	\$12,707	\$45,028
TOTAL COST BY FIRM	\$134,837	\$110,802	\$76,024	\$54,925	\$376,588



Appendix

SAMPLE REPORT

We have included the Missouri Statewide Airports Economic Impact Study Technical Report and Executive Summary Report, as well as the accompanying economic PowerPoint and two brochures in the electronic copy of our submittal per the instructions on page 18 of the RFP.

STATE OF MONTANA LICENSE

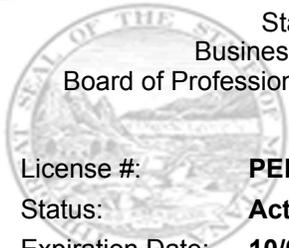
A copy of Kimley-Horn's current Montana Board of Professional Engineers & Land Surveyors license is included in this Appendix to serve as documentation establishing Kimley-Horn's qualification to provide the services specified in the RFP.

LETTERS OF INTENT

Letters of intent from each of our subconsultants are included in this Appendix.

PROOF OF FEDERALLY AUDITED RATE

A copy of Kimley-Horn's 2013 Overhead Audit Report is attached as proof of our federally audited rates. The 2014 report will be available by the end of May 2015 and can be furnished to MDT at that time upon request.



State of Montana
Business Standards Division
Board of Professional Engineers & Land Surveyors

License #: **PEL-EF-LIC-315**
Status: **Active**
Expiration Date: **10/01/2015**

KIMLEY-HORN AND ASSOCIATES INC
PO BOX 33068
RALEIGH, NC 27636

This certificate verifies licensure as:

CERTIFICATE OF AUTHORITY

Person In Charge: ERIC LOVEJOY

Person In Charge: JONATHAN MOORE

Person In Charge: KEVIN PHELPS

Person In Charge: KEVIN ROBERSON

Person In Charge: MELIBE THOMAS

Person In Charge: BENJAMIN HENDERSON

Person In Charge: CURTIS ROWE

Person In Charge: SANJAY PANDYA

Person In Charge: PAL HEGEDUS

Person In Charge: MATTHEW IDEMA

RENEW OR VERIFY YOUR LICENSE AT:
<https://ebiz.mt.gov/pol/>

To use license as a Wall License, cut off excess paper and affix the above to wall for display.

Remember to renew online if possible. Benefits of renewing online include:

The ability to change an address (for most professions)

The ability to print license(s) the same day as the renewal

The ability to print additional licenses for no additional charge up to 45 days following the end of the renewal cycle

To verify licenses or renew online: <https://ebiz.mt.gov/pol>

May 6, 2015
Pam Keidel-Adams
Kimley-Horn
7740 N. 16th St, Suite 300
Phoenix, AZ 85016

**Subject: Montana Economic Impact of Airports Update,
RFP Number: HWY-311642-SH**

Dear Ms. Keidel-Adams:

This letter serves as our letter of intent to perform as a subconsultant on your team for the proposed project Montana Economic Impact of Airports Update, RFP Number: HWY-311642-SH. Economic Development Research Group, Inc. (EDR Group) commits all resources and staff necessary to complete the economic consulting and modeling work as described in the Proposal should the Offeror, Kimley-Horn, become the prime consultant. My contact information is provided below:

Economic development Research Group. Inc.

Steven R. Landau

155 Federal St.

Boston. MA 02110

617-338-6775 x 206:

EMAIL: Slandau@edrgroup.com

Thank you.

Sincerely,



Steven R. Landau

Vice President

4585 Coleman Street
PO Box 1157
Bismarck, ND 58502-1157
701 355 8400
kljeng.com



April 25, 2014

Pam Keidel-Adams
Kimley-Horn
7740 N. 16th St, Suite 300
Phoenix, AZ 85016

Re: Montana Economic Impact of Airports Update
RFP Number: HWY-311642-SH

Dear Ms. Keidel-Adams:

This letter serves as our letter of intent to perform as a subconsultant on your team for the proposed project Montana Economic Impact of Airports Update, RFP Number: HWY-311642-SH. KLJ commits the resources and staff necessary to complete the data collection work as described in the Proposal should the Offeror, Kimley-Horn, become the prime consultant. My contact information is provided below:

Kadrmass, Lee & Jackson, Inc. (KLJ)
Tom Neigum, PE
4585 Coleman Street
Bismarck, ND 58503
(701) 355-8415
tom.neigum@kljeng.com

Sincerely,

KLJ

A handwritten signature in blue ink that reads "Tom Neigum". The signature is fluid and cursive, with a long horizontal stroke at the end.

Tom Neigum, PE
Aviation Services Manager

Project #: 21515104



The University of
Montana

Business and Bureau of Business and Economic Research

Gallagher Business Building
The University of Montana
Missoula, Montana 59812-6840

(406) 243-5113

FAX (406) 243-2086

www.bber.umt.edu

April 24, 2015

Pam Keidel-Adams
Kimley-Horn
7740 N. 16th St, Suite 300
Phoenix, AZ 85016

**Subject: Montana Economic Impact of Airports Update,
RFP Number: HWY-311642-SH**

Dear Ms. Keidel-Adams:

This letter serves as our letter of intent to perform as a subconsultant on your team for the proposed project Montana Economic Impact of Airports Update, RFP Number: HWY-311642-SH. The University of Montana Bureau of Business and Economic Research (BBER) commits all resources and staff necessary to complete the survey activities and socioeconomic analysis work as described in the Proposal should the Offeror, Kimley-Horn, become the prime consultant. My contact information is provided below:

Patrick Barkey
Bureau of Business and Economic Research
University of Montana
Missoula, MT 59812
406.243.5113
patrick.barkey@umontana.edu

Thank you.

Sincerely,

Patrick M. Barkey
Director

**BUREAU OF
BUSINESS
AND ECONOMIC
RESEARCH**



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

PAT McCRORY
GOVERNOR

ANTHONY J. TATA
SECRETARY

May 19, 2015

Tammy Flanagan, Controller
Kimley-Horn and Associates, Inc.
3001 Weston Parkway
Cary, NC 27513

Dear Tammy:

We have performed a cognizant review of the audit, and supporting workpapers, of the Indirect Cost Rate of Kimley-Horn and Associates, Inc. as presented in the Schedule of Indirect Expenses and Rates for the year ended December 31, 2014 in accordance with our role as Cognizant Agency as defined in 23 U.S.C. §112 (b) (2)(c) and 23 C.F.R. §172.3 and 172.7. The audit was performed by the independent CPA firm of Cherry Bekaert LLP. The CPA represented that the audit was conducted in accordance with Government Auditing Standards as promulgated by the Comptroller General of the United States of America, and the audit was designed to determine that the Indirect Cost Rate was established in accordance with the Cost Principles contained in the Federal Acquisition Regulation, 48 CFR Part 31. Our cognizant review was performed in accordance with the AASHTO Review Program for CPA Audits of Consulting Engineers' Indirect Cost Rates.

In connection with our cognizant review, nothing came to our attention that caused us to believe that the examination and supporting workpapers for the Indirect Cost Rate and the related Auditor's Report did not conform in all material respects to the aforementioned regulations and auditing standards.

We recommend acceptance of the following rates:

Payroll burden, G&A and overhead 192.16% (Home Office)
Facilities Capital Cost of Money 0.66% (Home Office)
Field Overhead 172.38% (Field Office)
Facilities Capital Cost of Money 0.04% (Field Office)
Direct Expense Rate (Florida DOT only) 6.35% (Home Office)
Direct Expense Rate (Florida DOT only) 4.01% (Field Office)

The Benchmark Compensation Amount (BCA) limit for executive compensation was adjusted June 24, 2014. As listed in Footnote 12 of the FAR-compliant overhead report, Kimley-Horn's indirect cost rate would include an additional \$324,358 of allowable compensation for contracts awarded prior to June 24, 2014, for a home rate of 192.43% and a field rate of 172.64%.

Sincerely,

A handwritten signature in blue ink that reads "Lonnetta Raynor".

Lonnetta Raynor, Manager
Consultant, Utility, Rail and Turnpike

MAILING ADDRESS:
NC DEPARTMENT OF TRANSPORTATION
OFFICE OF INSPECTOR GENERAL
1507 MAIL SERVICE CENTER
RALEIGH NC 27699-1507

LWRAYNOR@NCDOT.GOV
TELEPHONE: 919-707-4582

LOCATION:
1 S. WILMINGTON STREET
2ND FLOOR ART MUSEUM
RALEIGH NC 27601