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State of West Virginia
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FOR INFORMATION CONTACT THE BUYER

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Signature X

FEIN #

DATE

7-12-18

All offers subject to all terms and conditions contained in this solicitation



West Virginia Division of Highways

Right of Way Request for Information
CRFI 0803 DOT 1800000002

July 12, 2018



Mr. Eric B. Hudnall
Division Director, Right of Way Division
State of West Virginia
WVDOH Building 5, Room 855
1900 Kanawha Blvd, East
Charleston, WV 25305

DOT 18-02
Request for Information Commercially Available Services
Due July 12, 2018

July 12, 2018

Dear Mr. Hudnall:

Mott MacDonald is pleased to offer the following in response to your Request For Information regarding Commercially Available Services to compile a database of real estate currently owned by the West Virginia Department of Highways.

Please feel free to reach out to us as you move forward.

A handwritten signature in blue ink, appearing to read 'Stephen B. Polen', written over a light blue horizontal line.

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Executive summary

Project background and purpose

The West Virginia Division of Highways (WVDOH) is gathering information to assist them with development of requirements for a solicitation for a consultant to create a database of all real estate currently owned by WVDOH. This database will include all fee-simple owned properties, easements, historical roads, and roads which were dedicated or accepted by the WVDOH or its predecessors. The WVDOH would like to initially focus on uneconomic remnants and excess properties.

This document presents high level considerations for this work and suggestions on how to approach and/or items of interest that will benefit in the acquisition, storage, and maintenance of this data in a holistic manner.

Suggestions are offered to assist the WVDOH prepare the solicitation of services to complete this effort. Mott MacDonald offers these suggestions with the understanding we will not be precluded from responding to the future RFP for this work.

1 General process recommendations

1.1 Recommended approach

Based on the goal of the project, a larger team is needed than is typically traditional for WVDOH projects and WVDOH staff. The magnitude of data cited in the Request for Information (RFI) indicates it is also understood that more time must be allocated to compile and catalogue the backlog of legacy data while keeping the data current with ongoing acquisitions and dispositions.

We suggest that this project be broken up into manageable tasks by prioritizing preferences as stated in the RFI (Uneconomic Remnants, Excess Properties, Properties Used in Normal Operations, and Properties Acquired for Foreseeable Uses) and then further prioritized geographically. Perhaps two counties in a chosen district representing opposite ends of the spectrum of anticipated effort could be used as a "pilot" project to debug the workflow and product specifications. Consideration should be given to restricting the effort to include only in-house records and expand to sources outside the WVDOH at later stages/phases.

Such a pilot program would also provide reliable data as to what amount of time and level of funding will be required to accomplish the intended objective. Realistic timelines and cost projections could then be made to assist management and policy makers in making decisions about priorities and funding. Based on these decisions, task orders could be structured to expand the project as desired.

Ultimately, the workflow, data collection, and data processing procedures will be refined during the pilot project to ensure the data quality, metadata, and data format requirements outlined in the RFI are maintained over the wide range of source data formats and collection procedures expected to be encountered or employed.

2 Software

2.1 Software selection

WVDOH has indicated a desire to select a commercial off-the-shelf product to house the information gathered in this effort. We recommend that various database vendors be evaluated in a manner that allows for close comparison and focused effort. The top database vendors should then be invited to provide a demonstration of software capability, contents, and also their ability to integrate with the other WVDOH systems needed for managing this assets.

2.2 Integration with other WVDOH systems

A project of this magnitude should leverage existing systems as much as possible and not duplicate efforts or workflows. It is important that any software solution selected not only have the storage that is needed by the WVDOH to provide a comprehensive dataset on each land record/asset. Integration with other existing WVDOH systems is crucial for process efficiency as well as minimizing cost and maintenance of such systems. Identification of the WVDOH's information needs on each asset should be documented and used to generate a "checklist" to be used during each software demonstration. This checklist should be sectioned for desired attributes to be tracked, as well as a section for how the software can/should integrate with existing systems.

When reviewing the vendors demonstrations, standard questions should also be asked of each such as:

- Does the software dictate department process or does it mold to existing department processes?
- What constitutes a software enhancement and what cost impact is it to the department to request a software change?
- What are the support options and parameters for general support as well as enhancements and the timeframes they can be completed in?
- What is included in the basic support for installation and configuration of a purchased COTS system.

All of these factors should be weighed to help the WVDOH select the best product for their desired long-term vision.

We recommend that a requirement of selection be proof of having experience working with the WVDOH's various existing computer systems as well as demonstrated software integration experience be provided such that the WVDOH can weigh the respondent expertise and capability in a smooth installation and integration effort.

2.3 Integration with WVDOH GIS and R&H LRS

Leveraging existing systems is key to controlling costs and preventing duplication. The proposed ROW Management solution should integrate with ESRI's GIS suite of products including Roads and Highways (R&H) extension. WVDOH uses R&H to manage the geometry and associated linear referencing system locations for the State's transportation network. R&H is also used to edit and manage the point and linear events and assets that reside along the transportation network. R&H keeps the event data in sync with changes to the network. In addition, R&H interfaces with other operational systems. When network changes occur, operational systems are notified so that they can reflect the updated locations. This ensures that assets and events from the operational change continue to be located correctly on the transportation network.

The ROW Management solution should also integrate with WVDOH's straight line diagramming product called Road Analyzer. The ROW Management solution should be able to launch Road Analyzer so that route events in a selected location can be displayed. This integration will allow users to view information such as traffic counts, crash locations, or speed limits on the route that runs along a parcel.

3 Asset research and data management

3.1 Record scanning and archiving

A critical component of the project is compiling existing records. Select WVDOH staff should be mobilized to work with the consultant(s) to facilitate research and scanning of all pertinent documents in the WVDOH's possession. Examples of these documents include plans, deeds, leases, condemnation orders, commissioner's orders, etc. found in the WVDOH office as well as the District Offices.

A possible scope of work for this task is:

- Scan WVDOH documents in storage – Most WVDOH records are in paper format. It is highly recommended that during this process, all records be scanned into a digital format for safe archiving. It is also recommended a back process be developed and documented to have an offsite copy (such as Iron Mountain) to provide a secure and safe backup if needed, along with a refresh protocol to keep that data current on a set cycle.
- Save documents by preferred naming convention – In order to have proper document management, a standard naming convention and index should be used to manage the vast amount of records this project will include. This convention should be standardized but flexible enough to allow for some modifications, revisions, or additions as dictated by discovery during the pilot phase and by unforeseen future needs. This standard should be documented for periodic review and adjustment as needed.
- Cataloging – The documents should then be catalogued according to the WVDOH's preference based on characteristics outlined in the RFI such as Project Number, District, County, Purpose, Type of Interest, etc.
- Linkage to GIS Feature – The ability to have access to the scanned records via a GIS interface adds an immeasurable value to the ability to manage and maintain those assets. If this step is written into the requirements, it is also recommended the linkage process be documented for periodic review and adjustment as needed.
- Where possible, the records could also be geo-referenced or otherwise spatially linked to the Geographic Information System and/or Linear Reference System.

3.2 Research and attribute population

A standard form of attribute data to be collected for each record should be developed. Like the naming convention, it should be standardized but flexible enough to allow for some modifications, revisions, or additions as dictated by discovery during the research. It should include all the information specified in the RFI for the database such as Type of Document, Book and Page Reference, Date of Recording, Type of Interest Conveyed, etc.

Additional attribute data should be collected to further classify and quantify the data. For instance, in the case of rights of way, the type should be recorded, such as Controlled Access, Non-Controlled Access, Limited Access, etc. Wherever possible, the funding source should also be recorded as it may impact the use or disposition of the property.

Some of the WVDOH's holdings will require an added level of effort to quantify. For instance, HARP roads and some roads taken by order of the Commissioner may not have specified widths or lengths. They include the "traveled way." These will need to be researched outside the WVDOH's records to determine if they are defined by public record. If not, they will need to be quantified in some other manner.

This level of research and data collection will necessarily expand outside the WVDOH into the county courthouses. It will include not only conveyances to the WVDOH but also conveyances from the WVDOH, property exchanges, and abandonments. This data will also need to be reconciled with all other acquisition data to present an accurate database of the WVDOH's assets.

A project of this scope and magnitude will require vast experience in land research and abstracting. It is recommended the requirements outline the various experience needed to ensure the WVDOH is securing qualified and experienced personnel to undertake such a large-scale effort. Qualified and experienced personnel allow for more timely and efficient execution, thereby reducing the effective cost of this component. It is difficult to predict what items may be encountered by the research personnel, but some of the possible tasks this will include are:

- Land Broker Efforts
 - Complete forms for each record to include specific information pertaining to property.
 - Type of Document
 - i. Deed
 - ii. Right of Way
 - Rights granted in agreement
 - District/County/Acreage
 - Lineage of each asset
 - Determine from WVDOH files which need further research
 - Conduct necessary additional research in county and state office to fill in gaps
 - Determine if any properties have been conveyed
 - Populate database with applicable data.
- QAQC and Data Quality – A well-defined QAQC process, documented for consistency, should be generated and followed as a QAQC Plan. This process should include measures that maintain the data quality, metadata, and data format requirements outlined in the RFI. The WVDOH should approve of this QAQC Plan in advance of work being done to ensure the agency agrees with the processes and validations recommended to avoid rework or poor-quality data from compromising the integrity of the master database.
- Ingestion to GIS – Coordination with the land broker could be needed for database entry and validation as well as any questions to GIS asset entry to ensure proper location, accuracy, and orientation to the WVDOH road network.

We recommend that the requirements note that a letter granting access to WVDOH documents will be provided to such field agents by the WVDOH to help facilitate access to the records in the various venues that will be investigated, especially for the lineage requirement on each asset.

3.3 Legal interpretation and opinion

We anticipate that legal counsel experienced and knowledgeable in real estate matters and the formation and history of the West Virginia state road system will be required from time to time throughout this effort to analyze vesting/chain of title instruments to determine types of ownership interests vested in the WVDOH, provide assistance in management of governmental record searches, assist in review of historical records related to former Virginia/West Virginia turnpikes, and provide written analysis and opinions related to project matters as needed.

If this is a desire of the WVDOH, especially on the Phase I effort of uneconomic remnants and excess property, the WVDOH may consider entering into the requirements that qualified, experienced legal counsel may need to validate asset condition or status to allow for sale or retention in the WVDOH asset base. Base recommendations include:

- Lead project counsel should have at least ten years' experience in West Virginia real estate matters including experience in conducting title searches and closings.
- Having knowledge of the formation and history of the West Virginia state road system is needed for background understanding of project goals.

- Project counsel will review and analyze vesting/chain of title instruments as needed to determine type of ownership interest vested in State.
- Project counsel will provide assistance as needed in management of searches of County Clerk other governmental records.
- Counsel to assist in review of historical records related to former Virginia/West Virginia turnpikes.
- Counsel to provide written analysis and opinions related to project matters as needed.

3.4 Data governance

We further suggest that a Data Governance document be created to outline the “owners” or responsible parties for each data element identified. A proper change management process should be defined to avoid compromising data integrity. We recommend that this document be added into the requirements to assist the WVDOH with data control processes and accountability management. The information this document could define includes:

- Who owns each data element (who is the responsible party)?
- What is the approval process for updates/changes?
- Document process of updating of data, including approval chains and criteria
- Document QAQC process for data quality (responsible party, standard process of review, validation sign-off)

This process should begin at the onset of the project to help identify the information to be collected and to what level of control is needed at the onset of this large-scale effort.

