West Virginia GIS Technical Center
West Virginia University
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June 17, 2019

MEMORANDUM OF UNDERSTANDING
**** Fayette County E-911 Addressing Project ****

SUBJECT: Fayette County Addressing Project MOU among the following partners: Atlas Geographic Data Inc., West Virginia University, Fayette County's Addressing Office, and municipalities.

This Memorandum of Understanding (MOU) sets forth the terms and understanding among the Vendor (Atlas Geographic Data Inc.), the State of West Virginia (West Virginia University), Fayette County E-911 Office, and municipalities for the following professional GIS services: to inventory, edit, and update E-911 road centerlines and site points for an estimated **23,595 structures** in Fayette County, WV.

Funding
Funding for this MOU is from FEMA's Hazard Mitigation Grant Program, Statewide Multi-Hazard Risk Assessments (TEIF/TEAL); Project Numbers FEMA-4273-DR-WV-0031 and WVU-10023420.1.1007860AR; Performance Period 6/20/2018 to 6/4/2021. The grant recipient is the State Hazard Mitigation Office, WV Division of Homeland Security and Emergency Management; grant sub-recipient the WV GIS Technical Center at West Virginia University. Complete and accurate E-911 Addresses are important for pinpointing and identifying at-risk structures in hazard zones.

Duration
This MOU is at-will and may be modified by mutual consent of the authorized officials listed at the end of this document. This MOU shall become effective upon signature by the authorized officials and will remain in effect until modified or terminated by any one of the partners by mutual consent.

Overview
A qualified GIS professional services company will edit, update, and inventory an estimated **23,595** E-911 structure address points for Fayette County. The resulting project will yield a spatially accurate, GIS addressing dataset, identifying the correct address and location of each habitable structure in the county. The final data format will be delivered in Fayette County's current data structure.

In order to accomplish this task, Atlas Geographic Data Inc. will perform a series of tasks which are consistent with the workflows performed for the other successful West Virginia E-911 addressing projects delivered by Atlas. Existing GIS data will be gathered and assessed to determine current accuracy of spatial location, associated attributes, and data schema in relation to NENA addressing standards. Once the data assessment is complete, work will begin to correct and modify all inaccuracies and prepare data for address inventory. The individual tasks are outlined below. Based on the Fayette County's current data it is expected to have a final address point total of approximately 23,595 for the towns and unincorporated areas of Fayette County. Countywide data assessments, reports, and addressing files will be delivered for upload into the County's CAD and Statewide Addressing and Mapping Systems (SAMS).

Table 1. Work Tasks, Schedule, and Costs

ADDRESSING WORK TASKS	TIME PERIOD	COST
TASK 1: [DATA INVENTORY AND ASSESSMENT] Collect and assess existing county data and determine the necessary in-office tasks to prepare data for field verification. Existing GIS data will be gathered and assessed to determine current accuracy of spatial location, associated attributes, and data schema in relation to NENA addressing standards. Once the data assessment is complete, work will begin to correct and modify all inaccuracies. This will include both in-office and field efforts to achieve the desired resulting dataset.	8/5/19 to 8/30/19	$1,200
TASK 2: [ADDRESS DATABASE EDITING] In-office database preparation. Migrate/update schema of addressing data to appropriate specifications, perform spatial adjustment of address points and centerlines per latest orthoimagery, prepare data for field verification, and perform any additional in-office edit tasks identified in Task 1.Perform address inventory using available supplemental datasets to assign address points with street address currently in use.	10/1/19 to 1/3/20	$20,300
TASK 3: [TRAINING FOR FIELD VERIFICATION] Train county and municipal staff on field verification techniques and software tools.	1/7/20	$1,000
TASK 4: [FIELD VERIFICATION] Perform windshield survey to verify structure addresses. This includes physically visiting each structure to verify any posted address information on mailboxes, driveway/road markers, numbers posted on the structure, etc. This does not include exiting the vehicle to personally verify address with residents or neighbors although every effort will be made to fully explain the project to any members of the public encountered while in the field. **Fayette County and municipalities are responsible for the field verification.** See Table 2 for cost and effort breakdown.	1/8/19 to 4/30/20	$0
TASK 5: [DATA RECONCILATION/MSAG/QC] Perform QC, MSAG creation, and reconciliation processes on completed field verification data to ensure accuracy and consistency. This will include the verification of centerline road names to match those of associated address points, verifying address numbers which fall into the assigned range of their respective centerline segment, create updated MSAG, and reconciliation of address points to TELCO subscriber database. (Reports will be Countywide)	5/1/20 to 6/19/20	$15,000
TASK 6: [DELIVERY AND TRAINING] Final GIS data delivery and QC, MSAG development, and generation of appropriate reports to be delivered to Fayette County along with final GIS database. Conduct project close-out meeting. Provide re-addressing recommendations and estimated costs for communities with non-conforming, city-style street addresses/road names. Provide training and workflows for in-house or online (SAMS) maintenance of addresses for County. **It is the responsibility of Fayette County to coordinate with the current E911 Computer Aided Dispatch vendor to load completed GIS dataset into dispatch.**	6/23/20	$3,200
Total project funding paid by FEMA Hazard Mitigation Grant for Fayette County		**$40,700**

Scope
Countywide, correct, comprehensive and reconciled address point and road centerline datasets for full implementation in the County's Computer Aided Dispatch (CAD) system and Statewide Addressing and Mapping System (SAMS). Re-addressing for any of the municipalities (e.g., Oak Hill) constitutes a separate project and is outside the scope of this MOU.

The field verification will be performed by Fayette County's Office of Emergency Management and municipalities. A two-person team should be able to field check 500 addresses per day. A field verification labor cost estimate by Atlas Geographic Data Inc. is $1.25 per address. It is expected the labor costs will be cheaper for municipalities since travel costs are minimized due to more densely situated structures compared to unincorporated rural areas. Atlas Geographic Data will provide all the necessary training required for the field verification.

Table 2. Addressable Structure Counts and Estimated Field Checking Costs. All addressing work tasks for this project will target the municipalities (56%) and the unincorporated areas (44%) of Fayette County.

Communities	Number of Addressable Structures	% of Total Field Checked Structures	Field Checking Costs (In Kind)	# Days to Field Check (500 addresses per day; 2 person team)
Anstead	1,001	4%	$1,251	2.0
Fayetteville	3,422	15%	$4,278	6.8
Gauley Bridge	449	2%	$561	0.9
Montgomery	418	2%	$523	0.8
Mount Hope	1,392	6%	$1,740	2.8
Oak Hill	5,928	25%	$7,410	11.9
Pax	125	1%	$156	0.3
Smithers	500	2%	$625	1.0
Total Municipalities	**13,235**	56%	$16,544	26.5
Fayette Unincorporated	**10,360**	44%	$12,950	24.5
Total County	**23,595**		$29,494	50.9

Table 3. Costs Breakdown. Total Project Cost is $70,194; FEMA grant contribution $18,400; Fayette County's direct dollar contribution $22,300; estimated in-kind labor by all municipalities for field validation is $29,494.

Number of Targeted Addresses for Project	23,595
Cost for Addressing Vendor - Atlas Geographic Data	$40,700
Dollar Contributions for Atlas Geographic Data	
FEMA Grant Contribution (municipalities)	$18,400
County Contribution	$22,300
total	$40,700
Estimated In-Kind Labor for Field Validation	
Municipalities	16,544
Unincorporated Areas	12,950
total	$29,494
Total Project Cost	$70,194

Table 4. Project Goal and Deliverables

OBJECTIVE AND DELIVERABLES
OBJECTIVES: To inventory, edit, and accurately place E-911 site points for an estimated **23,595** structures in Fayette County, West Virginia.
DELIVERABLES: Correct, comprehensive and reconciled address point and road centerline datasets for full implementation in the County's Computer Aided Dispatch (CAD) system and Statewide Addressing and Mapping System (SAMS).
COST: Total estimated cost of project is **$70,194.** *For this project Fayette County will incur direct dollar cost of $22,300*

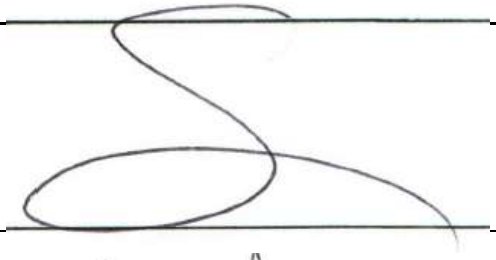
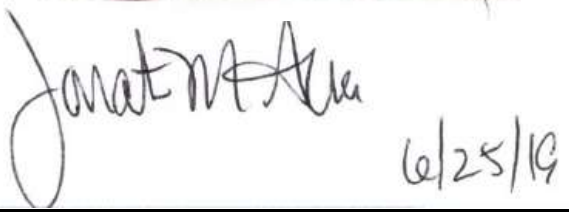
Table 5. Partner Responsibilities

RESPONSIBILITIES
VENDOR: [ATLAS GEOGRAPHIC DATA INC.] • Lead technical unit for coordinating and completing all deliverables • Complete addressing work tasks, training, and deliverables in accordance with **WVU State Contract U19Atlas** dated January 14, 2019. Follow pricing schedules in accordance with same contract. Adhere to national and state E-911 standards and specifications.   ○ http://data.wvgis.wvu.edu/pub/temp/FEMA/FRA/Contracts/Digital_Tax_Maps_and_Addresses-Contract_20190114_(U19ATLAS).pdf • Submit monthly progress reports to State and County • Submit invoices that follow a file naming convention associated with project name and completed tasks (e.g., Fayette_Addresses-1_Tasks_1-3_20190415) • Provide technical support and training during the mapping activity. Continue technical support to jurisdiction for one year after delivery of product deliverables. • Provide completed deliverables to State and County including metadata • Warrant data quality and mapping for 18 months after contract completion
STATE: [WVU AND WVDHSEM] • Assist with the Memorandum of Understanding/Statement of Work • Review completed work tasks and deliverables prior to authorizing payments • Communicate to grant sponsors regarding work progress and deliverables

LOCAL: [FAYETTE COUNTY]
• Review and approve MOU that lists specifications, timelines, and deliverables
• Identify a technical point of contact for the project
• Provide best available addressing data and GIS files
• Provide in-kind support for field mapping of addresses and uploading addressing files into Computer Aided Dispatch
• After project completion:
  ○ Continuously maintain digital E-911 addresses and submit updated address files annually to the Statewide Addressing and Mapping System (SAMS). Specifically, every year during the month of January, the County E-911 Office shall provide its updated street and site address files to the SAMS in accordance with the standardized address exchange format set forth by the WV Division of Homeland Security and Emergency Management. The point of contact is Nuvia E. Villamizar, GIS Manager / SAMS Program Leader, WV Division of Homeland Security and Emergency Management, (304) 558-5380, Nuvia.E.Villamizar@wv.gov
  ○ Ensure addressing ordinance(s) for county are current
  ○ Send a Letter of Appreciation to grant sponsors using a letter template provided by the State
  ○ Complete an online survey on client satisfaction regarding overall project implementation and deliverables
  ○ If possible, add resource link to WV Flood Tool (www.mapwv.gov/flood) to county website

Table 6. Partner Signatures

Partner	Authorized Representative	Signature and Date
Vendor	**Hays Lambert** President Atlas Geographic Data Inc. (910) 256-9892 hlambert@atlasgeodata.com	
State	**Kurt Donaldson** Manager WV GIS Technical Center West Virginia University (304) 293-9467 kdonalds@wvu.edu	
County	**Kevin B. Walker** Director Fayette County Office of Emergency Management (304) 574-3285 kwalker@fayettecountywv.org	
	<< see continuation below >>	

Partner	Authorized Representative	Signature and Date
Local	**Bippy Holcomb** Town of Ansted 19940 Midland Trail Ansted, WV 25812	
Local	**Sharon Cruikshanks** City of Fayetteville 125 Court St Fayetteville, WV 25840	
Local	**Johnathan Gross** Town of Gauley Bridge PO Box 490 Gauley Bridge, WV 25085	
Local	**Greg Ingram** Town of Montgomery 706 Third Ave Montgomery, WV 25136	
Local	**Michael Kessinger** City of Mount Hope 609 Main St Mount Hope, WV 25880	
Local	**William C. Hannabass** City of Oak Hill City Manager (304) 469-9541 bhannabass@oakhillwv.gov	
Local	**William Hughes** Town of Pax 99 Center St Pax, WV 25880	
Local	**D. Anne Cavalier** Town of Smithers PO Box 489 Smithers, WV 25186	