



6<sup>th</sup> quarterly report on the Northeast  
Ohio Information Exchange: Digital  
Infrastructure for Drone Services in  
Cuyahoga County project

Period thru June 30, 2024

Stuart C. Mendel  
Project Director





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### **Website content hyperlinks**

Here is a short link for this report if needed: [tinyurl.com/neofix-q4report](https://tinyurl.com/neofix-q4report)

<https://bw-centers-tech-partnerships.org/neofix/>  
<https://bw-centers-tech-partnerships.org/members-supporters/>  
<https://bw-centers-tech-partnerships.org/resources/>  
[www.OH-FIX.com](http://www.OH-FIX.com)



July 9, 2024

County's address for notification is:  
Cuyahoga County Office of the Council  
2079 East 9th Street  
Cleveland, Ohio 44115  
Attention: Cynthia Mason, Research and Policy Analyst

With a copy to:  
Cuyahoga County Department of Law  
2079 East 9th Street  
Cleveland, Ohio 44115  
Attention: Director of Law

Dear Ms. Mason,

This document and attachments comprise the *sixth quarterly* (first quarter of year 2, 2024 calendar year) report on the Northeast Ohio Information Exchange: Digital Infrastructure for Drone Services in Cuyahoga County, abbreviated hereafter as the NEOFIX project.

The format narrative of this document is drawn from the reporting items listed in section 4 of the agreement between Cuyahoga County and Baldwin Wallace University for funding the NEOFIX, cut and pasted as:

Recipient shall submit quarterly reports to the Clerk of the Cuyahoga County Council. Reports shall be submitted no later than thirty (30) days after the end of each calendar quarter. In each report, recipient shall provide the following:

1. An itemized list of all expenditures made during the preceding quarter (**see Table I below**).
2. An itemized list of project goals achieved during the preceding quarter; (**see Table II below**).
3. An itemized list of project goals in progress as of the end of the preceding quarter (**see Table II below**).
4. An itemized list of project goals to be completed during the current quarter and an itemized list of project goals to be completed in the next quarter (**see Table III below**).

A handwritten signature in black ink, appearing to read 'Swagata Banik'.

Swagata Banik, Ph.D.  
Dean of Graduate Studies & Research

A handwritten signature in blue ink, appearing to read 'Stuart C Mendel'.

Stuart C Mendel, Ph.D.  
Affiliate Professor and  
NEOFIX Project Director



## Summary

Briefly, the NEOFIX is a public private partnership, where public sector first-in resources will be amplified well beyond a dollar-for-dollar return for an emerging \$10B private industry benefiting residents of the County and the state of Ohio. NEOFIX will provide public safety in Cuyahoga County with a *Common Operating Picture* of drone operations, supporting safe operations and counter-UAS. The NEOFIX puts the County and its airspace within the leading the communities in the nation, applicable as a model program for the state of Ohio.

*This sixth quarter* report (**TAB 1**) on the progress of the NEOFIX depicts uninterrupted work described in the original proposal to the Cuyahoga County District 2 and County Council in Fall 2022.

The period covered by this report is April 1, 2024 through June 30, 2024.

In addition to the two-year funding provided to Baldwin Wallace University for the NEOFIX project in the amount of \$450,000, the organization Manufacturing Works and the firms CriticalOps, and ATA, LLC and its successor ATA Aviation have contributed in-kind staff time and essential expertise of approximately \$350,000.

This past quarter, our application to the state of Ohio Senate for its discretionary allocation drawn from the “One Time Community Strategic Investment Fund” (OTSCIF), was successful.

As of this writing we have received notice that \$500,000 was earmarked for the NEOFIX to be received before the year-end 2024. This brings the total of direct and indirect funding assembled for the NEOFIX since 2022 to \$1.3 million or a leverage of the original County investment of nearly 3 to 1.

Looking ahead we are working with the County office of Emergency Management on a demonstration project in Cuyahoga County to pilot a “drone as first responder” (DFR) infrastructure projected to be up and running for the fourth quarter 2024 or first quarter 2025 in the region of Garfield Heights.

We are also working with regional communities to submit a second US DOT Smart Grant Application similar to the concept devised last year involving drone delivery of emergency hospital based medical supplies.

The work of this past sixth quarter continues the strategy to align and leverage Cuyahoga County’s investment in drone ready critical infrastructure and we are actively working to synchronize the public infrastructure with a drone industry supply chain, centered in the region. This would comprise a new Northeastern Ohio industry.

This *sixth quarter* report can be accessed by visiting: <https://oh-fix.com/index.html> clicking “About,” and then Government sub-tab of the pull-down menu.



## Quarterly Narrative on Performance

The *sixth quarter* of the NEOFIX project involved the period April 1, 2024, through June 30, 2024.

The operational goals for 2024 (year 2 of the NEOFIX project) are:

- 2024 Goal 1 To establish the NEOFIX and its stakeholders as an authoritative asset and model recognized in the state of Ohio’s Fly Ohio programming.
- 2024 Goal 2 To add data drawn from dedicated Cuyahoga County-placed ground-sensors and reporting purchased by the NEOFIX for charts and made available via the world wide web for public and private local, regional, and Ohio drone stakeholders.
- 2024 Goal 3 To obtain further funding to advance the NEOFIX as public infrastructure in Cuyahoga County, Northeastern Ohio, throughout the state of Ohio and in cooperating states beyond Ohio.

### Past performance – 6<sup>TH</sup> quarter

The work of this past quarter sets in motion a strategy to port the NEOFIX to other Counties in Ohio. We are doing this for two reasons:

- as we seek to align and leverage Cuyahoga County’s investment in this critical infrastructure with the those coalescing in the state of Ohio and regionally.
- to acknowledge that drone operational friendliness requires the infrastructure be connected uninterruptedly beyond Cuyahoga County.

In the period April 1, through June 30, 2024, we have continued the process of adding content, scope and engagement with drone stakeholders. We cast this maturation process as a continuing “ripening” and “deepening” of the NEOFIX instrument.

To advance the support of the NEOFIX as critical infrastructure for the Cuyahoga County and beyond, a series of presentations by NEOFIX were made for the purposes of “drone as first responders” (DFR) use cases for broad adoption. See list below:

- April 1, 2024 Update to the community from Ohio Senator Kent Smith with follow-up for “One Time Community Strategic Investment Fund” (OTSCIF)
- April 2, 2024 Update to Ohio Rep. Bernard Willis “One Time Community Strategic Investment Fund” (OTSCIF) and Drone as First Responder (DFR) initiative.



April 4, 2024	TEAMNEO Briefing on “One Time Community Strategic Investment Fund” (OTSCIF)
April 5, 2024	Briefing for Cuyahoga County Emergency Management program on Drone as First Responder project proposed for Garfield Heights.
April 12, 2024	Update for Ohio Senator Matt Dolan, Chair of the Senate Finance committee regarding the NEOFIX application for the “One Time Community Strategic Investment Fund” (OTSCIF)
April 15, 2024	Follow-up briefing for Senator Kent Smith on the OTSCIF proposal
April 16, 2024	Follow-up briefing with Representative Willis on the OTSCIF and the meeting at BW with U.S. Congress Representative Max Miller.
April 19, 2024	Briefing with TEAMNEO regarding NEOFIX OTSCIF proposal requiring their endorsement.
April 23, 2024	NEOFIX Testimony before Ohio Representative Sub Committee on Aerospace and Aeronautics on HB 149.
May 2, 2024	Briefing Aerozone Alliance at BW for NEOFIX priorities and applications
May 16, 2024	Follow-up Briefing for Cuyahoga County Emergency Management program on Drone as First Responder project proposed for Garfield Heights.
May 17, 2024	Submit proposal to Rep Max Miller
May 29, 2024	Briefing with U.S. Congress Rep Shontell Brown regarding NEOFIX and DFR project
May 31, 2024	Follow-up Briefing for Cuyahoga County Emergency Management program on Drone as First Responder project proposed for Garfield Heights.
June 4, 2024	U.S. DOT SMART Grant Phase 1 proposal meeting prep.
June 6, 2024	Follow-up and recap with Rep Max Miller staff
May 2, 2024	Aerozone Alliance at BW for their planning U.S. EDA grant application
June 17, 2024	Meeting with Manufacturing Works at BW regarding AAM supply chain initiative.
June 20, 2024	Meeting with CAK, Akron and Ravenna airports over SMART grant partnership and proposal for emergency medical delivery
June 27, 2024	Follow-up SMART Grant preparation meeting
June 30, 2024	Informal notice of OTSCIF Award of \$500,000 to BW for NEOFIX.

**2024 Goal 1 progress**

*Sixth* quarter work continued prior work throughout 2023 with engaged participants from three working groups (Data, design and configuration, sensors integration and planning; and public policy) to deepen the NEOFIX data instrumentation and data collection.

The latest version of NEO-FIX update includes the previous improvements and additional bug fixes. Updates include:

- System architecture improvements
- Interactive Airspace Layer Information



- UAV flight history display improvements
- Weather layer UX improvements
- File upload and bulk processing improvements
- General bug fixes and UX improvements
  
- Equipment ordered and arrangements “Notice to Proceed” for the installation of drone detection sensors/equipment at Burke Lakefront Airport was approved. Supplemental documents included, under **TAB 2**.
  
- Briefing meetings were arranged with the state of Ohio House Representatives Subcommittee Chair Adam Holmes and Co-chair Representative Bernard Willis to link the NEOFIX with the states FlyOhio plan and organizers.
  
- Briefings were held with Congressional Rep Max Miller and state of Ohio Senators Dolan, Antonio and Smith for concept familiarity and making the case that the NEOFIX as critical public infrastructure will touch every resident and business of Cuyahoga County.

## **2024 Goal 2 progress**

*Sixth* quarter work continued prior work throughout 2023 NEOFIX.

- Met with Cuyahoga County Emergency Management and senior leadership to propose a “Drone as First Responder” (DFR) demonstration “proof-of-concept” project for Garfield Heights and vicinity.
- Organized a second application to the US DOTSMART grant program, submission deadline for July 12, 2024. This is the last grant opportunity for a phase one grant for this program. Partners include University Hospitals, CAK Airport and regional airports and Akron and Ravenna.

## **2024 Goal 3 progress**

*Sixth* quarter work continued prior work throughout 2023. Our overarching goal for 2024 is to receive funding from the grant applications to enable NEOFIX to obtain Cuyahoga County dedicated ground-based sensors.

- Applications and legislator briefings were finalized to state of Ohio’s One Time Strategic Investment Fund
- With our partner organization Manufacturing Works, we are seeking to obtain funding from JobsOhio to position the NEOFIX as critical infrastructure leading business development in AAM jobs centered on the Aerozone District of Cuyahoga County.



The NEOFIX will also seek infrastructure project support from multiple State of Ohio (departments of Economic Development and Homeland Security for example) during quarters *six, seven and eight*.

The work of the *fifth* quarter involved NEOFIX goals performance that are reported in the following tables.

**Table I** Budgeted and Expense items Fifth Quarter thru 06/30/2024

Line Item	2023 Budget	2023 Actual	2024 Budget	2024 Actual	Notes
Program Development Expenses	\$105,000	\$107,895	\$85,000	\$72,721	Salary/fringe
Technical / Software	\$ 75,000	\$75,000	\$75,000	\$75,000	ATA
Stakeholder Outreach	\$ 19,500	\$15,000	\$15,000	\$ 3,750	EHM, Vaux
Data Governance	\$ 0	\$ 0	\$ 5,000	\$ 500	contributed
Use Case Development	\$ 25,000	\$18,750	\$ 22,500	\$15,000	Critical Ops, Food, travel
<b>Total Direct Costs</b>	<b>\$224,500</b>	<b>\$216,645</b>	<b>\$225,000</b>	<b>\$166,971</b>	Net 2023 Rollover \$7,855 in 2024

**Table I Budget narrative**

2024 expense allocations for the first quarter include a full payment for program development which includes salary and limited fringe benefits in addition to third party consulting.

The full allocation for subscription to the “Airdex” software necessary to produce the NEOFIX charting and advisories in real time was paid in quarter one.

Rollover funding for year 2023 will be allocated for the purchase of two NEOFIX dedicated sensors. These two pieces of equipment will be installed at Burke Lakefront Airport and a location on the campus of Baldwin Wallace University or the adjacent Cuyahoga County Fairgrounds property sometime during calendar year 2024.

**Table II.** An itemized list of project goals to be completed during the sixth quarter.

**Fifth Quarter**





<p><b>Monthly</b></p>	<p>Legislative briefings of Cuyahoga County officials - ongoing          Legislative Briefings of State of Ohio Officials          Draw stakeholders into Public Private Partnership          Project proposal for funding of the NEOFIX          Public Policy development on user fees</p>
<p><b>Monthly Thereafter</b></p>	<p>Monthly User Group Meeting          Ongoing Onboarding of USS/UTM Partners          Ongoing onboarding of BW partner agency systems          Continued collection, mapping, and loading of data assets.          Review, extend, updated and maintain data mappings and supplemental language.          Funded projects development          State of Ohio advocacy to secure infrastructure endorsement and funding</p>
<p><b>Quarterly Thereafter</b></p>	<p>Operations System Maintenance and Ongoing Security Compliance          Minimum quarterly release of updated application and new features          State of Ohio advocacy to secure infrastructure endorsement and funding</p>

**TABLE III.** Next Quarter goals and activities

<p><b>Sixth Quarter</b></p>	
<p><b>6<sup>th</sup> Quarterly and Thereafter          (April 1 – June 30, 2024)</b></p>	<p>Sensor integration          Regional Multi-state AAM collaborative          System Maintenance and Ongoing Security Compliance          Minimum quarterly release of updated application and new features</p>



## Interested Party Testimony- House Aviation and Aerospace Committee

### HB 149 —Establish Requirements Related To The Use Of Unmanned Aerial Vehicle By Law Enforcement

April 23, 2024

Chairman Holmes, Vice Chair Willis, Ranking Member Baker, and members of the committee.

Thank you for the opportunity to appear before you again and to provide testimony on House Bill 149.

My name is Dr. Stuart Mendel, Affiliate Professor at Baldwin Wallace University and Project Director for the Northeast Ohio Flight Information Exchange also known as the NEOFIX. As I mentioned during my last visit, the University serves as the focal point for this applied research and community engagement program to fulfill its visioned role as a leading regional comprehensive university impacting learners, businesses, and communities throughout the Great Lakes region.

NEOFIX allows state and local government to publish key information to UAS Operators and Industry, giving everyone engaged in Public, Commercial and Civilian Advanced Air Mobility a clear, common picture – in the same way charts do for traditional aviation.

To refresh your memory, for years, the drone market was in a nascent phase and had yet to break into the mainstream. Then, in 2016, drone industry growth took flight when the Federal Aviation Administration (FAA) granted hundreds of new exemptions for companies to operate drones in the U.S. through FAA Part 107.

These exemptions included several new use cases in multiple private industries, such as insurance, construction, and agriculture as well for public safety uses such as drone as a first responder — each of which demonstrates the broad range of beneficial drone applications, which have implications for public safety, emergency management and emergency response, and enforcement.

Communities with drone ready infrastructure offer strong incentives for public sector applications including safety and response, but also manufacturing and testing, business operations, technology development, and workforce training and education. Further, communities with drone ready infrastructure are more likely to comply with the spirit of this bill, which is to encourage the use of drones for legitimate public and commercial purpose, and to discourage their use for spurious purposes or in an unsafe manner.

Among the states, Ohio is primed in the leading cohort of early adopters of drone operations. Rest assured it will be this first group of early adopter states that will engage with the FAA to develop the policies, regulations, and procedures for the whole country. I am pleased to report the NEOFIX as emerging critical infrastructure is digital infrastructure that will accelerate use of drones for public safety (Drone as a First Responder) while lowering the costs of these operations. This is exactly the type of safe, beneficial use envisioned by this bill.

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Questions referred to:

Stuart C Mendel, Affiliate Professor and Project Director  
Baldwin Wallace University  
SMendel@bw.edu





House Bill 149, along with the earlier legislation for operation of unmanned aerial vehicles in Ohio (HB 77), if implemented effectively, can support the safe growth and development of this market in Ohio for both public safety and emergency response uses, and commercial and civilian uses. The key is to emphasize the use of drones for surveillance or enforcement purposes must be conducted in a manner consistent with existing laws for these purposes, while also recognizing drone as a first responder. capabilities, which use drones as an extension of dispatch to collect information for emergency purpose, has the potential to both reduce public safety costs and save lives.

Drone as a First Responder is a transformational policing method which has demonstrated the ability to increase officer and community safety, reduce overall police response times, and reduce waste. DFR allows a trained incident commander to “virtually” arrive on scene first before officers are in harm’s way. The drone has a powerful on-board camera which streams HD video back to the department’s real-time operations center where a trained critical incident manager (teleoperator) not only controls the drone remotely but communicates with the units in the field to provide information and tactical intelligence. The system can also stream the video feed to the cell phones of the first responders, supervisors, and command staff, so they can see exactly what the drone is seeing. The Chula Vista Police Department has become the nation’s model for police departments using drones. According to data from the Chula Vista Police Department, it has sent drones to almost 19,000 calls with an average response time from call of 3-5 minutes. For reference, average response times using officers exceeded 20 minutes in 14 of 15 other departments.

Drone as a First Responder allows police and fire to better understand an emerging incident, to dispatch appropriate resources and equipment, and to prepare responders for what they will find on the scene. Drone as a First Responder leads to more effective public safety response, reduced waste and cost, and saves the lives of responders and the public through better preparation and de-escalation. These types of uses appear to be envisioned in the proposed Section 4561.63 (B) – where I might propose adding language states “such as assisting in improving appropriate dispatch of resources to an emerging incident through better situational awareness.”

During stage one of its development throughout 2023, the NEOFIX began integrating public data to support a common operating picture public safety can leverage – both to support public safety operations AND to identify potential bad actors for counter-UAS (unmanned aircraft system). Phase 2, comprising the work of 2024 and forward, enables UAS operators and industry to use the NEOFIX data to understand the local environment before and during operations. Public safety uses NEOFIX to coordinate operations and alert private operators State, and Local government use NEOFIX to manage the interaction of UAS for local communities.

In our region, presentations on the data availability, geocoded operations flight charts and flight advisories are perceived as highly valuable for public use-cases for municipalities and their resident county safety and emergency management practices. Further, as envisioned by this bill, they create a shared, authoritative public record of the flight operations described in the bill.

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Questions referred to:

Stuart C Mendel, Affiliate Professor and Project Director  
Baldwin Wallace University  
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As to the subject matter of the bill, at a gathering of Northeast Ohio public safety unmanned response team public safety officials and staff in late January of this year, uses and applications HB 149 will impact include operations such as:

- State police, department of emergency management, and local police and fire using FIX to notify private pilots of public safety activities to avoid (fire, hazmat, police response, disasters)
- Planning and coordination between public safety in the event of emergencies (e.g., unruly protests, tornados)
- Providing warning and official notice of critical and sensitive infrastructure, including police barracks, corrections facilities, parks, and radio and cellular masts/towers;
- Use of drones in emergency or law enforcement situations.

In developing the NEOFIX, our work has been designed to serve as a regional template adaptable to each of Ohio's 88 counties. Organizing and standing up the NEOFIX as a functioning model aligning with the state's DriveOhio July 2022 AAM Framework Report, (specifically section 8 AAM Strategic Framework). By curtailing inappropriate use, but encouraging use for life-saving and better response in Section 4561.63, we align Ohio to successful existing programs in other states such as Virginia, Oklahoma, and California and in the work we are conducting under the NEOFIX program in Northeast Ohio. We have talked to the Director of the Ohio UAS Center and are excited and ready to share our public data with the UAS Center so it can be included in the statewide registry. We are excited to be supporting public safety and first responders in Northeast Ohio in the development of a regional public network that supports exactly the kind of legitimate, beneficial purposes of drones as envisioned in Section 4561.63 of this bill.

I will reiterate our goals including the design and implementation of the NEOFIX: to protect critical infrastructure, make sure local rules are clear, consistent, and available, and make these available as a clear, clean easy to use state asset. The next stage of our work is engagement processes with the localities and municipalities. This is a way we can include and publish information on no-go areas, to ensure localities can create thoughtful rules and share consistent data.

We now have substantial experience with this process in Northeast Ohio and are excited to support the UAS Center and the State of Ohio by bringing our expertise to anywhere in the state where it is needed.

Thank you for your time and the opportunity.

I will now take any questions you may have.

Dr. Stuart Mendel

Northeast Ohio Flight Information Exchange

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Questions referred to:

Stuart C Mendel, Affiliate Professor and Project Director  
Baldwin Wallace University  
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## Cuyahoga County Drone as a First Responder Pilot – Garfield Heights

We are proposing a Drone as a First Responder (DFR) pilot in Cuyahoga County in partnership between the Garfield Heights, the NEO-PSURT public safety UAS group, and the NEOFIX program office at Baldwin Wallace. The objective of the pilot is to introduce and evaluate state-of-the-art concepts in the use of drones for Public Safety as a pilot for roll-out regionally across Cuyahoga County. The benefits of this pilot include more effective public safety dispatch and response, faster overall service response, reductions in unnecessary or inappropriate dispatch, de-escalation, and cost savings through the development of a coordinated regional program. The estimated cost for the pilot is \$192,600.00.

### What is Drone as a First Responder?

Drone as a First Responder (DFR) is a concept piloted in Chula Vista, CA and Campbell, CA that integrates drones with the incident response and dispatch process. It involves co-locating a drone Remote Pilot in Command (RPIC) with a dispatcher in the Emergency Communications Center (ECC) and dispatching a drone for those incidents where rapid and early situational intelligence will change outcomes – this includes dispatching appropriate equipment, advising officers en-route to support de-escalation or more effective response, and avoiding unnecessary dispatch, among others.

The DFR program in Chula Vista, CA is the most mature, and maintains an online program dashboard<sup>1</sup> that provides real time information on the program. Since Chula Vista started their DFR program in October of 2018, they have responded to 19,000+ incidents, have avoided unnecessary dispatch 21.8% of the time, and have average response times of under two minutes and first on scene times of 90 seconds. Anecdotally, the program has assisted in more appropriate response to domestic violence and violent crime, and has directly contributed to a number of de-escalations.

Building on Chula Vista's success, the City of Pearland, TX was able to receive the first Federal Aviation Administration (FAA) waiver for Beyond Visual Line of Sight (BVLOS) operations. BVLOS operations mean that, unlike Chula Vista, Pearland does not need to tie up valuable staff and officers as "visual observers" on rooftops throughout the city. Visual observers warn the RPIC if there is a potential conflict with another aircraft – Pearland developed a concept with the FAA called a "virtual observer" that relies on safety procedures, remote sensing, and the integration of systems. This allows for more missions with leaner resources at the same or higher degree of safety.

### Why Conduct a DFR BVLOS Pilot in Garfield Heights?

The value of DFR programs, and the force multiplier effect of BVLOS operations, are already established as a public safety asset. The value of DFR BVLOS is especially enhanced in Cuyahoga County because of two existing investments: i) the Cuyahoga County in NEOFIX a regional public data services provide of navigation and airspace data and ii) a regional consortium acquisition of DroneSense, a tool for integrated drone mission and flight operations as well as shared video streaming. These investments

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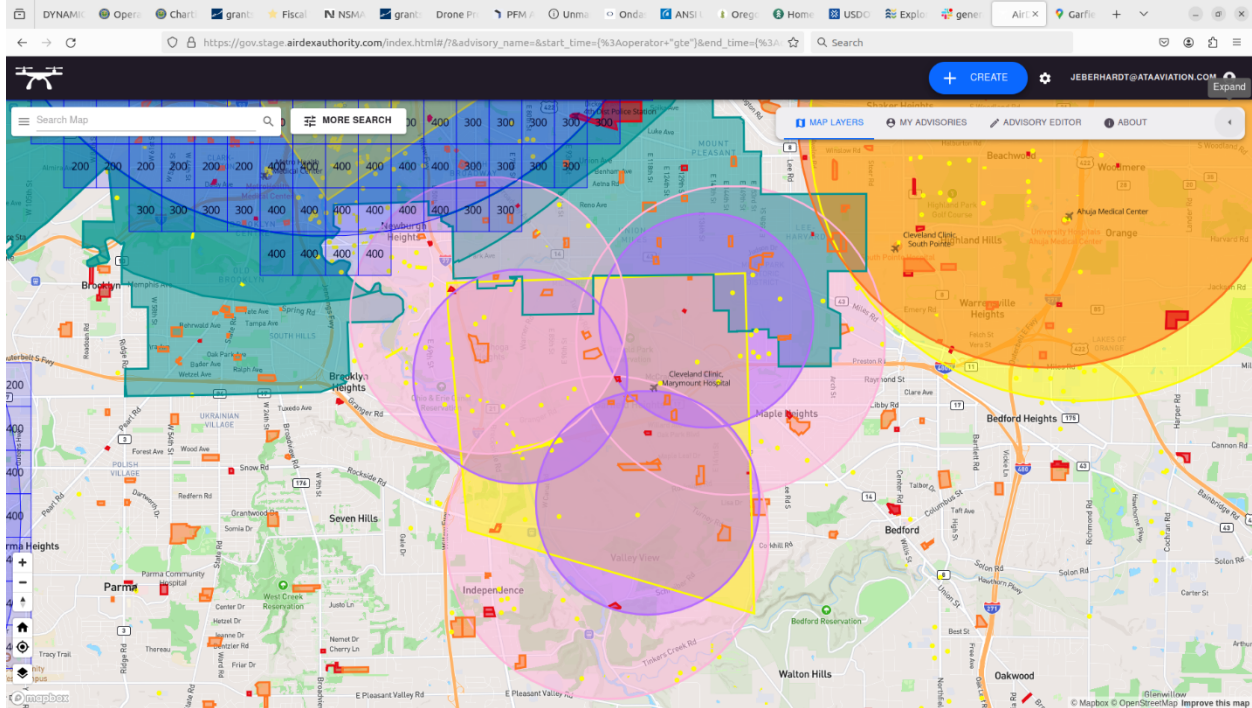
<sup>1</sup> <https://www.chulavistaca.gov/departments/police-department/programs/uas-drone-program>

allow Cuyahoga County to support a regional, integrated DFR system where costs of sensors and software can be amortized over a wide area. Further, by investing in the sensors required to obtain a regional FAA DFR BVLOS waiver, a regional program can allow a community such as Garfield Heights, with a mature Uncrewed Aerial Systems (UAS) program, to provide DFR services to neighboring communities through BVLOS flight.

Further, a DFR BVLOS pilot in Garfield Heights in Cuyahoga County, will produce the specific, actionable data required to successfully apply for, and receive, the additional capital equipment funding from Federal sources such as Department of Homeland Security or the Community Projects Fund and from Ohio State sources such as the Capital Budget. Garfield Heights is an ideal location for this pilot because it both contains, and is adjacent to both higher density urban areas as well as lower density suburban areas. The demographics of Garfield Heights are representative of Cuyahoga County as a whole, and Garfield Heights already has a mature, effective Public Safety UAS program. This pilot, in addition to saving lives and helping the community, is the key to unlocking program funding to roll out services across Cuyahoga County.

### **What the Proposed Pilot and What are the Objectives?**

We propose to acquire, deploy and integrate the sensors necessary for an FAA DFR BVLOS waiver in the Garfield Heights community. These sensors will be integrated into the Cuyahoga County common, public airspace picture in NEOFIX and the full data feed will then be integrated for automatic display in DroneSense, for use by Garfield Heights Police Dept. in executing compliant, effective within the boundaries of Garfield Heights. DFR BVLOS operations will be conducted using the sensors plus the existing regional NEOFIX and DroneSense investments, existing Garfield Heights pilots and equipment, and target additional training and program development specific to DFR BVLOS operations and preparation for regional roll-out.



The sensors, integrated with drone operators through NEOFIX, will support an overall service area of approximately 10 square miles, including the 7 square miles of Garfield Heights proper. These sensors, integrated into the Cuyahoga County NEOFIX system and regional DroneSense system, will support Garfield Heights obtaining an FAA DFR BVLOS waiver that can then act as a model for developing a county-wide shared system and waiver with the FAA. Further, the sensors have the potential to connect with the proposed service area for the Cleveland Clinic medical delivery pilot, demonstrating the potential for dual-use technology supporting both public safety and commercial needs through the county's shared public system.

The proposed pilot period is one year, during which time, we will integrate the required sensor data with NEOFIX, Garfield Heights dispatch, the regional DroneSense system, and conduct the ConOps and training development required to submit a compliant waiver package to the FAA and conduct DFR BVLOS operations. During the pilot period, we will collect specific data on:

- Number of DFR responses;
- Number of dispatches avoided;
- First on scene response time;
- Reduction in harm due to DFR capabilities;
- Number of incidents in which DFR contributed to de-escalation;
- Safety performance; and
- Cost and operations profile.

This data will support the development of further DFR BVLOS throughout Cuyahoga County as well as federal and state funding requests.

## What is Required for a DFR BVLOS Pilot?

To implement a BVLOS DFR program, several components are required:

- Qualified pilots: FAA Part 107 certified pilots to operate UAS as RPICs;
- Aircraft: FAA-defined small UAS aircraft (<55 lbs) with appropriate sensor payloads and integrations with DroneSense;
- Standard Operating Procedures (SOPs): Defined program SOPs that support the FAA waiver safety case, program outcomes, and data collection;
- USS Tool: The DroneSense tool to support mission planning, flight planning, operations, and sharing of video and UAS sensor feeds;
- Airspace Awareness Sensors: the airspace awareness sensors that provide the “virtual observer” function through the county NEOFIX system and supporting the FAA safety case;
- FAA DFR BVLOS Waiver: Leveraging the pilots, aircraft, SOPs, USS tool, and airspace awareness sensors, submit a DFR BVLOS waiver request to the FAA;
- Integration with ECC: Integration with dispatch to support rapid drone dispatch and relaying communications between the dispatcher, RPIC, and responding unit;
- Training: Training of dispatchers and pilots on how to coordinate DFR responses and the relaying of intelligence; and
- Program Support and Data Collection: Overall assistance with program setup, materials development, systems integration, and data collection and reporting.



## Pilot Costs and Outcomes

Leveraging the experience of Chula Vista, Campbell, and Pearland, as well as existing Cuyahoga County and Regional investments, we developed a budget for an initial turn-up of the pilot, including regulatory filings and data collection and program evaluation, as well as the estimated additional cost for the first full year of operations.

Item	Pilot Year Cost	Annual Operations Cost	Discussion
<b>Certified Pilots</b>	\$18,000.00	\$0.00	Garfield Heights already has Part 107 certified pilots, this cost assumes the need for 20 hours/week of overtime during a 3-month period of data collection; subsequent operations would be managed through departmental budget
<b>Aircraft</b>	\$0.00	\$0.00	Garfield Heights already has capable, compliant DFR sUAS aircraft, no incremental cost for aircraft for the pilot
<b>Standard Operating Procedures (SOPs)</b>	\$10,000.00	\$0.00	This assumes modest cost for consultant assistance in developing additional departmental SOPs to support DFR BVLOS operations
<b>USS Tool and Data Sharing</b>	\$0.00	\$0.00	These costs (NEOFIX and DroneSense) are already funded through existing county and regional investment
<b>Airspace Sensors</b>	\$73,600.00	\$48,600.00	Costs of acquisition, deployment, and integration costs for sensors with ongoing lease costs for sensors
<b>FAA DFR BVLOS Waiver</b>	\$10,000.00	\$0.00	This assumes modest cost for consultant assistance in developing the Garfield Heights FAA DFR BVLOS waiver submission
<b>ECC Integration</b>	\$25,000.00	\$0.00	One-time integration costs for integrating ECC dispatch with the USS and Data Sharing tools
<b>ECC Training</b>	\$6,000.00	\$0.00	Assumes overtime cost to train four dispatchers in the ECC
<b>Program Support</b>	<u>\$50,000.00</u>	<u>\$0.00</u>	Program support provided by Baldwin Wallace to support community engagement and policy materials, data collection, and reporting for the pilot
<b>Total</b>	<b>\$192,600.00</b>	<b>\$48,600.00</b>	

No.: \_\_\_\_\_

Date: \_\_\_\_\_  
*Division of Accounts only*

**LICENSE AGREEMENT  
FOR USE OF CITY PROPERTY**

This License Agreement (the “License” or the “Agreement”) is entered into as of the Effective Date (as defined below), by and between **THE CITY OF CLEVELAND, OHIO** (“City”) a municipal corporation duly organized and validly existing under the Constitution and laws of the State of Ohio, acting by and through its Director of Port Control, under the authority of Section 183.16 of the Codified Ordinances of the City of Cleveland (Exhibit “A”) , and **Baldwin Wallace University**, a nonprofit 501 (c)3 organized and existing under the laws of the State of Ohio and authorized to conduct business in the State of Ohio as a foreign corporation (“Licensee”).

**RECITALS**

A. The Department of Port Control of the City is responsible for the operation of Burke Lakefront Airport (“Airport”);

B. Section 183.16 of the Codified Ordinances of Cleveland, Ohio, 1976 authorizes the Director of Port Control (“Director”) to issue a license to enter, inspect, test, or perform limited activities, on City-owned real property under the jurisdiction of the Director;

C. City has agreed to grant Licensee a License to enter and install a 10-foot length, 1-in diameter steel or aluminum pole to the side of the ARFF building at the Airport with u-brackets and antenna(the “Events”), as more fully described in Exhibit “B” (the “Property”), in order to provide passenger air travel and support operations.

D. City and Licensee desire to enter into the following agreement for the use of the Property in connection with the Events, in accordance with the terms set forth herein;

E. The City hereby grants to Licensee a License to use the Property to provide facilities in aid of advancing air commerce and navigation at the Airport during the Term.

F. City desires to grant to Licensee a License to enter upon and utilize the Property for limited construction purposes in accordance with the terms and conditions of this Agreement.

**NOW, THEREFORE**, the City, for and in consideration described below, and other good and valuable consideration, grants and conveys to Licensee, a nonexclusive license to enter upon and utilize the Property for the purposes described below, subject the following terms:

1. **Recitals**: The above Recitals are true and accurate and are made a part of this License.
2. **Term**: The Term of this Agreement shall commence upon **June 1, 2024** and expire upon the sooner of 30 days’ written notice of termination by either party to the other or upon the Parties entering a lease for the Property. Otherwise, this Agreement shall expire twelve (12) months from the Effective Date.
3. **Purpose**: Licensee shall have the permission to enter upon the Property for the non-exclusive right to operate and maintain for use only by Lessee and any

authorized assigns and/or Affiliate(s), for use to position sensors and antenna for purpose of monitor Airport aircraft traffic and ground operations..

4. License Fee: **\$1.00**

Fees are subject to annual rates and charges adjustment. Licensee shall post a letter of credit or performance bond in the amount equal to the license fee as a security deposit. The security deposit shall be returned at termination of the License provided that Licensee is current on all obligations under this License at that time.

5. Payment: Licensee shall pay all license fees and other fees and charges required by this License to: Treasurer of the City of Cleveland, c/o Bank of New York Mellon Trust, Lock Box 70275, Cleveland, and Ohio 44190-0275.

6. Compliance with Applicable Laws and Conditions: Licensee shall possess, or contract only with those parties that possess, the necessary qualifications and certifications required by law, ordinance, or regulation to perform all activities related to the purposes of this License, as described in Section 3 above, and shall perform all activities in compliance with applicable laws, ordinances, and regulations. Licensee must comply with all environmental laws relating to the Licensed Property.

7. Qualifications of Contractors: Licensee must require that any and all contractors performing activities permitted under this Agreement be qualified, licensed, and bonded by the appropriate regulatory agencies and in accordance with the laws and regulations of the City of Cleveland and the State of Ohio.

8. Security: Lessee acknowledges and agrees that the City shall not provide, nor be responsible for providing security under this License.

9. Indemnification: Licensee must defend, indemnify, and hold harmless the City, its officers, agents, employees, successors and assigns from any and all claims, losses, costs, damages, expenses, and liabilities, including attorneys' fees, for or from loss of life or damage or injury to any person or property of any person or entity, including, without limitation, the agents, officers, employees, invitees, and licensees of the City, arising out of Licensee's use of, construction on, or maintenance of the Property during the term of this Agreement by Licensee, its employees, agents, contractors, and subcontractors, licensees, or invitees or the exercise by Licensee of any of its rights or the performance by Licensee of any of its obligations under this Agreement. Licensee may not interfere with or damage existing utility facilities on, off, under, or near the Property, and must indemnify and reimburse the City for any damages, costs, expenses, or liabilities resulting from Licensee's damage or interference. In addition, Licensee shall indemnify and hold harmless the City, its officers, agents, employees, successors, and assigns from any liabilities, fines, charges, assessments, claims, penalties, losses, and damages arising out of Licensee's failure to comply with all applicable laws, ordinances, and regulations and all conditions and requirements in this License. The indemnity obligations in this Section will survive the expiration or earlier termination of this Agreement.

Licensee shall in accordance with its indemnity obligations hereunder, at its own expense, defend the City in all litigation, pay all attorneys' fees, damages, court cost, and other expenses incurred and arising out of such litigation or claims; and shall, at its own expense, satisfy and cause to be discharged all judgments that may be obtained against the City, its officers, agents, or employees, arising out of such litigation. None of the foregoing shall require Licensee to indemnify the

City against the negligence or willful misconduct of the City, or of its officers, agents, employees, successors and assigns.

Licensee must take out and maintain at its own expense during the term of this Agreement, Comprehensive General Liability insurance, naming the City as an additional insured, to the extent of Licensee's indemnity obligations under this Agreement as will protect itself, the City, and any entity performing work covered by this Agreement from claims for damage for personal injury, disease, illness, or death, including accidental death, as well as from claims for property damages that may arise from operations under this Agreement, whether the operations be by itself or by any entity or by anyone directly or indirectly employed by either of them. The Comprehensive General Liability insurance policy must have limits of liability of not less than One Million Dollars (\$1,000,000.00) applicable to the liability assumed by Licensee under this Section. Licensee must provide the Director of Law with a Certificate of Insurance for the coverage upon signing of this Agreement.

10. Modification: This Agreement and any particular rights granted by it may only be amended by the written agreement of the City and Licensee.
11. Safety Measures: Licensee must fence, barricade, or take such other measures as are necessary or appropriate to protect the general public from any danger in connection with Licensee's activities under this Agreement.
12. Taxes, Utilities and Other Charges: Licensee must timely pay all taxes, utilities and any other charges or expenses attributable to Licensee's activities.
13. Restoration of Property: Upon the expiration of this License, Licensee shall restore the Property to the same condition as when received by Licensee, or in a condition satisfactory to the Director of Port Control.
14. City's Right of Entry: The City, its officers and employees, may enter the Property at any time for all reasonable purposes, including, without limitation, inspection of Licensee's activities under this Agreement.
15. Copies of Test Results. If the Licensee performs any tests or inspections of the Property, Licensee shall deliver a copy of the results of any such tests or inspections to the Department of Port Control.
16. City and Licensee Not Partners. Nothing contained in this License shall be deemed to constitute the City and Licensee as partners in a partnership or joint venture for any purpose whatsoever.
17. Severability. If any term or provision of this License is held invalid, illegal, or unenforceable by any court of competent jurisdiction, the invalidity, illegality, or unenforceability shall not affect any other term or provision of this License. This License shall be interpreted and construed as if such term or provision, to the extent it has been held invalid, illegal, or unenforceable, has never been contained in this License.
18. Entirety. This License constitutes the entire agreement between its parties as of the Effective Date. Any provision of prior licenses, agreements, or documents that conflict in any manner with the provisions of this License is void and has no effect.
19. Power and Authority: City represents that City owns the Property and has the right and authority to convey the License contained in this Agreement.

20. Governing Law: The terms and conditions of this Agreement will be interpreted according to the laws of the State of Ohio, City of Cleveland Equal Opportunity Clause (Exhibit "C") and the Federal Aviation Administration Mandates (See Exhibit "D").
21. Effective Date: The "Effective Date" will be **June 1, 2024**.
22. Notices: All notices, requests, demands, documents, and other communications under this Agreement shall be in writing and shall be deemed to have been duly given on the date of service if served personally on the party (including without limitation service by overnight courier service) to whom notice is given, or on the fifth (5<sup>th</sup>) calendar day after mailing if mailed to the party to whom notice is given, by first class mail, registered or certified, postage prepaid, at the address set forth below, or on the date of service if delivered by facsimile to the facsimile number set forth below which facsimile is confirmed. Failure of notice shall not be a defense to an act or action under this Agreement if the party asserting lack of notice has failed to inform the other party of a change of address or responsible person to receive such notice. Either party may change its address for purposes of this Section by giving the other party written notice of the new address in the manner set forth above.

If to the City:                   City of Cleveland  
  c/o Director of Port Control  
  Cleveland Airport System  
  5300 Riverside Drive  
  P. O. Box 81009  
  Cleveland, Ohio 44181-0009

With a copy to:                 Jonathan McGory  
  [jmcgory@clevelandairport.com](mailto:jmcgory@clevelandairport.com)

If to Lessee:                   \_\_\_\_\_

**BLANK**

  Email: \_\_\_\_\_

**IN WITNESS WHEREOF**, the Director has caused this License to be executed as of the date below.

**The City of Cleveland**

\_\_\_\_\_  
Bryant L. Francis, CM., Director  
Department of Port Control

Date: \_\_\_\_\_

**Baldwin Wallace University**

\_\_\_\_\_  
Dr. Stuart C. Mendel, PhD

Email: smendel@bw.edu

EIN: \_\_\_\_\_

Date: \_\_\_\_\_

The legal form and correctness of this instrument is approved.

Mark Griffin  
Director of Law

\_\_\_\_\_  
Jonathan Stone McGory  
Assistant Director of Law

Date: \_\_\_\_\_

## Exhibit “A”

### § 183.16 Licenses for use of City Property



The director of a department having charge of City real estate, facilities, equipment or other City property may, upon satisfaction of the conditions stated below, issue to any person or entity a license to enter upon, inspect, test, or perform limited construction or maintenance upon, any City property under the jurisdiction of said director:

- (a) The license may not exceed one (1) year in duration or the length of the project for which it is issued, whichever first occurs;
- (b) The license shall specify the licensee’s permitted activities and require the licensee to be qualified to perform such activities, shall provide appropriate indemnification of the City, and shall require restoration of any damaged property;
- (c) The licensee shall be charged a licensing fee determined by the director.

(Ord. No. 1356-92. Passed 11-23-92, eff. 11-30-92)

## Exhibit "B"

### Property

# Burke Passive Sensor Installation Specifications

16 January 2024

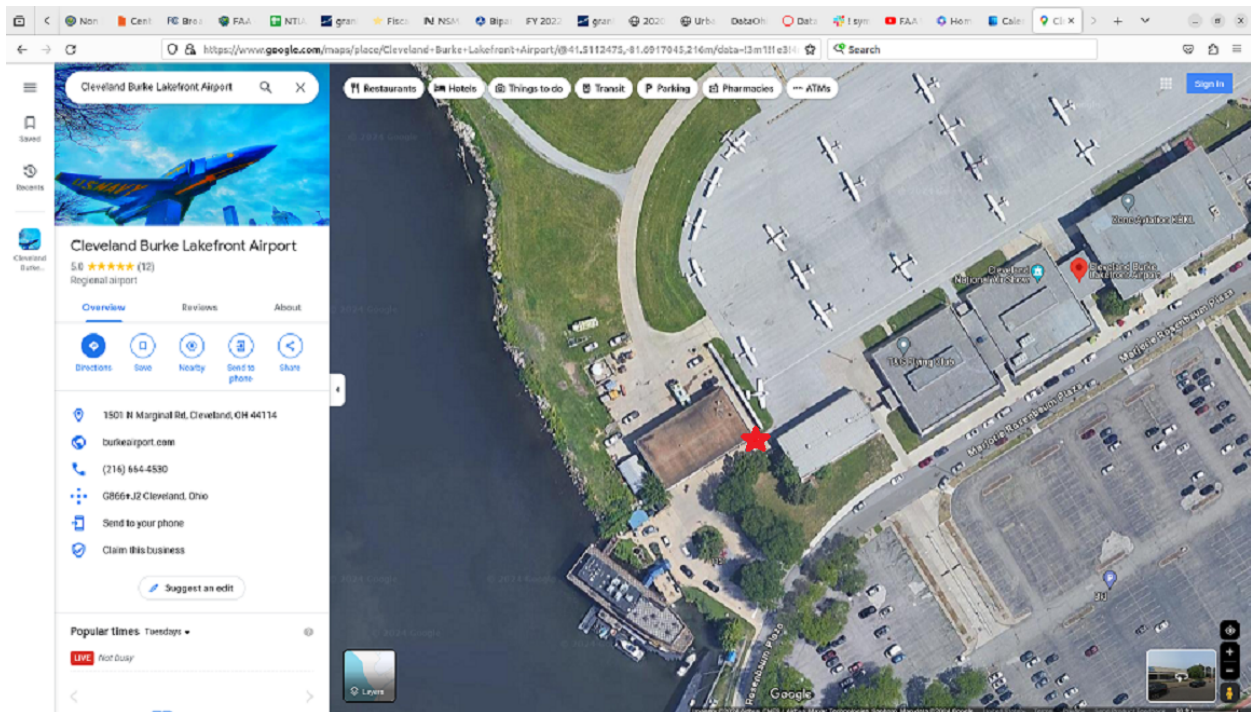
## 1. Passive Sensors being Installed

Two passive (no RF emission for detection purposes) aircraft detection sensors will be mounted on the Fire Station / Rescue Building. These are the sensors that will be mounted:

1. Airport Monitoring Systems ADS-B monitoring box (conventional aircraft), consisting of a passive antenna, a box containing data processors, power source, and data connectivity, and the requirements to connect the box to 110-120V AC power and a CAT6 ethernet jack with data routing access to the public internet; and
2. AirSentinal AMS RemoteID monitoring box (UAS) consisting of a self-contained box including antennas, computing hardware, cellular connection, power source and the requirements to connect the box to 110-120V AC power.

## 2. Location

The boxes / antennas will be installed at the Fire Fighting / Rescue Station and the power and data cables will be routed to the rack-mounted data routers in the utility closet in the southeast (rear) corner of the building, as identified below in red, at GPS coordinates: 41.511072,-81.691203.



Mounting of the Airport Monitoring Systems antenna and the AirSentinal AMS self-contained box will be on a pole (see requirements below) at the back of the building, as shown below in red.





### 3. Mounting Requirements

In order to properly mount the equipment, a 10-foot length, 1-in diameter steel or aluminum pole needs to be mounted to the side of building with u-brackets and ingress into the building needs to be identified for the Airport Monitoring Systems antenna cable the and the AirSentinel power cable. The pole should be mounted with four-feet of length below the roofline and six feet of length above the roofline. Supplies needed:

- 10 foot long, 1-in diameter steel pole (standard electrical conduit should suffice)
- Two u-brackets for mounting the pole to the side of the building
- Wiring soffit and/or grommet for running antenna and power cables into building

#### Pole Mounting

The Airport Monitoring Systems antenna and self-contained AirSentinel unit will both be mounted on the pole. The Airport Monitoring Systems included antenna and included u-bracket should be fixed to the top of pole such that the Airport Monitoring Systems antenna is 5-7 above the roof cornice of the building.

The self-contained AirSentinel unit will be mounted directly on the pole using the included u-bracket. **ENSURE THAT THE AIRSENTINEL POWER CABLE IS INSTALLED AND LIVE IN ORDER TO ACTIVATE THE BOX PRIOR TO FINAL MOUNTING. MAKE SURE TO FOLLOW THE AIRSENTINEL ACTIVATION INSTRUCTIONS AND CONFIRM FUNCTION PRIOR TO MOUNTING.** The unit should be mounted approximately 3 feet above the roof cornice of the building. Direction of mounting is not significant as antennas are omnidirectional.

Since all antennas are passive, they can be mounted near one another, however should **NOT BE MOUNTED WITHIN 15 FEET OF OTHER ANTENNAS.**

Route the Airport Monitoring Systems antenna cable, and the AirSentinel power cable, through the soffit/grommet into the utility/server closet.

#### Utility/Server Closet Mounting

The Airport Monitoring Box (approximately 12x18 inches) needs to be affixed to a wall, rack or other mount. It can be mounted with standard screws through the mounting holes in the enclosure.

Power cables for the AirSentinel unit and the Airport Monitoring Systems unit should be plugged into a persistent 110-120VAC power source. The ethernet cable supplied with the Airport Monitoring systems box should be plugged into the switch and County IT can open a port to the internet for the Airport Monitoring Systems sensor.

#### 4. Power Requirements

Both units will require persistent 110-120VAC power in the data rack in the utility closet.

#### 5. Data Requirements

The AirSentinel box is a self-contained unit with built in cellular modem and does not require its own data connection. The Airport Monitoring Systems box requires a CAT6 ethernet connection with an open port routed through the firewall to support a VPN connection over the public internet.

#### 6. Sensor Specifications / RF Emissions

Both sensors are passive units, so the antennas operate only in receive mode and do not emit any RF energy. The AirSentinel box uses a 5G cellular data modem, emitting low energy cellular data traffic on the 450Mhz to 6Ghz and 24.25Ghz to 52.6Ghz frequency spectra reserved for 5G cellular.

## **Exhibit “C”**

### **EQUAL OPPORTUNITY CLAUSE (Section 187.22 (b) of the Codified Ordinances)**

1. During the performance of this contract, the contractor agrees as follows:

The contractor shall not discriminate against any employee or applicant for employment because of race, religion, color, sex, sexual orientation, gender identity or expression, national origin, age, disability, ethnic group or Vietnam-era or disabled veteran status. The contractor shall take affirmative action to insure that applicants are employed and that employees are treated during employment without regard to race, religion, color, sex, sexual orientation, gender identity or expression, national origin, age, disability, ethnic group or Vietnam-era or disabled veteran status. As used herein, “treated” means and includes without limitation the following: recruited, whether by advertising or other means, compensated, whether in the form of rates of pay or other forms of compensation; selected for training, including apprenticeship, promoted, upgraded, demoted, downgraded, transferred, laid off and terminated. The contractor agrees to and shall post in conspicuous places, available to employees and applicants for employment, notices to be provided by the hiring representatives of the contractor setting forth the provisions of this nondiscrimination clause.

2. The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that the contractor is an equal opportunity employer.
3. The contractor shall send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice advising the labor union or worker’s representative of the contractor’s commitments under the equal opportunity clause, and shall post copies of the notice in conspicuous places available to the employees and applicants for employment.
4. It is the policy of the City that local businesses, minority-owned businesses and female-owned businesses shall have every practicable opportunity to participate in the performance of contracts awarded by the City subject to the applicable provisions of the Cleveland area Business Code.
5. The contractor shall permit access by the Director or his designated representative to any relevant and pertinent reports and documents to verify compliance with the Cleveland Area Business Code, and with the regulations. All such materials provided to the Director or his designated representative by the contractor shall be considered confidential.
6. The contractor will not obstruct or hinder the Director or his designated representative in the fulfillment of the duties and responsibilities imposed by the Cleveland Area Business Code.
7. The contractor agrees that such subcontractor will include his Equal Opportunity Clause, and the contractor will notify each subcontractor, material supplier and supplier that the subcontractor must agree to comply with and be subject to all applicable provisions of the Cleveland Area Business Code. The contractor shall take any appropriate action with respect to any subcontractor as a means of enforcing the provisions of the Code.

Effective: December 9, 2009

## Exhibit “D”



### **FEDERAL AVIATION ADMINISTRATION MANDATORY PROVISIONS**

“Contractor” shall mean “Lessee”, “Offeror” or “Applicant”; “Owner” shall mean the City; “Contract” shall mean this Agreement; “Solicitation” or “Proposal” shall mean the offer from the City to enter into this Agreement.

Contractor is required to insert the following terms and conditions in each lower tier contract, subcontract, sub-agreement, etc. Contractor is required to incorporate the applicable requirements of these provisions by reference for work done under any purchase orders, rental agreements, and other agreements for supplies or services. Contractor is responsible for compliance with these provisions by any subcontractor, lower-tier subcontractor or service provider.

Contractor itself is required to meet all of the terms and conditions set out below. Should Contractor fail to do so, this Agreement shall be subject to cancellation by the City.

#### **GENERAL CIVIL RIGHTS PROVISIONS**

In all its activities within the scope of its airport program, the Contractor agrees to comply with pertinent statutes, Executive Orders, and such rules as identified in Title VI List of Pertinent Nondiscrimination Acts and Authorities to ensure that no person shall, on the grounds of race, color, national origin (including limited English proficiency), creed, sex (including sexual orientation and gender identity), age, or disability be excluded from participating in any activity conducted with or benefiting from Federal assistance.

This provision is in addition to that required by Title VI of the Civil Rights Act of 1964. If the Contractor transfers its obligation to another, the transferee is obligated in the same manner as the Contractor.

The above provision obligates the Contractor for the period during which the property is owned, used or possessed by the Contractor and the airport remains obligated to the Federal Aviation Administration.

#### **TITLE VI SOLICITATION NOTICE:**

The **City of Cleveland**, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 USC §§ 2000d to 2000d-4) and the Regulations, hereby notifies all bidders or offerors that it will affirmatively ensure that for any contract entered into pursuant to this advertisement, [select businesses, or disadvantaged business enterprises or airport concession disadvantaged business enterprises] will be afforded full and fair opportunity to submit bids in response to this invitation and no businesses will be discriminated against on the grounds of race, color, national origin (including limited English proficiency), creed, sex (including sexual orientation and gender identity), age, or disability in consideration for an award.

#### **COMPLIANCE WITH NONDISCRIMINATION REQUIREMENTS:**

During the performance of this contract, the Contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the “Contractor”), agrees as follows:

1. **Compliance with Regulations:** The Contractor (hereinafter includes consultants) will comply with the Title VI List of Pertinent Nondiscrimination Acts and Authorities, as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.
2. **Nondiscrimination:** The Contractor, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, national origin (including limited English proficiency), creed, sex (including sexual orientation and gender identity), age, or disability in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The Contractor will not participate directly or indirectly in the discrimination prohibited by the Nondiscrimination Acts and Authorities, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR part 21.
3. **Solicitations for Subcontracts, including Procurements of Materials and Equipment:** In all solicitations, either by competitive bidding or negotiation made by the Contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the Contractor of the contractor's obligations under this contract and the Nondiscrimination Acts and Authorities on the grounds of race, color, or national origin.
4. **Information and Reports:** The Contractor will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Sponsor or the Federal Aviation Administration to be pertinent to ascertain compliance with such Nondiscrimination Acts and Authorities and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish the information, the Contractor will so certify to the Sponsor or the Federal Aviation Administration, as appropriate, and will set forth what efforts it has made to obtain the information.
5. **Sanctions for Noncompliance:** In the event of a Contractor's noncompliance with the non-discrimination provisions of this contract, the Sponsor will impose such contract sanctions as it or the Federal Aviation Administration may determine to be appropriate, including, but not limited to:
  - a. Withholding payments to the Contractor under the contract until the Contractor complies; and/or
  - b. Cancelling, terminating, or suspending a contract, in whole or in part.
6. **Incorporation of Provisions:** The Contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations, and directives issued pursuant thereto. The Contractor will take action with respect to any subcontract or procurement as the Sponsor or the Federal Aviation Administration may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the Contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the Contractor may request the Sponsor to enter into any litigation to protect the interests of the Sponsor. In addition, the Contractor may request the United States to enter into the litigation to protect the interests of the United States.

#### **CLAUSES FOR TRANSFER OF REAL PROPERTY ACQUIRED OR IMPROVED UNDER THE AIRPORT IMPROVEMENT PROGRAM**

- A. The Licensee for himself/herself, his/her heirs, personal representatives, successors in interest, and assigns, as a part of the consideration hereof, does hereby covenant and agree that:
  1. In the event facilities are constructed, maintained, or otherwise operated on the property described in this License for a purpose for which a Federal

Aviation Administration activity, facility, or program is extended or for another purpose involving the provision of similar services or benefits, the Licensee will maintain and operate such facilities and services in compliance with all requirements imposed by the Nondiscrimination Acts and Regulations listed in the Title VI List of Pertinent Nondiscrimination Acts and Authorities (as may be amended) such that no person on the grounds of race, color, or national origin, will be excluded from participation in, denied the benefits of, or be otherwise subjected to discrimination in the use of said facilities.

- B. With respect to licenses, leases, permits, etc., in the event of breach of any of the above Nondiscrimination covenants, the City of Cleveland will have the right to terminate the License and to enter, re-enter, and repossess said lands and facilities thereon, and hold the same as if the License had never been made or issued.

#### **TITLE VI LIST OF PERTINENT NONDISCRIMINATION ACTS AND AUTHORITIES**

During the performance of this contract, the Contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the “Contractor”) agrees to comply with the following non-discrimination statutes and authorities; including but not limited to:

- Title VI of the Civil Rights Act of 1964 (42 USC § 2000d *et seq.*, 78 stat. 252) (prohibits discrimination on the basis of race, color, national origin);
- 49 CFR part 21 (Non-discrimination in Federally-Assisted programs of the Department of Transportation—Effectuation of Title VI of the Civil Rights Act of 1964);
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 USC § 4601) (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- Section 504 of the Rehabilitation Act of 1973 (29 USC § 794 *et seq.*), as amended (prohibits discrimination on the basis of disability); and 49 CFR part 27 (Nondiscrimination on the Basis of Disability in Programs or Activities Receiving Federal Financial Assistance);
- The Age Discrimination Act of 1975, as amended (42 USC § 6101 *et seq.*) (prohibits discrimination on the basis of age);
- Airport and Airway Improvement Act of 1982 (49 USC § 47123), as amended (prohibits discrimination based on race, creed, color, national origin, or sex);
- The Civil Rights Restoration Act of 1987 (PL 100-259) (broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, the Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms “programs or activities” to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);
- Titles II and III of the Americans with Disabilities Act of 1990 (42 USC § 12101, *et seq.*) (prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities) as implemented by U.S. Department of Transportation regulations at 49 CFR parts 37 and 38;
- The Federal Aviation Administration’s Nondiscrimination statute (49 USC § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (ensures nondiscrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations);
- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of limited English proficiency (LEP). To ensure compliance with Title

VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs [70 Fed. Reg. 74087 (2005)];

- Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 USC § 1681, et seq).

### **FEDERAL FAIR LABOR STANDARDS ACT (FEDERAL MINIMUM WAGE) SOLICITATION CLAUSE**

All contracts and subcontracts that result from this solicitation incorporate by reference the provisions of 29 CFR part 201, et seq, the Federal Fair Labor Standards Act (FLSA), with the same force and effect as if given in full text. The FLSA sets minimum wage, overtime pay, recordkeeping, and child labor standards for full and part-time workers.

The Contractor has full responsibility to monitor compliance to the referenced statute or regulation. The Contractor must address any claims or disputes that arise from this requirement directly with the U.S. Department of Labor – Wage and Hour Division.

### **OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970**

All contracts and subcontracts that result from this solicitation incorporate by reference the requirements of 29 CFR Part 1910 with the same force and effect as if given in full text. The employer must provide a work environment that is free from recognized hazards that may cause death or serious physical harm to the employee. The employer retains full responsibility to monitor its compliance and their subcontractor's compliance with the applicable requirements of the Occupational Safety and Health Act of 1970 (29 CFR Part 1910). The employer must address any claims or disputes that pertain to a referenced requirement directly with the U.S. Department of Labor – Occupational Safety and Health Administration.

### **CERTIFICATION REGARDING DOMESTIC PREFERENCES FOR PROCUREMENTS**

The Bidder or Offeror certifies by signing and submitting this bid or proposal that, to the greatest extent practicable, the Bidder or Offeror has provided a preference for the purchase, acquisition, or use of goods, products, or materials produced in the United States (including, but not limited to, iron, aluminum, steel, cement, and other manufactured products) in compliance with 2 CFR § 200.322.

# FACILITY MODIFICATION PERMIT



5300 Riverside Drive, Cleveland, OH 44181-0009 216.898.5215 / [DPCPermits@clevelandairport.com](mailto:DPCPermits@clevelandairport.com)

## City of Cleveland, Department of Port Control (DPC)

APPLICATION FORMS TO BE COMPLETED ELECTRONICALLY THEN SUBMITTED VIA EMAIL TO:  
[DPCPermits@clevelandairport.com](mailto:DPCPermits@clevelandairport.com)

### SECTION A. DPC SPONSOR INFORMATION

DPC Sponsor Name	Phone	Email
John Hoose	216.265.3315	jhoose@clevelandairport.com

### SECTION B. APPLICANT INFORMATION

FMP Project Title:	<b>NEOFIX Enhanced Aviation Sensors</b>	
Applicant Name:	<b>Baldwin Wallace University</b>	Date: <b>April 4, 2024</b>

Applicant/Tenant Contact Info	
Applicant/Tenant	Baldwin Wallace University
Address	275 Eastland Road
City, ST, Zip	Berea, Ohio 44017
Phone	216-407-2673
Email	smendel@bw.edu
Contact	Stuart Mendel

Contractor Contact Info	
Contractor	
Address	
City, ST, Zip	
Phone	
Email	
Contact	

### SECTION C. JOB SITE INFORMATION

Location of Job Site:

Roof and Power/Server Closet of Firefighting Building (see attached Installation Specification)



# FACILITY MODIFICATION PERMIT



5300 Riverside Drive, Cleveland, OH 44181-0009 216.898.5215 / [DPCPermits@clevelandairport.com](mailto:DPCPermits@clevelandairport.com)

## SECTION C (continued)

### BRIEF DESCRIPTION OF WORK:

A 10-foot length, 1-in diameter steel or aluminum pole needs to be mounted to the side of building with u-brackets and ingress into the building needs to be identified for the Airport Monitoring Systems antenna cable the and the AirSentinel power cable

Proposed dates of work:	Start	5/1/24	Finish	5/30/24
Proposed hours of work:	Start	8:00AM	Finish	5:00PM

## TYPES OF ADDITIONAL PERMITS REQUIRED

City of Cleveland Permits?	
Construction Storm Water Pollution Prevention Plan (SWP3)?	
FAA 7460?	<input type="checkbox"/>
Hotworks?	<input type="checkbox"/>

\* NOTE: For exterior work requiring crane, lifts or other large heavy equipment, an FAA 7460 Permit is required and could take between 90-120 days. Do not submit proposed start dates that pre-date the 7460 approval process. Coordinate with P&E.

## REQUIRED DOCUMENTS

Improvement plans meeting DOT/AM specifications.	No
Maintenance of Traffic (MOT) plan, both vehicular and pedestrian, if applicable.	No
A Note prominently displayed on the title sheet or first paragraph of the general notes sheet, stating the requirement to use DPC construction standards.	No
Current insurance policy, listing City of Cleveland as additionally insured	No
Scope of work including Schedule of work.	No
FAA Construction Safety and Phasing Plan (CSPP) if applicable.	No
<b>To be submitted at Project Completion:</b>	
Final inspection report including punch list.	
As-built meeting DOT/AM specifications. Please provide As-Built as BIM ready, if possible.	

## APPLICANT SIGNATURE

*John J. Mendel, Project Director NEOTX* 4/18/24



**CLE** CLEVELAND HOPKINS  
INTERNATIONAL AIRPORT

**BKL** CLEVELAND BURKE  
LAKEFRONT AIRPORT

## Facilities Modification Permit Notice To Proceed

**Date Issued:** May 6, 2023

**Date Permit Expires:** June 6, 2024

**To Whom:** Baldwin Wallace University

**Sponsor Name:** John Hoose

**Email address:** [jhoose@clevelandairport.com](mailto:jhoose@clevelandairport.com)

**Applicant Name:** Stuart Mendel

**Email address:** [smendel@bw.edu](mailto:smendel@bw.edu)

**Project Name:** BKL ARFF Sensor Installation

**Project Number:** FMP-240424-3

**Work to Be Performed: Project: Project:** Roof and Power/Server Closet of Firefighting Building. A 10-foot in length, 1-in diameter steel or aluminum pole needs to be mounted to the side of building with u-brackets and ingress into the building need to be identified for the Airport Monitoring Systems antenna cable and the AirSentinel power cable.

### Requirements:

#### Prior to beginning the project:

- Follow all DPC and NEC installation and labeling standards
- Label all wiring

#### During and after completion of the project:

- Notify [DPCPermits@clevelandairport.com](mailto:DPCPermits@clevelandairport.com) of construction start date.
- Notify [DPCPermits@clevelandairport.com](mailto:DPCPermits@clevelandairport.com) of construction completion.
- Please provide as-builts when completed

With the applicant agreeing to address these requirements, a Notice To Proceed is issued.

Cheryl Lubertazza  
Airport Document Control Coordinator  
[clubertazza@clevelandairport.com](mailto:clubertazza@clevelandairport.com)  
216-265-6798

Cleveland Hopkins International Airport  
P.O. Box 81009  
Cleveland, OH 44181-0009  
1 216 265 6000

Cleveland Burke Lakefront Airport  
1501 North Marginal Road  
Cleveland, OH 44114-3759  
1 216 781 6411

## **Minnesota Police Drone Deployments Nearly Quadruple in Four Years, Proving Cost Effective**

<https://dronelife.com/2024/06/27/minnesota-police-drone-deployments-nearly-quadruple-in-four-years-proving-cost-effective/>

An article by Dronelife shares a state report revealed a dramatic increase in drone flights despite modest budget growth.

The state of Minnesota reported that the number of times police agencies in the state deployed drones without a warrant nearly quadrupled over the past four years, from 1,171 such missions in 2020 to 4,326 flights in 2023.

According to data released earlier this month, over the same time period, the amount of money spent on police agency drone programs increased only slightly, from about \$922,411 to about \$1,065,677.

The annual cost of police agency UAV programs had fallen dramatically in 2022 to about \$646,531. However, over the next two years the same costs rose by about 65% to the level seen in 2023.

The latest data is contained in a legislative report, released by the Minnesota Bureau of Criminal Apprehension (BCA) on the police agencies' use of unmanned aerial vehicles in the year 2023.

Under state law, beginning in 2020 all of Minnesota's law enforcement agencies that maintain or use an UAV are required to report the following data to the BCA by January 15 regarding the prior calendar year:

- The number of times a UAV was deployed without a search warrant
- The date of each deployment
- The authorized use for each deployment
- The total cost of the agency's UAV program.

The BCA had developed a submittal form that enables law enforcement agencies to report data on their UAV usage in a uniform manner, making it easier for lawmakers and the general public to track police drone usage in the state over time.

In its most recent report for the year 2023, the BCA collected data from 99 police and sheriff's departments and other law enforcement agencies. The report noted that that police agency usage of drones in circumstances where a warrant is not required has risen steadily in the four years that data has been collected.

At about \$124,713, the Minnesota State Patrol had the highest-cost drone program in 2023, while the St. Paul Police Department has the second-highest cost program, with \$100,000 spent on drones and related equipment.

## Why Police are Flying Drones

Of the 4,326 UAV warrantless missions that police agencies in the state in 2023 almost twice as many flights were for training or public relations purposes as those flown in emergency situations.

Last year, the most common purpose given for conducting a warrantless drone flight was “flying over a public area for officer training or public relations purposes.” This was the reason given for a total of 1,986 missions flown. The second most common purpose for warrantless police drone flights, at 1,031 missions, was “during or in the aftermath of an emergency situation that involves the risk of death or bodily harm to a person.”

Other common purposes given for warrantless drone flights were “to collect information for crash reconstruction purposes after a serious or deadly collision occurring on a public road,” 603 missions, and “to collect information from a public area if there is a reasonable suspicion of criminal activity,” 398 missions.

Continue Reading

<https://dronelife.com/2024/06/27/minnesota-police-drone-deployments-nearly-quadruple-in-four-years-proving-cost-effective/>

### **Legislation Needed to Boost U.S. Drone Innovation, Says Industry Expert**

<https://dronelife.com/2024/06/26/legislation-needed-to-boost-u-s-drone-innovation-says-industry-expert/>

An article by Dronelife shares former Red Cat COO Allan Evans advocates for CHIPS Act-style incentives to accelerate domestic drone manufacturing and reduce reliance on Chinese technology.

As the U.S. government considers taking steps to limit the importation of Chinese-manufactured drones, it should also consider passing legislation that would incentivize domestic drone producers to innovate their products, the former Chief Operating Officer of American drone company Red Cat Holdings said in an interview.

“I think that as the U.S. government goes toward eliminating being able to import (China’s) DJI from the marketplace, without some additional offset to accelerate or jumpstart domestic manufacturing, you’ll see it take a very long time and require more investment down the road to get us to parity,” said Allan Evans.

Evans, who is currently the CEO of aviation component manufacturing company Unusual Machines, said he thinks that in order to help the domestic drone industry Congress should pass a law similar to the CHIPS Act, which provides incentives to U.S. microchip makers.

In 2022, citing national security fears, U.S. regulators banned the sale and import of new communications equipment from Chinese technology companies, including Huawei and ZTE. That same year, Congress also passed the Creating Helpful Incentives to Produce Semiconductors (CHIPS) and Science Act, which allocated \$53 billion in federal incentives for domestic semiconductor research, development and manufacturing.

Currently, Congress is considering several pieces of legislation meant to limit or curtail the importation of drones manufactured in China, such as the Countering CCP Drones Act and the Drones for First Responders Act, both introduced by Rep. Elise Stefanik (R.-New York). The Countering CCP Drones Act place equipment and services produced by DJI Technologies on a Federal Communications list of things deemed to pose an unacceptable risk to U.S. national security.

The Drones for First Responders Act would implement a new tariff on Chinese-produced drones and use the tariff revenue to establish a new grant program to help first responders, critical infrastructure providers and farmers purchase new non-Chinese drones.

Drones: A Critical Technology

“Both sides, the Republicans and Democrats, have identified drones as a critical technology,” Evans said.

Continue Reading

<https://dronelife.com/2024/06/26/legislation-needed-to-boost-u-s-drone-innovation-says-industry-expert/>

Next month, July Post Dates

7/3

7/12

7/22

7/31



Stuart C. Mendel  
Project Director

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