



**JOEL ANDERSON**  
SUPERVISOR, SECOND DISTRICT  
SAN DIEGO COUNTY BOARD OF SUPERVISORS

**AGENDA ITEM**

**DATE:**           **October 21, 2025**

**20**

**TO:**             Board of Supervisors

**SUBJECT**

**STRENGTHENING DISASTER PREPAREDNESS AND RECOVERY THROUGH  
PROACTIVE INFRASTRUCTURE DOCUMENTATION (DISTRICTS: ALL)**

**OVERVIEW**

The recent fires in Los Angeles highlight the devastating and widespread impacts of natural disasters in California, which carry significant human, economic, and infrastructure costs. For local governments, disasters often result in billions of dollars in damages, placing immense pressure on local budgets and requiring substantial federal assistance to recover. The Federal Emergency Management Agency (FEMA) plays a critical role in reimbursing these costs but imposes stringent documentation requirements to validate disaster-related claims.

The County Board of Supervisors has previously taken significant steps to enhance FEMA reimbursements and improve disaster resilience. Most recently, these include updates to the Flood Damage Prevention Ordinance in September 2024 to align with FEMA requirements, emergency funding allocations for flood recovery in January 2024, and additional support for flood relief efforts in March 2024. These actions reflect the Board's ongoing commitment to strengthening disaster recovery processes and maximizing federal assistance.

Under FEMA's recent update to the Public Assistance Program and Policy Guide (PAPPG) Version 5.0 applicants may be required to provide pre-incident photographs or video to establish the condition of assets before a disaster. This requirement formalizes the need for high-quality, proactive documentation to expedite reimbursement processes and ensure eligibility for funding. Without this preparation, delays, and outright denials of FEMA reimbursements can create significant fiscal challenges for county governments.

This initiative will position the County to meet new FEMA reimbursement eligibility requirements by implementing unique technology in infrastructure documentation. The documentation will also meet emergency reimbursement requirements for other federal agencies including Federal Highway Administration Emergency Relief Program and U.S. Housing and Urban Development recovery programs. The approach includes:

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Core Capabilities

- Drone & Vehicle-Powered Imaging
  - High-resolution aerial and ground-based drone/vehicle footage
  - Capable of capturing geo-tagged, time-stamped, and audit-ready imagery
  - Specialized sensors and cameras document assets inaccessible to traditional systems (e.g., underside of bridges, levees, culverts, drainage channels)
- Geospatial Database
  - Proprietary, secure GIS-integrated database for storing, indexing, and retrieving infrastructure imagery
  - Searchable by GPS coordinates, physical address, map interface clicks, or “Proximity Clipping”
  - Proximity Clipping technology ensures precise image retrieval (i.e., pulling multiple drone passes to select the clearest image)
- Permanent Digital Records
  - Maintains imagery to meet federal reimbursement standards
  - Provides an immutable archive for audits, federal reviews, and compliance checks

Software Platform: Uploading & Processing

- Secure Video Interface
  - Upload and archive video/photographic files directly into a cloud-based system
  - Duplicate upload protection ensures no redundant files are stored
  - Built-in quality control identifies missing, outdated, or poor-quality images and prompts for retakes
- Automated Image Extraction
  - Converts continuous drone video into high-quality still images at user-defined intervals
  - Enhances search and retrieval functionality for large datasets
  - Reduces manual labor in post-processing
- Rapid Distributed Processing
  - Parallel processing framework accelerates upload-to-database time
  - Ensures large-scale county datasets (tens of thousands of images) are available quickly during a disaster response and recovery
- Metadata Tagging
  - Every file automatically tagged with:
  - Latitude/longitude GPS coordinates
  - Date/time stamp
  - Drone ID/camera ID (for quality control and equipment tracking)

Today’s action seeks single source authority to contract with Infrastructure Documentation Solutions. This vendor is uniquely qualified to provide these services because of their expertise in aligning infrastructure and facilities mapping and municipal documentation with FEMA emergency reimbursement requirements, along with their possession of and ability to use advanced technological systems to obtain the required documentation accurately.

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By approving this request, the Board will position the County to expedite reimbursements, reduce fiscal challenges during recovery, and safeguard the \$10 billion portfolio of critical infrastructure that supports community resilience. This initiative aligns with the County's strategic focus on resilience, equity, and sustainability by ensuring that all communities, particularly those most vulnerable to disasters, benefit from timely recovery efforts and robust infrastructure protection.

**RECOMMENDATION(S)**

**SUPERVISOR JOEL ANDERSON**

Direct the Chief Administrative Officer (CAO) to:

- ~~1. Develop a scope for a Critical Infrastructure Documentation Initiative that enhances the County's ability to inventory, map, and document critical infrastructure in order to expedite reimbursements and reduce fiscal challenges during disaster recovery and emergency response efforts.~~
- ~~2. Explore opportunities for partnership and cost sharing with other local jurisdictions, regional agencies, and entities to leverage data, expertise, and resources in developing and maintaining critical infrastructure documentation.~~
- ~~3. Return to the Board with the proposed scope, recommended procurement actions, funding recommendations, and any necessary authorizations to enter into agreements with partner entities to implement the initiative.~~
1. Establish appropriations of \$2.5 million in the Office of Emergency Services, Services and Supplies from unassigned General Fund balance to immediately engage Infrastructure Documentation Solutions to map, catalog and database the unincorporated area's most vulnerable infrastructure. (4 VOTES)
2. In accordance with Board Policy A-87, Competitive Procurement, approve and authorize the Director of the Department of Purchasing and Contracting to enter into negotiations with Infrastructure Documentation Solutions and subject to successful negotiations and a determination of a fair and reasonable price, award a contract to map, catalog, and database infrastructure in the unincorporated area, for up to one year and an additional six months if needed, and to amend the contracts as needed to reflect changes to requirements and funding, subject to the approval of the Director of the Office of Emergency Services.
3. Direct the Chief Administrative Officer to oversee the contract implementation to begin the contracted work within 6 months of approval of this Board letter.
4. Direct the Chief Administrative Officer to report back to the Board of Supervisors the results of initial work and recommendations for ongoing compliance with new FEMA requirements.

**EQUITY IMPACT STATEMENT**

Lower-income communities are often the most severely affected by disasters and are heavily dependent on federally funded responses. This initiative will help ensure equitable recovery by strengthening the County's ability to secure FEMA reimbursements and expediting the rebuilding of essential infrastructure.

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### **SUSTAINABILITY IMPACT STATEMENT**

Critical infrastructure supports sustainable and healthy environments. By documenting and protecting these assets, including the County's maintained natural features, this initiative promotes resilience and ensures timely restoration of vital services after disasters.

### **FISCAL IMPACT**

~~Funds for these Recommendations are included in the Fiscal Year 2025-26 Operational Plan based on existing staff time in the Office of Emergency Services funded by various funding sources. There will be no change in net General Fund cost and no additional staff years. There will be fiscal impacts associated with future related recommendations which staff would return to the Board for consideration and approval.~~

Funds for this request are not included in the Fiscal Year 2025-2026 Operational Plan in the Office of Emergency Services. If approved, this request will result in costs of \$2.5 million in Fiscal Year 2025-2026. The funding source is unassigned General Fund balance. There will be no change in net General Fund cost and no additional staff years. If approved, this request will result in current year costs of \$2.5 million.

### **BUSINESS IMPACT STATEMENT**

The County's businesses depend on reliable infrastructure for their operations. This initiative ensures that critical infrastructure is repaired quickly and effectively post-disaster, providing substantial benefits to the business community.

### **ADVISORY BOARD STATEMENT**

N/A

### **BACKGROUND**

Counties across the nation face significant fiscal impacts from disaster-related infrastructure damage. A report by the National Association of Counties (NACo) highlights that local governments often experience delays in receiving FEMA reimbursements, with some claims remaining open for over six years. These prolonged timelines can severely affect county budgets, cash flow, and the ability to quickly recover and rebuild. By investing in proactive documentation and compliance measures, San Diego County can mitigate these challenges and ensure timely access to federal disaster relief funding.\*

San Diego County has experienced numerous natural disasters over the past decades, including wildfires, floods, and severe storms. Under the Stafford Act, FEMA can reimburse local governments for disaster-related infrastructure and facility repairs, debris removal, and emergency protective measures. Reimbursement eligibility relies upon accurate and thorough documentation and records of pre-disaster condition. For example, during the 2007 wildfires, the County's ability to secure FEMA reimbursements was directly tied to the availability of detailed damage assessments and records of affected infrastructure. Insufficient documentation during past disasters in other parts of the state have led to reimbursement delays, highlighting the need for a more systematic approach to cataloging County assets.

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Examples of FEMA denials in California include Los Angeles County debris removal and infrastructure repair following the devastating Woolsey fire in 2018 (DR-4407-CA). The lack of pre-disaster photos, maintenance and inspection reports led to project reimbursement denials. Following the 2018 Camp Fire (DR-4407-CA), the Paradise Unified School District was also denied reimbursements of certain repair costs to its facilities due to lack of pre-disaster documentation.

Under the California Disaster Assistance Act (CDAA), the Governor's Office of Emergency Services (Cal OES) administers a similar disaster reimbursement program that can be implemented with or without a federal disaster declaration. CDAA reimbursement follows the same FEMA guidelines with strict pre-disaster documentation standards to prove damage is in fact a result of the disaster. In the January 2024 San Diego County floods, the preliminary damage estimate to public infrastructure was approximately \$100 million. While the County and affected jurisdictions were able to recoup some costs through CDAA, due to deferred maintenance and the lack of pre-disaster documentation, the region was unable to secure a FEMA Public Assistance Declaration costing the region millions of dollars.

Under FEMA's recent update to the Public Assistance Program and Policy Guide (PAPPG) Version 5.0 applicants may be required to provide pre-incident photographs or video to establish the condition of assets before a disaster. This update formalizes the need for high-quality, proactive documentation of critical infrastructure and facilities, making compliance essential for timely and full reimbursement. The County's proactive engagement with Infrastructure Documentation Solutions will ensure adherence to these standards, positioning the County to secure maximum FEMA funding.

San Diego County manages a vast portfolio of infrastructure and capital assets with an estimated replacement value of over \$10 billion.\*\* These include roads, bridges, facilities, and other public resources vital to the community's functionality. Historical data from prior disasters, such as the 2007 wildfires, demonstrates the financial and operational challenges posed by insufficient documentation. Proactively addressing FEMA's updated requirements will ensure the County's ability to secure the maximum reimbursement possible while minimizing delays in recovery efforts.

The proposed initiative builds on lessons learned from past disasters and aligns with the County's commitment to resilience and preparedness. We are entering another potentially devastating fire season driven by drought conditions and critically dry vegetation. By leveraging advanced technology to map and catalog infrastructure, this effort will ensure that the County is well-positioned to secure maximum federal and state assistance and safeguard critical assets should disaster strike.

Today's action seeks single source authority to contract with Infrastructure Documentation Solutions. This vendor is uniquely qualified to provide these services because of their expertise in aligning infrastructure and facilities mapping and municipal documentation with FEMA emergency reimbursement requirements, along with their possession of and ability to use advanced technological systems to obtain the required documentation accurately.

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\*Footnote: National Association of Counties (NACo), “Counting Costs: Post-Disaster Reimbursement and County Fiscal Impacts in Federal Disaster Response,” available at <https://www.naco.org/resource/counting-costs-post-disaster-reimbursement-county-fiscal-impacts-federal-disaster-response>

\*\*Footnote: The estimated replacement value of San Diego County’s infrastructure and capital assets is based on data provided in the County’s Annual Comprehensive Financial Report (ACFR) for the fiscal year ending June 30, 2024. The ACFR lists the net book value of capital assets, including infrastructure, buildings, and other depreciable assets, at approximately \$4 billion (see ACFR, page 41, Notes to the Basic Financial Statements). This figure represents the depreciated value of assets, which does not reflect current replacement costs. Using a FEMA-recommended multiplier of 2.5x to adjust for depreciation and inflation, the estimated replacement value of these assets exceeds \$10 billion. This calculation accounts for increased costs of labor, materials, and construction, as well as the significant scale and complexity of critical public infrastructure.

**LINKAGE TO THE COUNTY OF SAN DIEGO STRATEGIC PLAN**

This initiative supports the Community (Safety) Strategic Initiative in the County of San Diego’s 2025-2053 Strategic Plan by enhancing community resilience and preparedness by safeguarding critical infrastructure and ensuring equitable and effective disaster recovery efforts.

Respectfully submitted,

A handwritten signature in dark ink, appearing to read 'Joel Anderson', with a long horizontal flourish extending to the right.

JOEL ANDERSON  
Supervisor, Second District

**ATTACHMENT(S)**

N/A