October 17, 2022

Chairman Jose "Pepe" Diaz Board of County Commissione

Board of County Commissioners Miami-Dade County 111 NW 1st Street, Suite 220 Miami, FL 33128 district12@miamidade.gov

RE: CDMP20210003 - Application to Amend the Comprehensive Development Master Plan (CDMP) for the South Dade Logistics and Technology District (SDLTD)

Dear Chairman Diaz,

The Hold the Line Coalition, an alliance of individuals, community groups, businesses, municipalities, and organizations dedicated to responsible and sustainable land management in Miami-Dade County, hereby submit the following comments on revised application CDMP20210003, filed by Aligned Real Estate Holdings LLC and South Dade Industrial Partners LLC.

The applicant requests the County to:

- Expand the Urban Development Boundary (UDB) to include a 379-acre proposed project area in the Southern tier of the County south of the Homestead Extension of the Florida Turnpike and adjacent to the Homestead Air Reserve Base;
- Redesignate this parcel from "Agriculture" to 'Special District' on the Future Land Use Map;
- Amend the Comprehensive Development Master Plan, Policies LU-8H as well as Coastal Management Element Policy CM-9A to exempt non-residential development;

The applicant requests these unprecedented Comprehensive Plan revisions to accommodate their proposed development of a "South Dade Logistics & Technology District" in the area. The project would include phased development of logistics centers, commerce, warehouse, distribution, light manufacturing, and office space as well as a 150-room hotel. Given the considerable scope and cost to the taxpayer of the proposed 379-acre development and the extraordinary revisions the applicant has requested, the outcome of your review must be based on facts, data, and detailed information and evaluated in accordance with established planning principles outlined in the CDMP and Florida law. The particularly troubling issue highlighted in this letter is the requested amendment of the Coastal Management Element Policy CM-9A regulating potential redevelopment of land located within the Coastal High Hazard Area (CHHA), and the Hurricane Vulnerability Zone. This letter details arguments against modifications to the CM-9A and brings forth scientific evidence demonstrating the importance of the policy in its original form, primarily:

With solid science that hurricanes are strengthening, it is unconscionable to alter the CDMP to permit more building in the most vulnerable areas, not as an exception, but countywide policy.

Hurricane Climatology and Florida Impact potential

According to the historical data published by the National Hurricane Center (NHC), Florida remains

to be the most vulnerable and hurricane-prone area in the United States^{1,2}. In fact, ~40% of all landfalling hurricanes end up impacting portions of the Florida coast³. Further statistics show that on average, the center of a hurricane will pass within 50 miles of any point in South Florida every 6 to 8 years. This means that while hurricane strikes may not represent a yearly occurrence, statistically South Florida will at least be significantly threatened by a hurricane a few times a decade, and impacted directly - at least once a decade. Indirect hurricane impacts, as well as tropical storm (TS) passages over South Florida occur with a much higher frequency; at least every 2-3 years on average⁴. Since year 2017 alone, a total of 36 tropical cyclones (TCs) have directly or indirectly affected Florida, with just under half (14) exerting impacts on the southernmost part of the peninsula⁵. It should also be pointed out that the peak of hurricane activity in the Atlantic and the Gulf of Mexico falls during the months of August-October², which squarely coincides with the occurrence of King Tides in South Florida⁶.

Nature of Tropical Cyclone Impacts (Direct v. Indirect), Changes in the TC climatology, and Difficulties in Tropical Cyclone forecasting:

As of 2021, according to data assimilated and analyzed by the University of Florida's Institute of Food and Agricultural Sciences (UF/IFAS) since 1900, Florida has had a total of approximately \$650 billion worth of hurricane damage, which is equal to that of the rest of the US. Major hurricanes caused 87% of the damage. Florida is also the state that has been the most frequently damaged (25 times) by the top 50 devastating hurricanes⁷. TC impacts are multifold, and can take a form of wind damage, storm surge, flooding and tornadoes. A number of recent studies also indicate that the TC effects also seem to be modulated by changes in the global climate.

Winds represent the most well-known impact from tropical cyclones. Florida's specific vulnerability to wind damage stems from Florida's flat terrain which in many cases may prolong TC's life span, as strong winds do not rapidly weaken after the storm makes landfall. Wind strength is a function of TC's intensity, the stronger the storm – the stronger the wind fields. A worrying trend regarding TC intensity has been emerging based on a number of modeling studies (e.g. 2015⁸ and 2018⁹ publications in the American Meteorological Society journal), where based on the simulations authors predict future increases of 20-28% in category 4 and 5 storms globally, with a 29-42% increase in the North Atlantic basin.

Storm surge is the term used to describe the wall of water that is pushed toward the shoreline as a hurricane moves onshore or moves parallel to the shoreline. Storm surge effects can be intensified by concurrent occurrence of tides pushing even larger volumes of water onto the shore, often resulting in significant damage and loss of life. In the strongest hurricanes, this storm surge can be as high as 25 feet above normal water levels. Considering that Florida's mean elevation above sea level is the lowest of all 50 states, with coastal areas located within 3ft of the sea surface, this once again demonstrates the high potential for structural destruction, particularly in the coastal low-laying areas. Storm surge potential is also a constantly increasing threat stemming from the sea-level rise due to the changing climate.

Freshwater flooding from tropical cyclones is not correlated with the intensity of the system but instead with the relative speed of the storm and intensity of precipitation. Slow-moving tropical storms and hurricanes often produce comparatively larger amounts of precipitation that can lead to catastrophic flooding (e.g. Hurricane Harvey, 2017 and TS Imelda, 2019), particularly in coastal

areas where the flooding from the storm surge combine with the impacts from the torrential rain. Based on a number of studies-- analyzing historical data^{10,11} a reduction in forward speed of TC systems in the period from 1949-modern day has also been established, indicating that future storms can result in more severe coastal flooding. Projections of future rainfall increases in TCs are also notable. A 2015 study¹⁰ finds a global rain rate increase of 14% by the end of the 21st century, while 2017 study¹² of Hurricane Harvey (which dumped an unprecedented 60in of rain in the vicinity of Houston metropolitan area) calculates that hurricane rains of 20 inches in Texas will evolve from a once-in-100-year event at the end of the 20th century to a once-in-5.5-year occurrence by 2100.

A recent landfall of hurricane Ian, which tied for the fifth-strongest hurricane to make landfall in the United States, serves as the ultimate demonstration of devastation that can result from a landfalling hurricane in Florida. Ian dumped 20+ inches of rain in southern and central parts of the state (with 31.52 inches recorded over 36 hours at the Ponce inlet), 12+ft storm surge along Florida's Gulf coast and 119 fatalities recorded in Florida alone. Hurricane Irma from the 2017 Atlantic hurricane season similarly inundated most parts of the state in 9-20 inches of rain, and produced storm surges of up to 10ft in coastal areas and resulted in 123 fatalities.

Uncertainty in TC forecasting can also significantly contribute to the devastation produced by the storm, particularly in coastal regions. This once again can be exemplified by the recent landfall of Hurricane Ian, where evacuation orders in Lee County have been delayed due to the uncertainty in the storm's track. This demonstrates that even modern-day forecasting is susceptible to errors, and even structures equipped to withstand hurricane damage may not be adequately prepared if the guidance and warnings issued by the NHC end up being inaccurate.

Another issue currently generating a lot of attention amongst tropical meteorologists has to do with a recent trend of TCs undergoing a period of rapid intensification (an increase of wind speed of at least 35 mph in 24 hours), which is often hard to forecast. This trend is also hypothesized to be a consequence of the changes in global climate, and may potentially get worse as we approach the end of the century¹³. This also adds additional challenges to the preparation procedures in the coastal regions, where even if the track itself is forecasted accurately, the intensity of the storm is not leading to a larger extent of structural destruction. A variation of such scenarios, where a development and subsequent landfall of the storm proceeds at such a pace that storm preparations are simply impossible due to the lack of advance notice have also been recorded. This was a case for a Tropical Storm Imelda (2019 Atlantic Hurricane season), where despite a low chance of tropical storm formation estimated by the NHC, a storm formed a short distance away from Freeport, TX, making a landfall just 6 hours later. TS Imelda also became the fourth-wettest storm on record in the U.S. state of Texas, causing devastating and record-breaking floods across the southern portion of the State.

Restricting development from low-lying coastal areas protects against the destructive force of storm surge. This is a lesson brought home by comparing the effects of hurricanes Ian and Andrew, which previously held the record of Florida's costliest storm. Both hurricanes produced the same storm surge, about 12 feet, however, in contrast with Ian, the storm surge from Andrew resulted in

relatively little damage to buildings in and around Homestead. Ten years before Andrew, Miami-Dade County had established the Urban Development Boundary, which puts stringent restrictions on development in the low-lying coastal zone. Areas of dense, urban development were out of reach of Andrew's storm surge.

Everglades Restoration

At the last hearing it was stated by the applicant that after meeting with the ACOE the footprint of the project was downsized to avoid conflicts with BBSEER, the Everglades Restoration project footprint in this location. Yet the applicant's expert said from the start there was no conflict with the project. We feel this is an admission by the applicant that yes, in fact the project conflicts with BBSEER contrary to their own expert's statements. As we noted at the hearing those conflicts remain regardless of the downsizing as we continue with round 2 modeling efforts which will determine additional alternatives for consideration by the project delivery team. This will include the area in question and the project features that overlap with this property. Our team reached out to the ACOE and they indicated that yes in fact they met with the applicant but gave them no direction to avoid conflicts. In addition they confirmed that the elements on this property were still in play and being considered as they continue analysis of each project feature. In addition the Department of Interior provided a new letter on this subject matter for your consideration, attached.

Conclusions

Based on the points presented above, a strong case can be made against amendment of the Coastal Management Element Policy CM-9A and allowing for the land to be developed. The relevance of this policy is further exemplified by the 30th anniversary of the catastrophic landfall of Hurricane Andrew in 1992, which caused unprecedented devastation across most of southern Florida with areas adjacent to the proposed development having sustained most of the damage. It is rather clear that development of the land located within the designated CHHA would also put unnecessary pressure on emergency services that would be forced to service the area. Instead these areas should be considered a buffer to the already built environment.

We ask that you support the objections raised in the Department of Environmental Resource Management in the state review process in regards to Coastal Management Element Policy CM-9A as well as the new points raised by the Department of Interior and deny this application.

Sincerely,

Laura Reynolds

Dr. William Nuttle

Laura Reynolda

Organizing Representative, Technical Committee Hold the Line Coalition

Steering Committee Members:

Dave Doebler Volunteer Cleanup, Founder BBMHS Steering Committee

Victor Dover Co-Founder , Dover, Kohl & Partners

Lauren Jonaitis Conservation Director, Tropical Audubon Society

Albert Gomez Industrial Components, CEO BBMHS Steering Committee

Steven Green, Ph.D. Board of Directors, Tropical Fruit Growers of So Florida

Jane West Policy & Planning Director, 1000 Friends of Florida

Philip Kushlan President , Friends of the Everglades

Dwight Bullard Senior Political Advisor Florida Rising

Grace Perdomo Executive Director Transit Alliance Juan Mullerat Founding Principal PlusUrbia Design

Rock Salt TAS, Conservation Committee Army Corps of Engineers (Retired

Eve Samples Executive Director Friends of the Everglades

Elizabeth Fata Carpenter Managing Attorney, South Everglades Everglades Law Center

Katy Sorenson Former Miami Dade County Commissioner District 8 Resident

Paul Owens President 1000 Friends of Florida

Mary Waters Former Community Council 14 Former Chair Tropical Fruit Growers

May Rodriguez Executive Director South Florida Community Development Coalition

Shellie Levin President Shellie Levin Solutions District 9 Resident References:

1) https://www.aoml.noaa.gov/hrd-faq/#current-track-intensity-models

2) https://www.nhc.noaa.gov/climo/

3) https://www.cnn.com/2017/09/11/us/hurricanes-landfall-by-state-trnd

4) https://www.weather.gov/media/mfl/news/HurcnWeb_2020.pdf

5) https://www.nhc.noaa.gov/outreach/history/

6) https://www.miamigov.com/My-Government/ClimateChange/King-Tides

7) https://edis.ifas.ufl.edu/publication/AE528

8) https://journals.ametsoc.org/view/journals/clim/28/18/jcli-d-15-0129.1.xml

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11) https://www.nature.com/articles/s41612-019-0074-8

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146c1295908d?source=friends_link&sk=4a7dab22799d386ffaa2cdda3753f933

Cc: Mayor Daniella Levine Cava, <u>mayor@miamidade.gov</u>

Director Lourdes Gomez, Department of Regulatory and Economic Resources, lourdes.gomez@miamidade.gov

Assistant Director of Planning Jerry Bell, RER,

jerry.bell@miamidade.gov Commissioner Oliver G. Gilbert, III,

district1@miamidade.gov Commissioner Jean Monestime,

district2@miamidade.gov

Commissioner Keon Hardemon,

district3@miamidade.gov Commissioner Sally A.

Heyman, <u>district4@miamidade.gov</u> Commissioner

Eileen Higgins, <u>district5@miamidade.gov</u>

Commissioner Rebeca Sosa, district6@miamidade.gov

Commissioner Raquel A. Regalado,

district7@miamidade.gov Commissioner Danielle

Cohen Higgins, <u>district8@miamidade.gov</u>

Commissioner Kionne L. McGhee,

district9@miamidade.gov Commissioner Javier D.

Souto, district10@miamidade.gov Commissioner Joe

A. Martinez, <u>district11@miamidade.gov</u> Commissioner

René Garcia, district13@miamidade.gov