**Defining the Installation of the Future After a Natural Disaster – Tyndall AFB Case Study**

Coastal installations face a range of risks due to extreme weather, sea level rise and storm surge. Tyndall Air Force Base, located on the Florida panhandle, was hit with a category five hurricane in October of 2018 that resulted in damage to 100 percent of its assets. Determined to rebuild the base to be more resilient, sustainable, and smart, the Air Force wanted to ensure that in the future, Tyndall could recover in in hours and days not months and years. The end state would be an Installation of the Future that rebuilds what the Air Force needs, not build back what they had.

Creative and innovative planning, and design criteria was developed to enable an Installation of the Future. This included two enabling Memo’s issued by the Air Force that addressed Design Wind Speeds and Building Envelope Protection to increase structural wind load requirements and the Design Flood Elevation (DFE) that increased the minimum elevation to reflect anticipated future storm surge and sea level rise to fully enable increased resiliency.

Rising to this challenge, the Tyndall planning team quickly established performance standards that put metrics that would actually achieve more resilient, sustainable and smart solutions. This included definition of innovative guiding principles delivered by a multi-disciplinary technical team of subject matter experts. An integrated delivery approach ensured that truly viable recommendations were vetted through the proper disciplines to achieve optimized outcomes providing the best return on investment.

Several solutions were developed to enable the Installation of the Future approach, including an updated Installation Facilities Standards (IFS), a more detailed IFS rebuild appendix specific to the 1391 MILCON rebuild program, Landscape Master Plan, an environmental risk register and the application of an integrated land management approach for the redevelopment areas. The planning team also worked collaboratively with the US Army Corps of Engineers to ensure success through an initiative called Engineering With Nature® (EWN®).

The magnitude and challenge of organizing simultaneous and interrelated stakeholder and partnering working groups was massive, necessitating numerous tasks running in parallel and requiring a keenly focused synchronization of information that included daily briefings and numerous strategic breakout sessions in order to keep the program moving. Stakeholders included USACE, FEMA and NOAA, as well as State and Local agencies, institutions of higher educational and privatized utility providers. When COVID impacted daily operations and affected the ability to interact with stakeholders in person, specialized tools and techniques were developed to migrate this massive stakeholder engagement program to a digital platform including virtual town halls, websites and online meetings.

This unique approach to stakeholder engagement supported coastal resilience by building upon innovative planning, engineering and partnerships that reconciled the various climate change, resilience and adaptation directives into a coherent approach that supported mission assurance, cost effectiveness and pursuit of the goal of becoming a resilient, sustainable and smart Installation of the Future. A key focus of the stakeholder engagement approach was a ‘system of system’s that integrated grey, green and natural infrastructure to increase resilience, while also creating locally-relevant shared social, environmental and economic benefits, including integration of Other Transactional Authorities (OTAs) partnerships that are critical to gaining alignment and support for the nature-based elements of the coastal resilience strategy.

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**Bio:**

Hollie Schmidt is a Principal at Jacobs providing planning services to wide range of public, private, and federal clientele. In her 25 years of practice she has perfected an integrated planning and delivery approach, with a particular focus on master planning and site selection. Serving a broad range of projects, she leads large, diverse teams of planners, architects and a full spectrum of engineers and technical experts. With a strong foundation in facilitation, coordination, communication, and problem solving, she has a long history of successfully leading mega, complex projects for clients with large real estate and facilities holdings.

Hollie’s area of practice includes master planning, site selection and facility siting studies for federal, commercial, industrial, life sciences, advanced facilities and petro-chemical clients. She has a focus on resiliency planning either as a preventative or recovery service for larger-scale clients who are experiencing vulnerabilities to natural or man-made disasters particularly as it relates to climate change. She performs site selection studies at many scales applying a holistic siting approach integrating criterion that addresses the human, business and the physical environments. Other master planning capability and experience includes research and development planning for large clients with complex logistics and operations, as well as a range of real estate advisory services to federal agencies, including the Centers of Disease Prevention and Control (CDC), NIOSH, Intelligence Agencies, US Army, ARNG, Navy, US Air Force, SSA, IRS and GSA.

Hollie was a core team member for the Tyndall Air Force Base Recovery Program and led the infrastructure packages for the 1391 submissions, updated the Installation Facilities Standards (IFS), created an IFS Rebuild Appendix specific to the MILCON program and a supplemental Landscape Master Plan. She assisted the teams focused on the Other Transactional Authority (OTA) Studies for the Child Development Center and Coastal Resiliency as well as served as the On-Site Manager. She spent 18 months at Tyndall.