

SFO

San Francisco
International
Airport



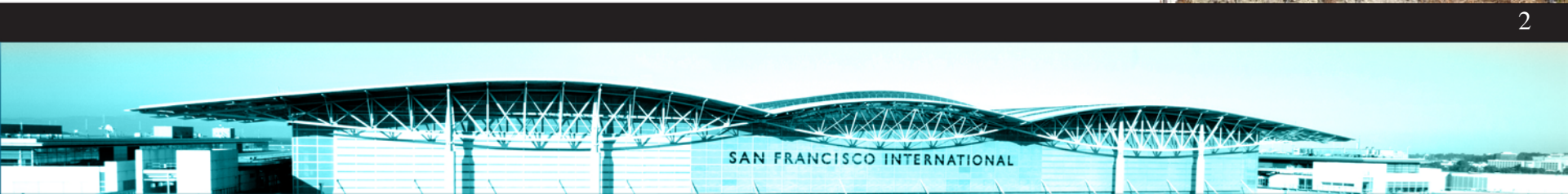
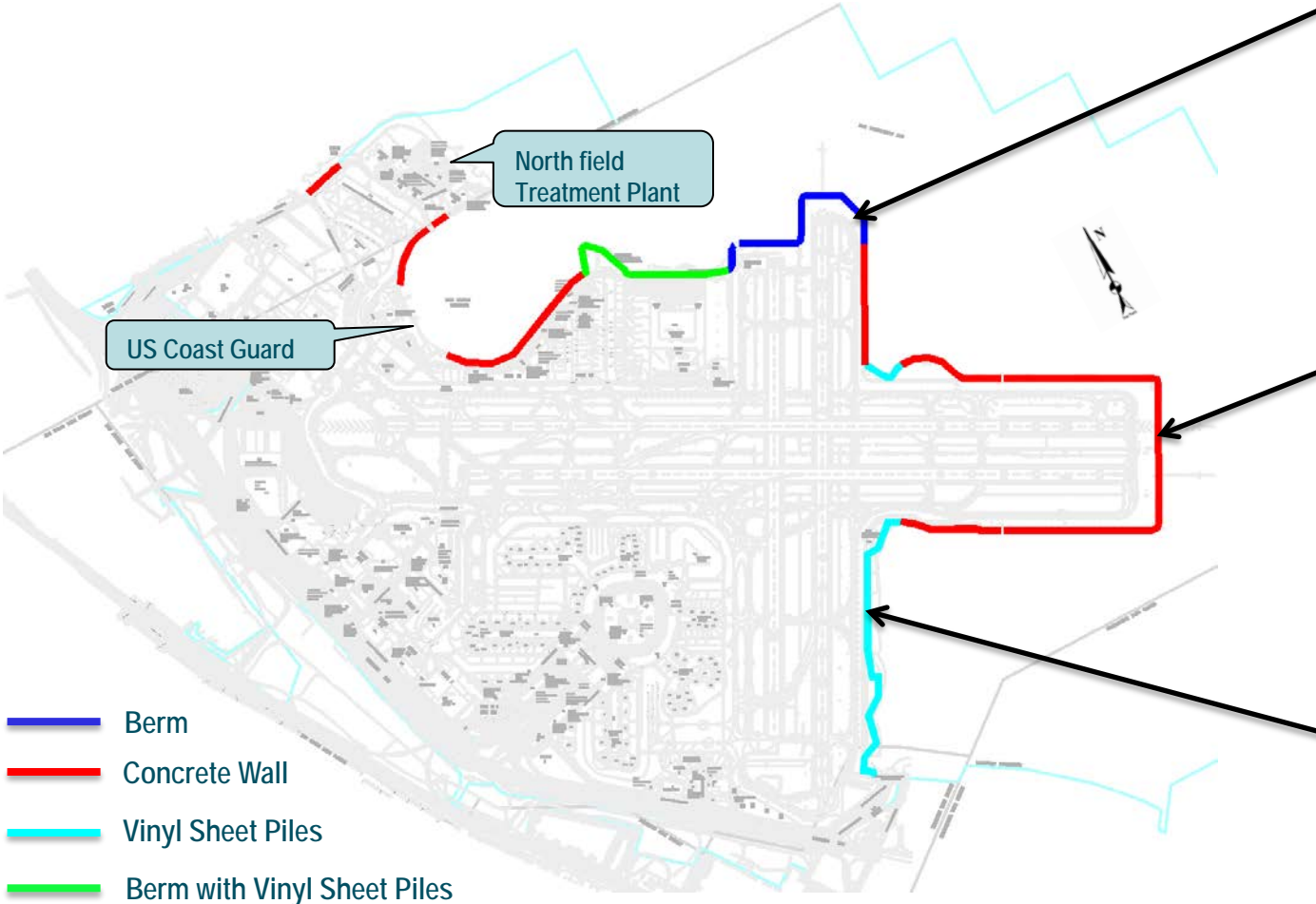
SFO's Adaptation Strategies

San Mateo County Sea Level Rise Shoreline Vulnerability Assessment
June 5, 2015

Joe Birrer
Director of Engineering and Construction Services



What has SFO done? Existing Engineered Shoreline Protection 1983-2006



Sea Level Rise & Extreme Storm Event

- I. 2010: CCSF joined FEMA's National Flood Insurance Program (NFIP)
- II. FEMA's SF Bay Area Coastal Study determined Base Flood Still Water Elevation: **10.5 feet NAVD88**
- III. 2013: FEMA issued Draft Flood Insurance Rate Map (FIRM)
- IV. Sea Level Rise (SLR) not accounted for

Legend

Zone AE

Subject to 100 year floods

Zone X

Above 500 year flood level



2013 Draft FIRM

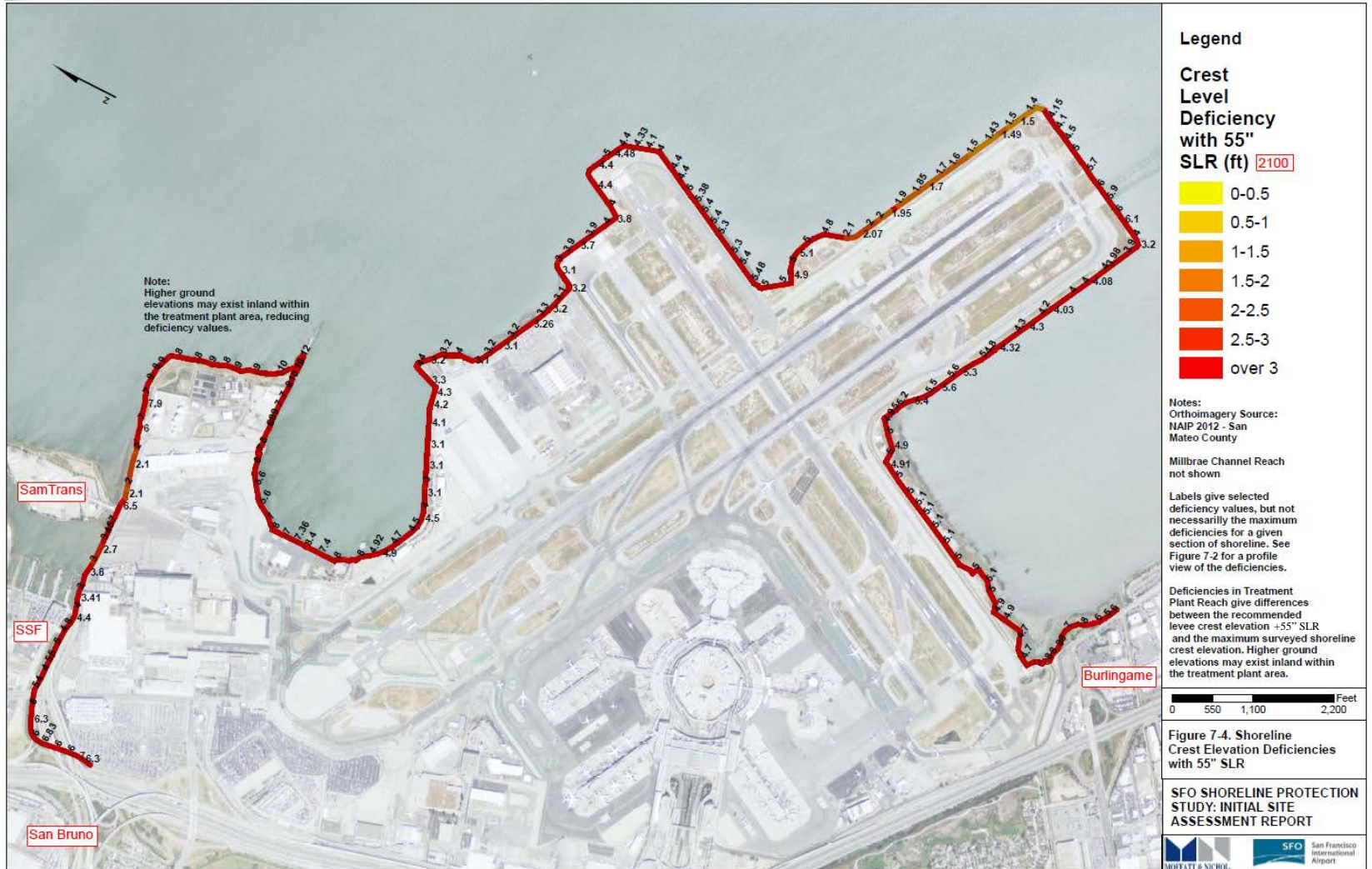


Airport Shoreline Protection Feasibility Study

- I. Performed a bay water modeling of sea level rise and extreme storm events
- II. Examined integrity of existing seawalls based on FEMA's standards (CFR 65.10):
 - 1) Examined the full length of shoreline (~8 miles)
 - 2) Identified height deficiencies
 - 3) Performed slope stability and settlement analyses
- III. Examined interior drainage system
- IV. Provided recommendations for FEMA compliance and future SLR







Next Steps

- I. California Environmental Quality Act (CEQA) process started
- II. US Army Corps of Engineers
 - 1) Sent conditional Letter of Intent in May, 2015 – potential partnership a in new feasibility study
- III. Zone A99 Certification Application submitted to FEMA in May, 2015
- IV. Legislative compliance
 - 1) AB 2516 (2014):

California Natural Resources Agency is compiling a statewide sea level rise database online (1st report due 7/1/15)
 - 2) EO B-30-15 (4/29/15):

State agencies will be looking for SLR adaptation planning when state actions (funding and permit decision making) are required
 - 3) EO 13690 (1/30/15):

Federal agencies require up to 2 to 3 feet of freeboard on top of 100 year flood to account for sea level rise on federal actions (funding and decision making)

