



# IR Site 12 Conceptual Site Model Update Restoration Advisory Board Presentation

Naval Station Treasure Island  
San Francisco, California



Innovex-ERRG Joint Venture

8/9/2022

# Topics to be Covered

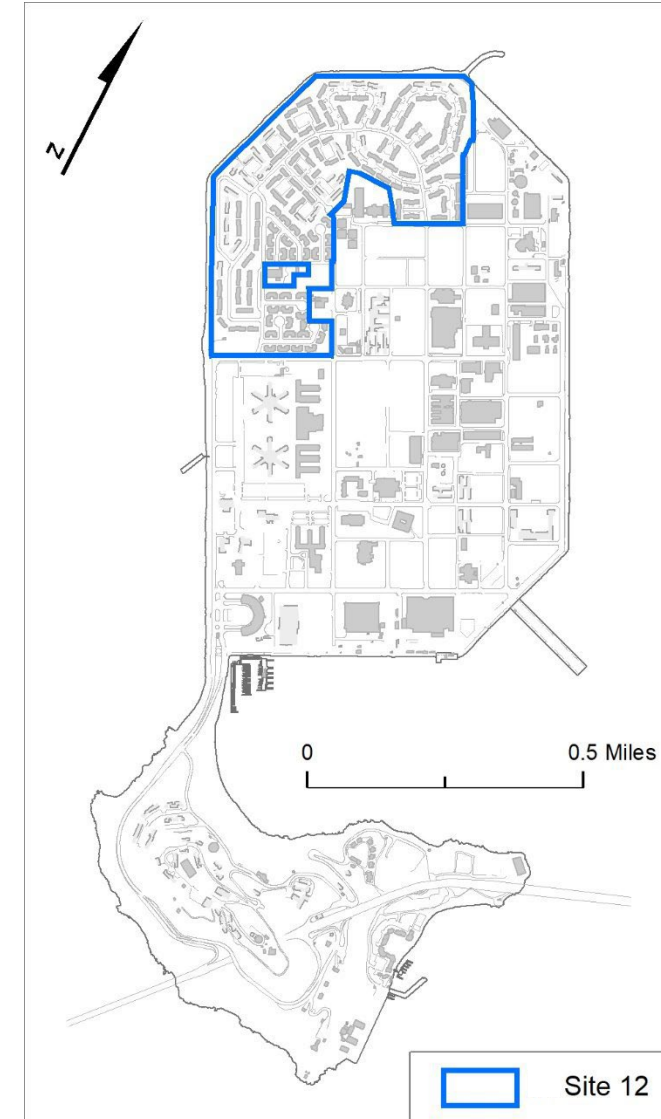


- Purpose of the Conceptual Site Model (CSM)
- Site 12 Housing Area
- Site 12 Solid Waste Disposal Areas (SWDAs)
- Waste Disposal Chronology
- Munitions Disposal Footprint
- Pre-Housing Construction Work
- Central Rubbish Area
- How does the CSM Update refine our understanding?
- Next Steps



# Purpose of Conceptual Site Model

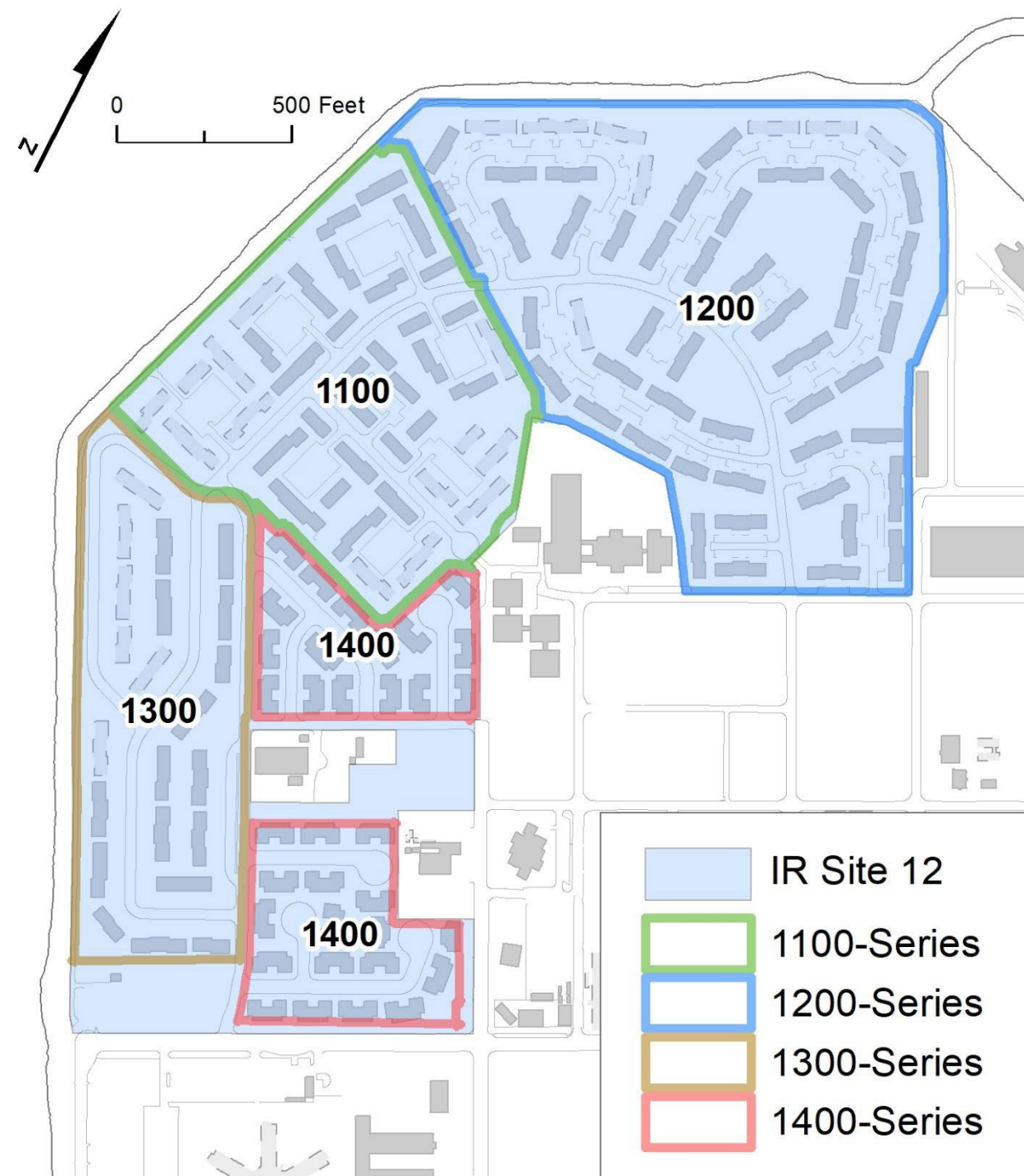
- The CSM is an iterative, 'living representation' of a site that summarizes and helps cleanup project teams visualize and understand available information for planning investigations and cleanup remedies.
- The CSM uses a combination of written and graphical work products to portray both known and hypothesized site information.
- The CSM assists cleanup project teams and decision makers throughout the life cycle stages of investigation and cleanup.
- A detailed, up-to-date, and accurate CSM supports decisions related to characterization, assessing risk, remedy selection, and site reuse.





# Site 12-Housing Area

- Site 12 is an environmental site at the northwest end of Treasure Island
  - Cleanup activities follow the CERCLA process with California regulatory agency oversight
- Former naval ammunition storage facility during WWII and waste disposal areas from 1940s to early 1960s
- Later developed as Navy housing:
  - 1100-series (1965)
  - 1200-series (1972)
  - 1300-series (1974-75)
  - 1400-series (1988)

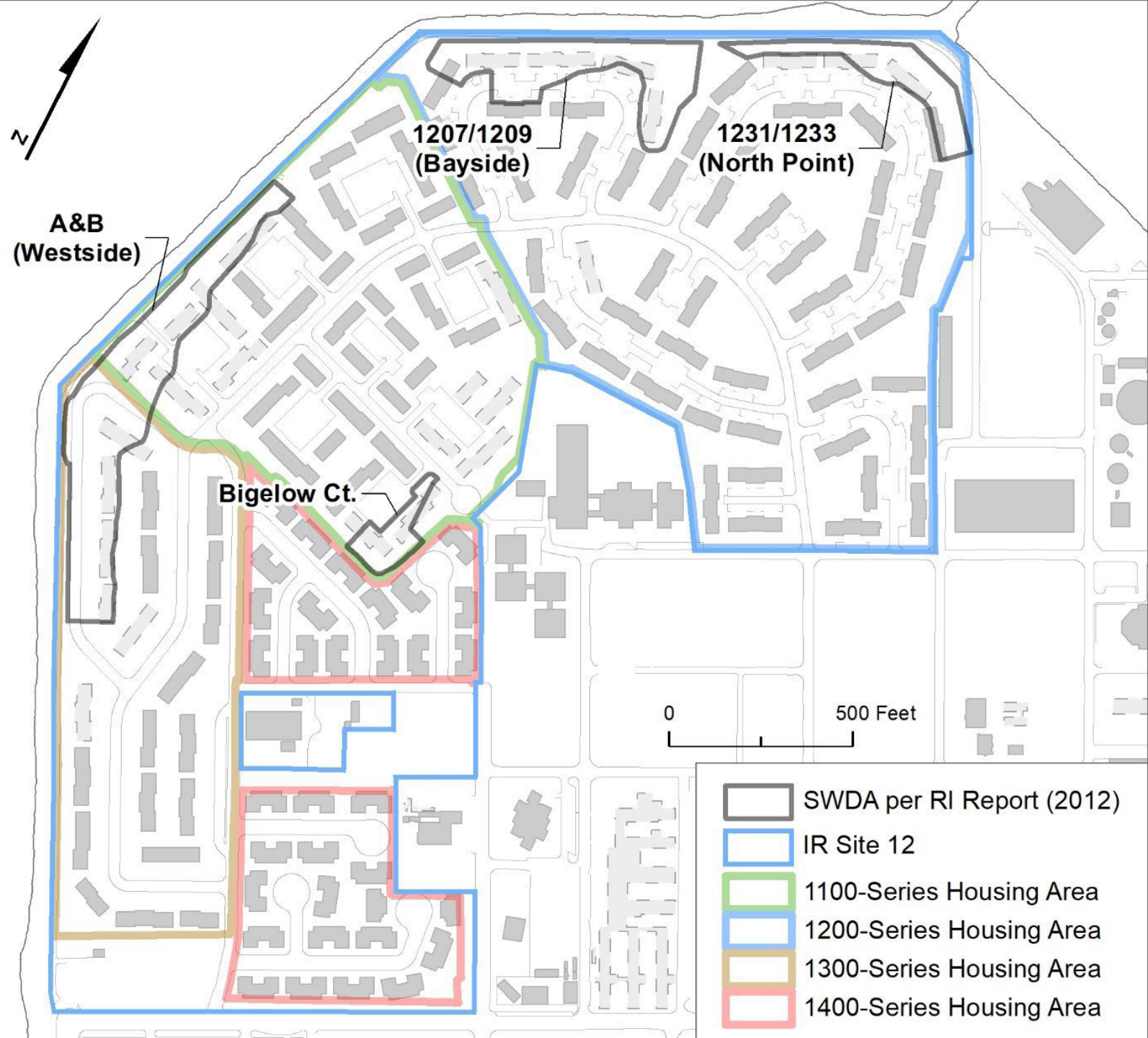




# Site 12 SWDAs (2012)

## Solid Waste Disposal Areas (SWDAs) at TI can contain:

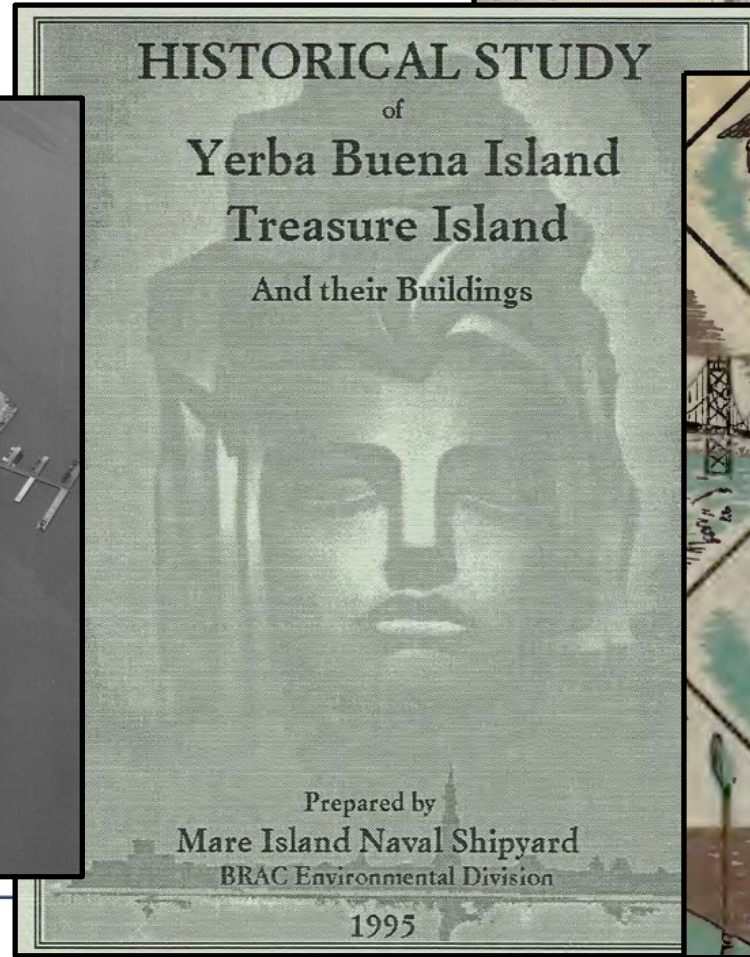
- Domestic/Sanitary waste and/or industrial waste from Navy operations
- Chemical contamination
- Low-level radiological objects (LLROs), e.g. aircraft carrier deck markers
- Munitions items (1945-1947)





# Waste Disposal Chronology Development

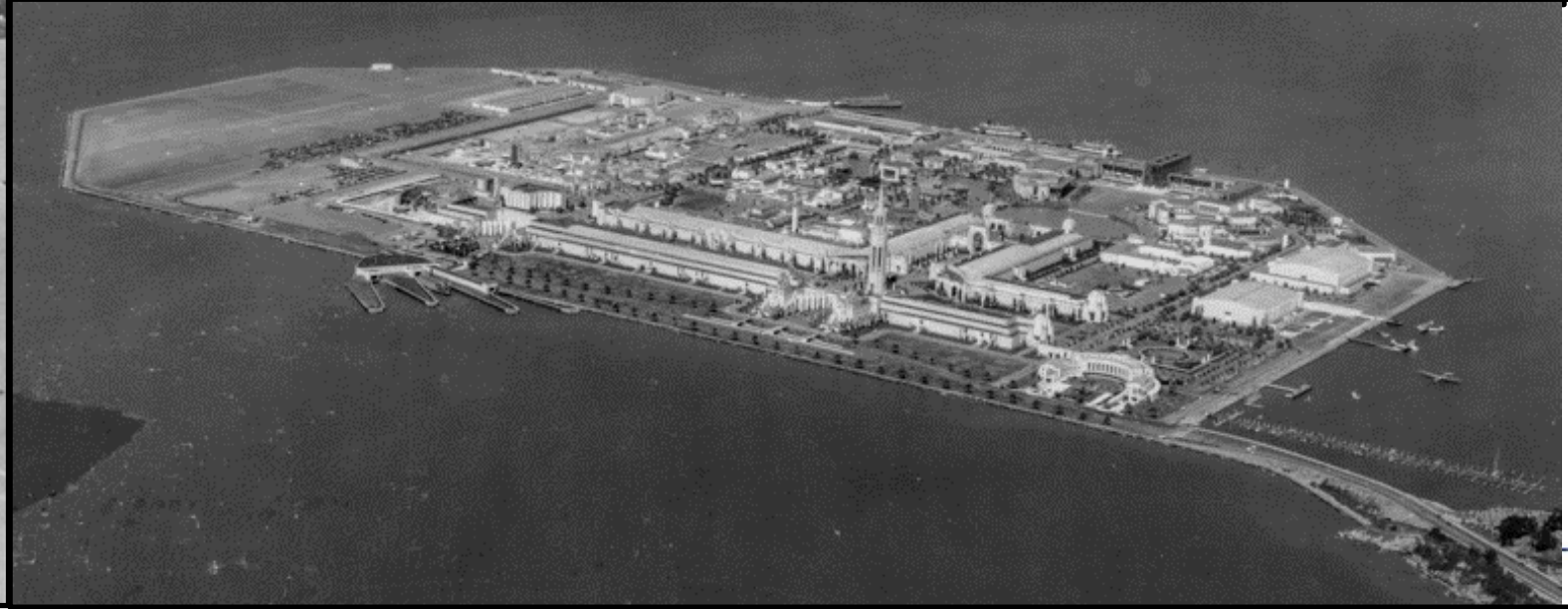
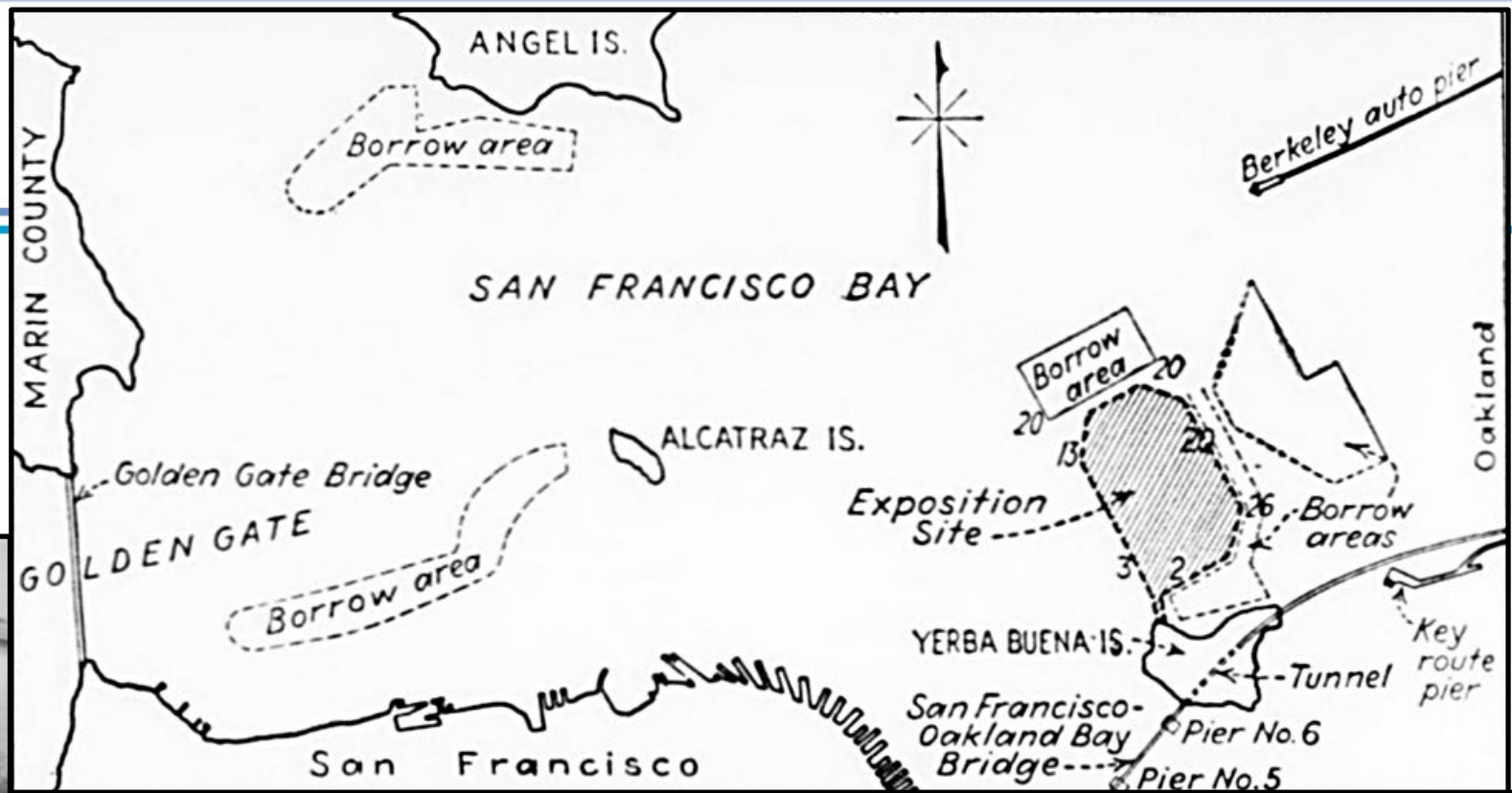
- Reviewed historical and admin record documents to build a chronology of Site 12 waste disposal





# Chronology: 1936-1940

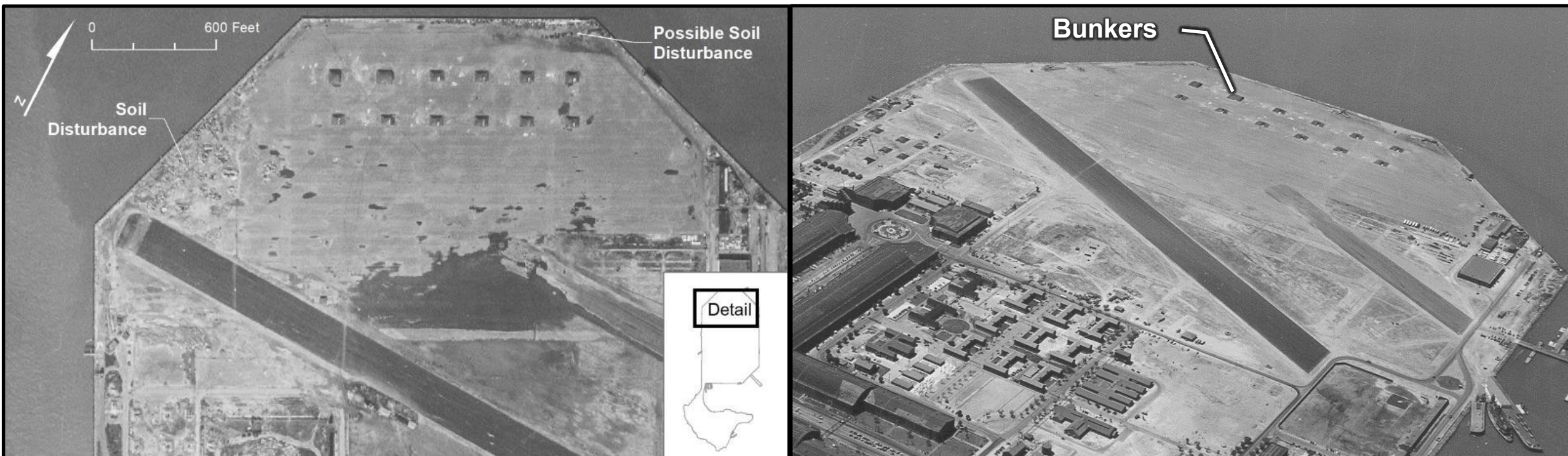
- Treasure Island built for the Golden Gate International Exposition of 1939-1940
- Site 12 mostly used as a parking lot





# Chronology: 1941-1943

- Original plan: Develop TI as a municipal airport
- December 7, 1941: Attack on Pearl Harbor
- April 17, 1942: Navy takes ownership, constructs ammunition bunkers at Site 12
- 1942: Waste disposal begins near end of runway (now called Westside SWDA)





# Chronology: 1944

- Ammunition storage at center of Site 12
- Continued disposal at end of runway (Westside SWDA)





# Chronology: Late 1944-1945

- Ammunition Facility established

- Large bunkers constructed expanding ammunition storage area
- Enclosed by a security fence – no waste disposal in fenced area

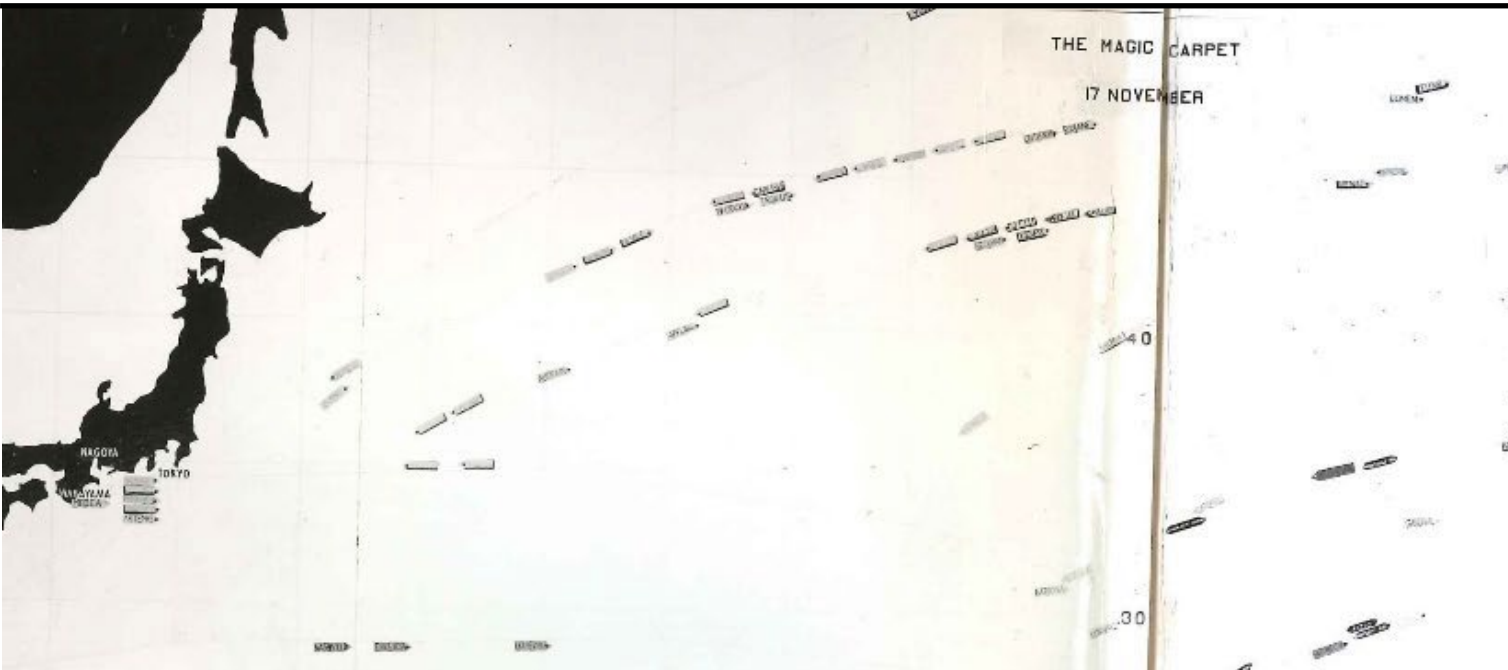
- Waste disposal continues at Westside SWDA





# Chronology: September 1945

- Japan surrenders; *Operation Magic Carpet* begins
  - 8 million service members return over ~one year, average 22,000 per day
  - TI is a major disembarkation point, average 4,000 per day, max 12,000 in one day
- Start of munitions disposal; items of Japanese-origin





# Chronology: 1946

- *Operation Magic Carpet* continues
- Deep disposal pit and soil piles at Westside SWDA
- Ammunition Facility decommissioned June 1, 1946





# Chronology: 1947

- Former bunkers converted to general storage:
  - Burn pit is established between two bunkers at Bayside SWDA
  - Possible soil disturbance at North Point SWDA
- Continued waste disposal activity at Westside SWDA

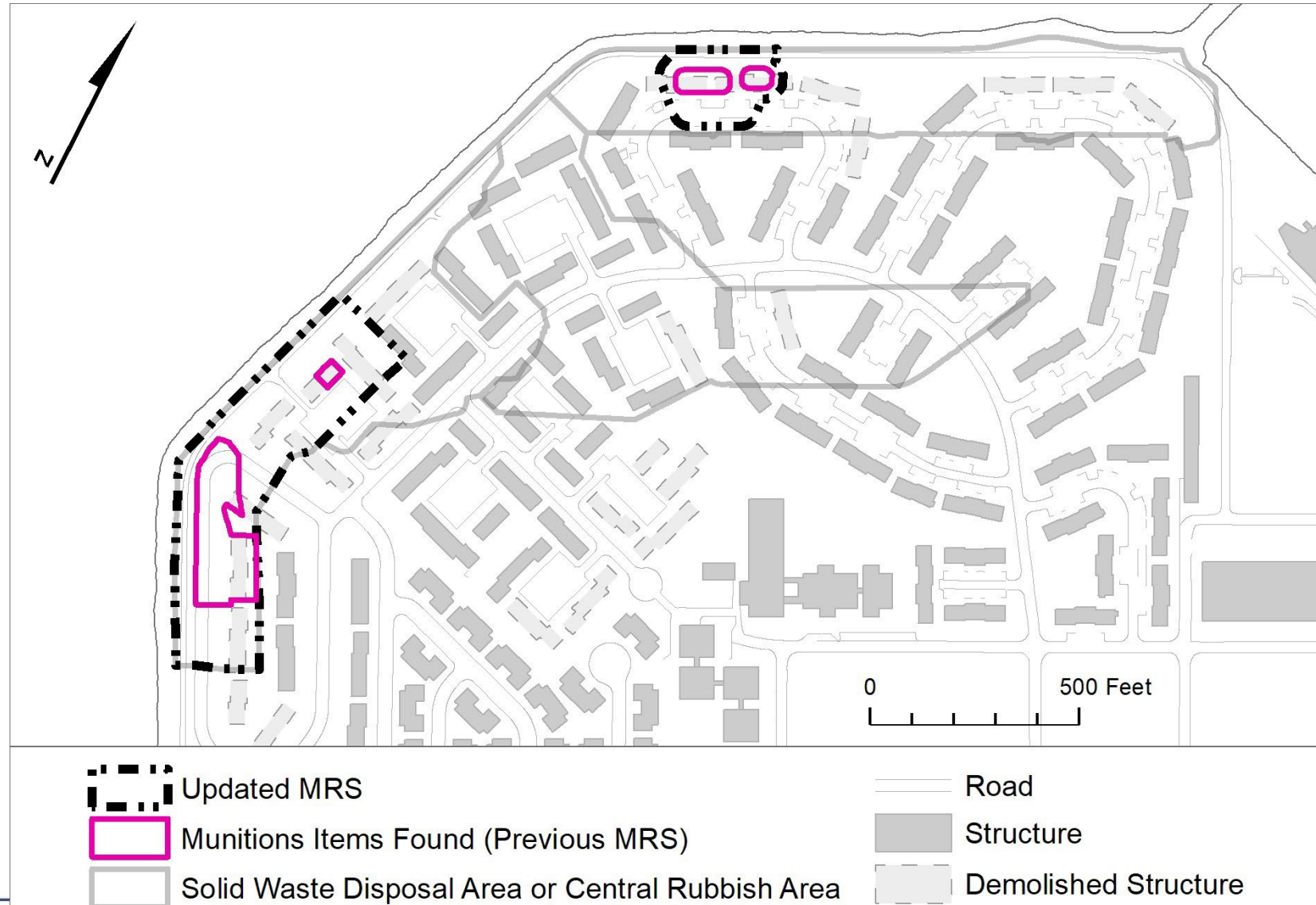




# Munitions Disposal Footprint

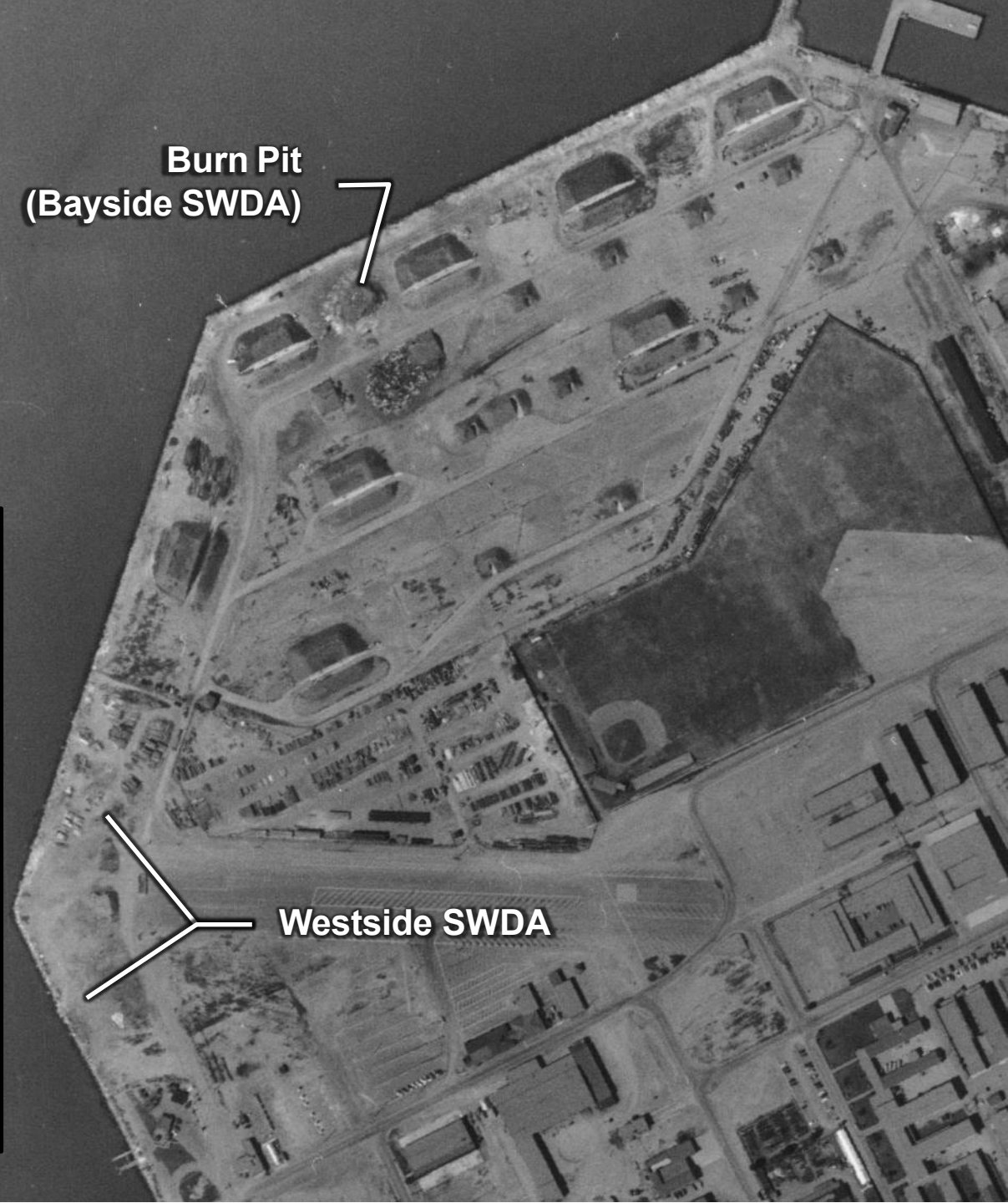


- **Munitions Response Site (MRS)**  
an area requiring munitions-related safety precautions for soil excavation
- Cleanup work found 414 munitions items compatible with WWII-era
  - No explosives in ~90% of items
  - Most items are empty cartridge casings associated with naval anti-aircraft guns
  - Finds are in areas of deep disposal; most finds were deeper than 6 feet.
- CSM Update recommended an expanded MRS to enclose disposal activity circa *Operation Magic Carpet* (1945-1947)



# Chronology: early 1950s

- Disposal at Bayside SWDA burn pit
- Little to no activity at Westside SWDA – pits and piles are absent





# Chronology: late 1950s

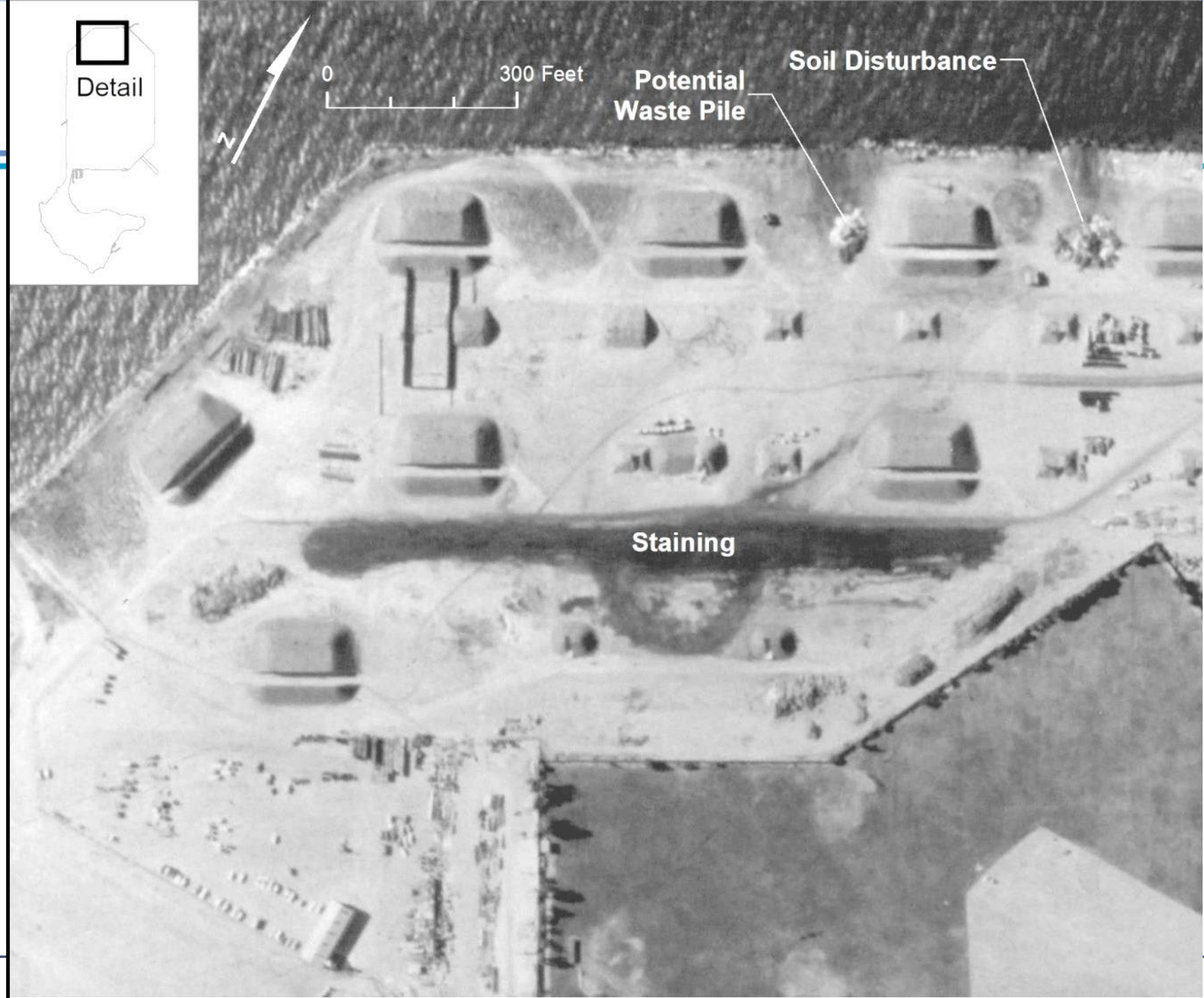
- Darkened soil around Northpoint SWDA incinerator (built 1952)
- Possible soil disturbance around Westside SWDA
  - known disposal at some point based on new mounds flanking runway by mid-1960s





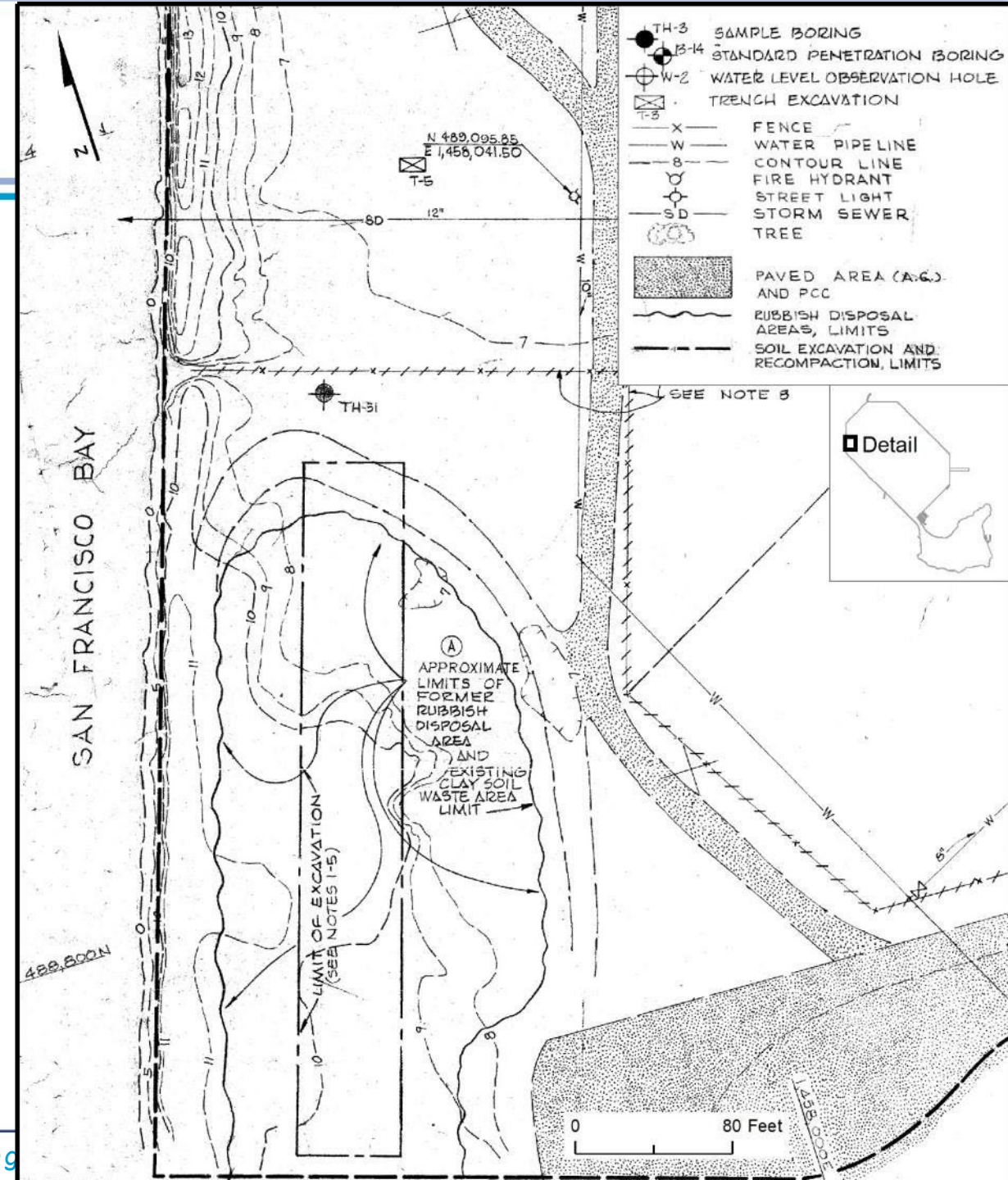
## Chronology: Early 1960s

- Soil staining appears further inland than previous disposal activity
- This area called the **Central Rubbish Area (CRA)**
- Pre-housing development (1965) documents describe past trenching and burial of “sanitary waste” in the CRA



# Pre-Housing Construction Work

- Reports document the presence of “rubbish” disposal at Site 12 coinciding with the SWDAs and the CRA
- Soil borings and trenches documented presence of buried, loose rubbish which would create a stability issue for housing foundations
- As-built maps indicate that rubbish was excavated, mixed with soil, replaced in the hole and compacted, then the excavation was filled to grade with more-or-less rubbish-free soil
- Reburied rubbish typically starts around 2 to 3 feet underground

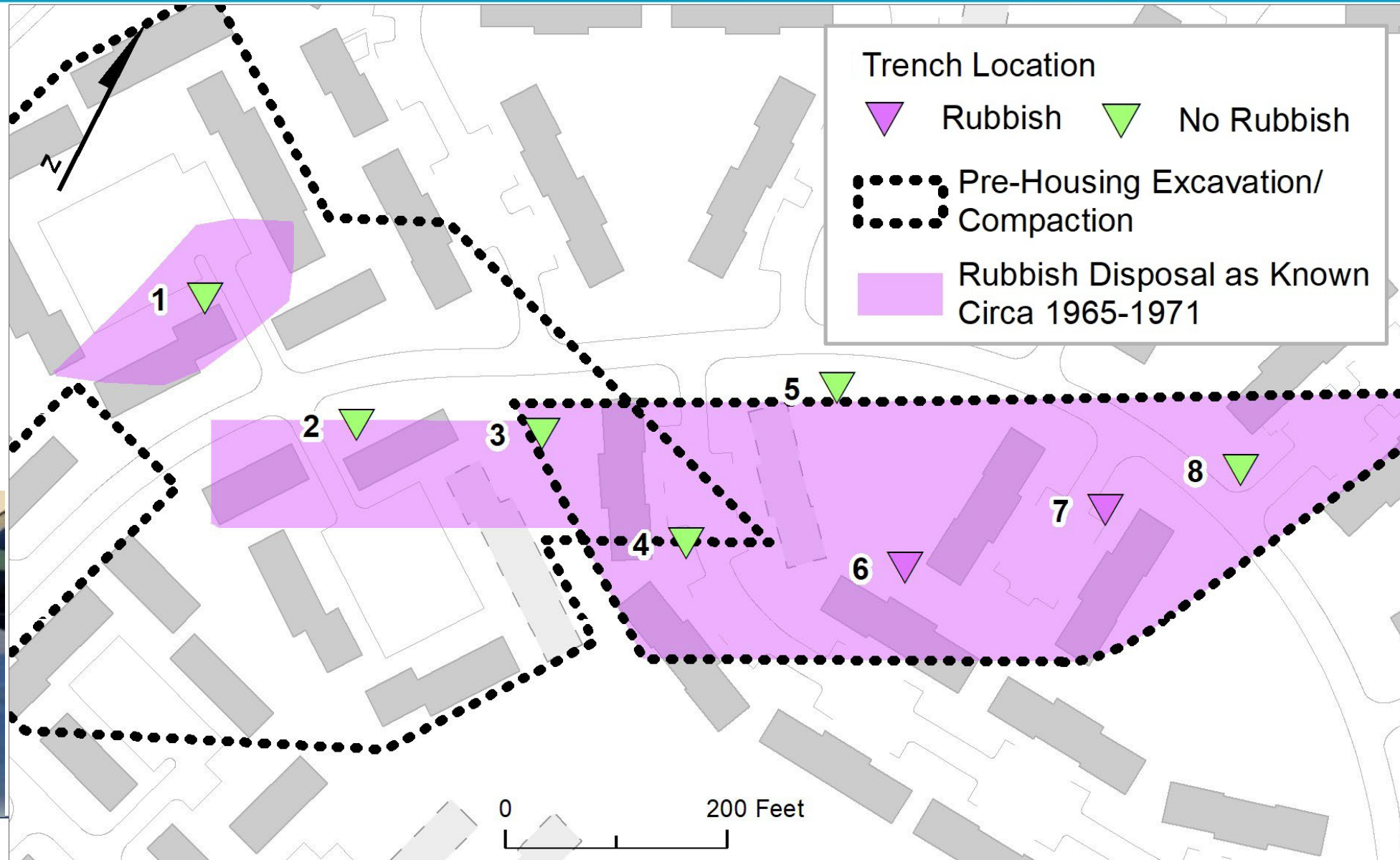




# Central Rubbish Area Investigation (2014)



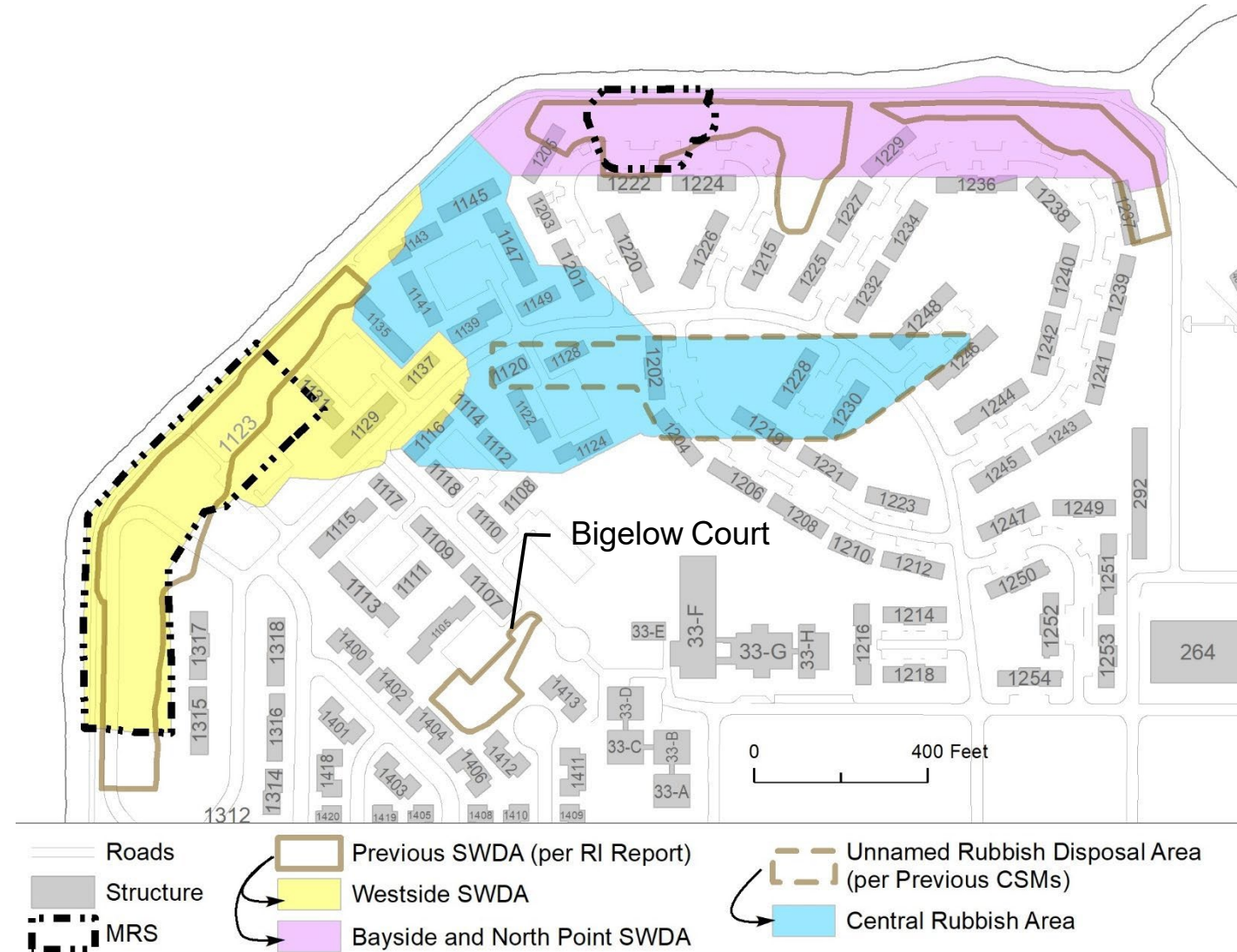
- Film reel, bottles, deodorant  
4-6 feet deep
- Earlier trenching in 2004 found metal cannisters around 4 feet deep



# How does the CSM Update refine our understanding?



- Better understanding of original disposal locations
- Northeast boundary of Westside SWDA expanded
- Bayside and Northpoint SWDAs combined
- Bigelow Ct not an original disposal area
- CRA is larger and can contain non-household waste
- More detailed understanding of earthwork prior to housing construction
- MRS expanded to include likely munitions disposal (disturbance 1945-1947; mostly > 6 feet deep)





# Next Steps



- CSM Update Report is in the review, comment, and resolution period
  - Our research did not uncover any information that would require new restrictions for the residents
  - Treasure Island remains a safe place to live, work, and play
- Additional findings and conclusions will be presented at future RAB meetings
  - Findings presented today are those most likely to be of interest to residents and larger community
- Fact Sheet in September
  - Covers similar content as this presentation
  - Mailed to all Site 12 residents (and mailing list) and posted to website with eblast alert
- Final CSM revisions will be incorporated into the Feasibility Study Addendum #2
  - Addresses radiological concerns throughout Site 12 and all environmental concerns within the disposal areas
  - This deeper understanding of the CSM will assist the Navy in developing a variety of cleanup alternatives in order to continue to ensure protectiveness of current and future users regardless of the types of reuse
- Following the FS, a Proposed Plan document and meeting presents, to the public, the remedy alternatives under consideration
  - Public meeting will present pros and cons for all remedies and allow for questions, comments, and input from the public on the preferred remedy alternative

# Questions?

