

SAN FRANCISCO WATERFRONT COASTAL FLOOD STUDY, CA

APPENDIX F REAL ESTATE PLAN

JULY 2026

USACE TULSA DISTRICT | THE PORT OF SAN FRANCISCO



**US Army Corps
of Engineers**



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Acronyms and Abbreviations

Acronym	Definition
EWN	Engineering with Nature
IFR / EIS	Integrated Feasibility Report / Environmental Impact Statement
NFS	Non-Federal Sponsor
LER	Lands, Easements, and Rights-of-Way
LERRD	Lands, Easements, Rights-of-Way, Relocations, and Disposal Areas
LUST	Leaking Underground Storage Tank
OMRR&R	Operations, Maintenance, Repair, Rehabilitation, and Replacement
PED	Preconstruction Engineering and Design
PGL	Policy Guidance Letter
PPA	Project Partnership Agreement
RAC	Regional Appraisal Center
REP	Real Estate Plan
SFWCFS	San Francisco Waterfront Coastal Flood Study
SPD	South Pacific Division
SPDRAC	South Pacific Division Regional Appraisal Center
USACE	U.S. Army Corps of Engineers
WRDA	Water Resources Development Act

1.0 Statement of Purpose

This Real Estate Plan (REP) is prepared in accordance with the *Real Estate Handbook, ER 405-1-12*. The purpose of this REP is to provide an outline of the federal real estate acquisition requirements for the San Francisco Waterfront Coastal Flood Study (SFWCFS), San Francisco, California. The feasibility study documents the planning process and information used to identify the Recommended Plan to protect the waterfront of the San Francisco Bay area. There is potential for quality-of-life loss as well as industrial damage if there is permanent water inundation along the waterfront. The information contained herein is tentative in nature and for planning purposes only.

2.0 Authorization

This study is being conducted under the authority of Section 110 of Rivers and Harbors Act of 1950, Section 142 of Water Resources Development Act (WRDA) 1976 as amended by Section 705 of WRDA 1986 and Section 8325 of WRDA 2022, and Section 203 of WRDA 2020 that authorize an investigation of the feasibility of providing protection against tidal and fluvial flooding and measures to adapt to rising sea levels in the City and County of San Francisco.

Section 110 of the Rivers and Harbors Act of 1950 states:

“The Secretary of the Army is hereby authorized and directed to cause preliminary examinations and surveys to be made at the following-named localities, the cost thereof to be paid from appropriations heretofore or hereafter made for such purposes : Provided, That no preliminary examination, survey, project, or estimate for new works other than those designated in this title or some prior Act or joint resolution shall be made: Provided further, That after the regular or formal reports made as required by law on any examination, survey, project, or work under way or proposed are submitted, no supplemental or additional report or estimate shall be made unless authorized by law: Provided further, That the Government shall not be deemed to have entered upon any project for the improvement of any waterway or harbor mentioned in this title until the project for the proposed work shall have been adopted by law: Provided further, That reports of surveys on beach erosion and shore protection shall include an estimate of the public interests involved, and such plan of improvement as is found justified, together with the equitable distribution of costs in each case: And provided further, That this section shall not be construed to interfere with the performance of any duties vested in the Federal Power Commission under existing law: ...San Francisco Bay, including San Pablo Bay, Suisun Bay, and other adjacent bays, and tributaries thereto, California.”

Section 142 of WRDA 1976, as amended, states:

“SEC. 142. The Secretary of the Army, acting through the Chief of Engineers, is authorized and directed to investigate the flood and related

problems to those lands lying below the plane of mean higher high water along the San Francisco Bay shoreline of San Mateo, Santa Clara, Alameda, Napa, San Francisco, Marin, Sonoma and Solano Counties to the confluence of the Sacramento and San Joaquin Rivers with a view toward determining the feasibility of and the Federal interest in providing protection against tidal and fluvial flooding. The investigation shall evaluate the effects of any proposed improvements on wildlife preservation, agriculture, municipal and urban interests in coordination with Federal, State, regional, and local agencies with particular reference to preservation of existing marshland in the San Francisco Bay region.”

Section 8325(b) of WRDA 2022 also states:

“(b) IMPLEMENTATION. — In carrying out a study under section 142 of the Water Resources Development Act of 1976 (90 Stat. 2930; 100 Stat. 4158), pursuant to section 203(a)(1)(A) of the Water Resources Development Act of 2020 (as amended by this section), the Secretary shall not differentiate between damages related to high tide flooding and coastal storm flooding for the purposes of determining the Federal interest or cost share.”

Section 203 of WRDA 2020, as amended, states:

“a) the Secretary shall expedite the completion of the following feasibility studies, as modified by this section, and if the Secretary determines that a project that is the subject of the feasibility study is justified in a completed report, may proceed directly to preconstruction planning, engineering, and design of the project”

(1) San Francisco Bay, California – The study for flood risk reduction authorized by section 142 of the Water Resources Development Act of 1976 (90 Stat. 2930), is modified to authorize the Secretary to—

(A) investigate the bay and ocean shorelines of San Mateo, San Francisco, and Marin Counties for the purposes of providing flood protection against tidal and fluvial flooding;

(B) with respect to the bay and ocean shorelines of San Mateo, San Francisco, and Marin Counties, investigate measures to adapt to rising sea levels; and

(C) with respect to the bay and ocean shorelines, and streams running to the bay and ocean shorelines, of San Mateo, San Francisco, and Marin Counties, investigate the effects of proposed flood protection and other measures or improvements on—

(i) the local economy;

(ii) habitat restoration, enhancement, or expansion efforts or opportunities;

- (iii) public infrastructure protection and improvement;*
- (iv) stormwater runoff capacity and control measures, including those that may mitigate flooding;*
- (v) erosion of beaches and coasts; and*
- (vi) any other measures or improvements relevant to adapting to rising sea levels.”*

3.0 Project Location

The study area extends approximately 7.5 miles from Aquatic Park in the northeast to just past Heron’s Head Park in the south. The study area is divided into four reaches and 15 subareas for conducting and evaluating coastal process and economic analyses, as shown in **Figure F-1**. These reaches were chosen based on hydrologic separability, identifiable geographic references, specific wave action within each reach, and major differences in physical structure inventory within the reach. These reaches also provide a neighborhood-scale approach to communicate risks, impacts, and alternatives. Reach delineations and associated sub-areas include the following:

- **Reach 1:** Covers Aquatic Park, Fisherman’s Wharf, Pier 31 to Pier 35, and the North Beach neighborhood. This reach contains unique open space, recreational opportunities, historic resources, and tourism attractions that are recognized as global icons.
- **Reach 2:** Includes the Northeast Waterfront and Financial District. This area comprises a significant portion of the Embarcadero Historic District and includes popular sites such as the Exploratorium, Embarcadero Promenade, and the San Francisco Ferry Building. Throughout this reach, many transportation hubs and businesses in the Financial District make this area central to San Francisco’s economy.
- **Reach 3:** Contains South Beach, Mission Creek, Mission Rock, Mission Bay, and Pier 70. This area is known for the Giants’ baseball stadium and access to Mission Creek and the Bay. It is one of the densest residential areas within the SFWFS, with high numbers of vulnerable populations and a number of community facilities such as the Delancey Street Foundation and SoMa Recreation Center. This reach is also the site of new waterfront development projects aimed to provide greater public access, jobs, services, and affordable housing opportunities.
- **Reach 4:** Encompasses Pier 80, Islais Creek, Cargo Way, Pier 96, and Heron’s Head Park. This area comprises industrial uses along the waterfront and provides critical industrial, maritime, and commercial Port functions. The Islais Creek subarea is ethnically diverse and has been subjected to considerable historical and environmental injustices. It also has strong economic and cultural life, with high rates of women- and minority-owned businesses, numerous

community benefit organizations, worship centers, and arts and culture organizations.



Figure F-1: San Francisco Waterfront Coastal Flood Study Area

4.0 Non-Federal Sponsor

The Port of San Francisco (Port) is the non-federal sponsor for this study. The Port oversees the administration of the public trust for the State of California under the Burton Act, ensuring that public trust uses such as maritime, public access, historic resources, visitor-serving uses, and water-related and dependent uses are preserved and maintained along the waterfront. The Port is also an enterprise agency of the City of San Francisco (City); they raise funds by leasing property and charging fees within their jurisdiction to preserve and enhance uses that are important to the public trust and to the City.

5.0 Project Description

This REP conceptually describes the proposed project features; provides a general description of Lands, Easements, Rights-of-Way, Relocations, and Disposal Areas (LERRD) requirements to implement the project; provides a framework for the federal real estate acquisition requirements; provides an estimated projection of the LERRD acquisition schedule; and provides estimated non-Federal LERRD acquisition and administrative costs and related Federal LERRD administrative costs.

In order to meet the study objectives of reducing flood risk and flood damages, reducing flood risk to public health, safety and life, and minimizing residual flood risks to the extent justified, alternatives were formulated, analyzed, compared and screened by the project delivery team and a Recommended Plan was identified and approved.

The principal structural features of the Recommended Plan are listed below. The Recommended Plan proposes features be constructed in two phases to be adaptable to increasing risk in the study area. Therefore, features will differ in each phase, 2040 or First Action and approximately 2090, Subsequent Action. Recommendations for addressing residual risk by the non-federal sponsor in each phase include nonstructural and structural features, such as dry floodproofing, ground improvement, wharf rebuilds, T-walls, berms, concrete curbs as described in Chapter 5 of the Main Report. Specifics of such plans will be included or referenced in the language Monitoring and Adaptation Plan and the Project Partnership Agreement (PPA) signed after project authorization.

- A. Embarcadero (Reaches 1 and 2). In Fisherman's Wharf, the Recommended Plan initially relies on floodproofing buildings, and later elevates the shoreline with floodwalls. Along the Embarcadero, the Recommended Plan elevates the shoreline in place by raising and reconstructing the bulkhead walls and pile-supported wharves north of the Bay Bridge while gradually transitioning down from the new shoreline elevation back to the existing city grade to retain visual and physical access to the waterfront. The plan includes reconstruction and redesign of the Embarcadero roadway – surface design of the Embarcadero roadway and promenade will be determined in future project phases. The Ferry Building and bulkhead buildings are raised in place. Piers are floodproofed with concrete curbs around the perimeter to reduce flood risk.

- B. Mission Creek / Mission Bay (Reach 3). In the Mission Creek / Mission Bay geography, the Recommended Plan defends existing city and community assets in place by elevating the creek and Bay shorelines with naturalized or embankment shorelines, floodwalls, and raised and rebuilt bulkhead walls and wharves. The coastal defense will tie into existing and planned high ground at Bayfront, Agua Vista and Crane Cove Parks, and at the Mission Rock and Pier 70 development areas. The plan also includes partial reconstruction and redesign of the Embarcadero roadway south of the Bay Bridge.
- C. Islais Creek / Bayview (Reach 4). In the Islais Creek / Bayview geography, the Recommended Plan defends the existing shoreline to retain residential and commercial land uses in place, including Port land uses and maritime facilities. The flood defenses consist of raising the shoreline using naturalized or embankment shorelines, bulkhead walls, raising and rebuilding marginal wharves, deployable closure structures, and tying into existing or planned high ground near Potrero Power Station and behind the Pier 94 Wetlands (Port backlands). This area of the waterfront contains large parcels independent of the combined sewer system, such that the elevated shoreline will require modification to handle stormwater in a safe and effective manner.

6.0 LERRDs Required

FEE INTEREST will be required for the following features:

- a. Building demolitions where an Engineering with Nature (EWN) berm will be placed along Islais Creek.
- b. Building demolition in Warm Water Cove.

FLOOD PROTECTION LEVEE EASEMENT will be required for the following features:

- 1) berms and EWN berms will be constructed.

TEMPORARY WORK AREA EASEMENTS will be required for staging during construction throughout the reaches of the project.

ROAD EASEMENTS could be required in areas where roadway impacts have been identified throughout the reaches of the project.

Based on the project's Real Estate maps and tract register, the Recommended Plan requires an estimated 114 acres for the first action and 85 acres for the subsequent action to support the project. There is approximately a 6-acre difference between the acres required for the project and the acres that the Port has jurisdiction over. Because we cannot acquire a parcel and leave an unusable remnant, we must acquire slightly more than 6 acres for the first and subsequent actions as shown below. The main report will show the acreages separated per action.

- An estimated 3.74 acres is required for Temporary Work Area Easement.
- An estimated 3.89 acres is required for Flood Protection Levee Easement.

- An estimated 5.43 acres is required in Fee.

The non-federal sponsor will acquire the minimum interests in real estate to support the construction and subsequent operation and maintenance of the future US Army Corps of Engineers (USACE) project.

Once the PPA process is complete the assigned USACE District Engineering Branch will prepare the final design for advertisement and construction. During this process the tract register, and tract maps will be updated to reflect any modifications to include final staging areas, access requirements, construction haul routes, and recreation features definitively for the First Action and conceptually for the Subsequent Action. This information will be used for future LERRDs crediting purposes.

7.0 Non-Federal Sponsored Owned LER

The Port of San Francisco has fee interest as well as jurisdiction granted by the Burton Act along the majority of the shoreline included within the project footprint.

The Port of San Francisco has jurisdiction over an estimated 106 acres impacted during the first action and 75 acres impacted during the subsequent action.

Credit will only be applied to lands, easements, and rights-of-way (LER) owned and/or held by the sponsors that fall within the project footprint, namely the LER required for the Recommended Plan. Lands outside of the project requirements and that may be acquired for the sponsor's own purposes which do not support the minimum interests necessary to construct, operate and maintain the project would not be creditable LER. Only land deemed necessary to construct, operate and maintain the plan would be creditable. The value of potentially creditable lands owned by the sponsors is included in the Recommended Plan costs.

The Burton Act gives the City and County of San Francisco land in trust for purposes of commerce, navigation, and fisheries and subject to the terms and conditions of the act, all of the right, title and interest held by the State of California and acquired by virtue of its sovereignty or otherwise, in and to the real property located in the City and County of San Francisco and presently under the jurisdiction and control of the San Francisco Port. The City and County of San Francisco has complete authority, except as otherwise agreed to as a condition of the transfer and as provided in this act, to use, conduct, operate, maintain, manage, regulate, improve and control the harbor of San Francisco and to do all things it deems necessary in connection with the use, conduct, operation, management, maintenance, regulation, improvement and control of said harbor which are not prohibited by the laws of the State of California or the Charter of the City and County of San Francisco and which are in conformance with the terms of the act.

8.0 Standard and Non-Standard Estates

The non-federal sponsor will be required to acquire the minimum interest in real estate that will support the construction and subsequent operation and maintenance of the proposed USACE project.

There are no non-standard estates required for this project. If a non-standard estate or real estate policy deviation is needed, it will be coordinated with the Division and Headquarters Real Estate as early as possible to ensure that the justification is sound and the proposed action is within the law, within the project authority, and will serve the project purpose(s).

The following standard estates as defined in ER 405-1-12 are identified as required for the project:

FEE.

The fee simple title to (the land described in Schedule A) (Tract Nos. _____, _____ and _____), Subject, however, to existing easements for public roads and highways, public utilities, railroads and pipelines.

FLOOD PROTECTION LEVEE EASEMENT.

A perpetual and assignable right and easement in (the land described in Schedule A) (Tract Nos. _____, _____ and _____) to construct, maintain, repair, operate, patrol and replace a flood protection (levee) (floodwall) (gate closure) (sandbag closure), including all appurtenances thereto; reserving, however, to the owners, their heirs and assigns, all such rights and privileges in the land as may be used without interfering with or abridging the rights and easement hereby acquired; subject, however, to existing easements for public roads and highways, public utilities, railroads and pipelines.

TEMPORARY WORK AREA EASEMENT (TWAE).

A temporary easement and right-of-way in, on, over and across (the land described in Schedule A) (Tract Nos. _____, _____ and _____), for a period not to exceed _____, beginning with date possession of the land is granted to the Port of San Francisco, for use by the United States and the Port of San Francisco, its representatives, non-federal sponsors, agents, and contractors as a (borrow area) (work area), including the right to (borrow and/or deposit fill, spoil and waste material thereon) (move, store and remove equipment and supplies, and erect and remove temporary structures on the land and to perform any other work necessary and incident to the construction of the _____ Project, together with the right to trim, cut fell and remove therefrom all trees, underbrush, obstructions, and any other vegetation, structures, or obstacles within the limits of the right-of-way; reserving, however, to the landowners, their heirs and assigns, all such rights and privileges as may be used without interfering with or abridging the rights and easement hereby acquired; subject, however, to existing easements for public roads and highways, public utilities, railroads and pipelines.

ROAD EASEMENT.

A (perpetual [exclusive] [non-exclusive] and assignable) (temporary) easement and right-of-way in, on, over and across (the land described in Schedule A) (Tract Nos. _____, _____ and _____) for the location, construction, operation, maintenance, alteration replacement of (a) road(s) and appurtenances thereto; together with the right to trim, cut, fell and remove therefrom all trees, underbrush, obstructions and other vegetation, structures, or obstacles within the limits of the right-of-way; (reserving, however, to the owners, their heirs and assigns, the right to cross over or under the right-of-way as access to their adjoining land at the locations indicated in Schedule B); subject,

however, to existing easements for public roads and highways, public utilities, railroads and pipelines.

9.0 Existing Federal Projects within the LER required for the Project

No federal projects are within the required LER.

10.0 Federally Owned Land Required for the Project

There are no federally owned lands required for this project. However, there is one parcel that will be potentially impacted within the project footprint that is federally owned. There is little data to be found about this parcel other than it is managed by the National Park Service (Tract 101-02). An interest will not need to be acquired on this parcel, but buildings within the parcel will require floodproofing for the first actions of the Recommended Plan.

11.0 Navigation Servitude

Navigation Servitude stems from the Commerce Clause of the Constitution of the United States (U.S. CONST. art. I, Sec.8, cl.3), and is defined as the dominant right of the Federal Government to use, control, and regulate the navigable waters of the United States and submerged lands thereunder for various commerce-related purposes including navigation and flood control.

At this time, the project features do not require the use of navigation servitude, however, navigation servitude is available for use in delivering materials.

12.0 Maps

See **Section 25.1**.

13.0 Induced Flooding

No induced flooding is anticipated as the purpose of the project is to ensure the Recommended Plan is providing the designed level of protection. The Recommended Plan will not transfer risk to communities outside the SFWCFS area. The Baywide Induced Flooding assessment in Appendix B.1, Section B-8.3 suggests that containment measures in the northern portion of the bay do not cause flood inundation along other sections.

14.0 Baseline Cost Estimates

The Real Estate Policy Guidance Letter (PGL) No. 31, dated 11 January 2019, and the Real Estate Support of Civil Works Planning Paradigm (3x3x3), requires a less formal estimation of the cost of acquiring real property rights when these costs are expected to

represent a small component of overall project costs. The PGL directs that “For Projects in which the value of real estate are not expected to exceed 15% of total project costs, a cost estimate will be acceptable for purposes of the feasibility phase.” The Real Estate costs do exceed 15% of the total project costs and are currently estimated to be approximately 24.8% of the total project cost. As a result, the South Pacific Division Regional Appraisal Center (SPDRAC) has performed a Gross Appraisal of the project area.

Table F-1 below estimates the direct and administrative costs associated with LERRDs necessary to construct, operate, and maintain the proposed project. This estimate was originally prepared on July 20, 2023 and updated on December 31, 2024 after receiving the Gross Appraisal from the SPDRAC.

The 02 Account costs for the First Action were provided by the cost engineer on December 18, 2025. The 02 Account costs for the Subsequent Action were pulled from an attachment of the Cost Engineering Appendix named “Attachment C-6 TSP Subsequent High.”

There is no value for the Subsequent Action Low Curve due to there not being changes within the reaches. There are minimal costs for the Subsequent Action Intermediate Curve due to Reaches 3 and 4 raising elevation of structures potentially requiring Relocation Assistance Benefits costs.

The Lands and Damages, Administrative costs, and Relocation Assistance Benefits costs are combined in the Lands and Damages line item of the Main Report.

Table F-1: Baseline Cost Estimate

	Real Estate Cost Summary of Maximum Recommended Plan	LERRDs	Contingency	Contingency Value	Total Value
First Actions	Lands and Damages, Administrative (01 Account)	\$2,351,580,000.00	50%	\$1,175,790,000.00	\$3,527,370,000.00
	Utility/Facility Relocations (02 Account) (Cost Eng)	\$921,610,000.00		\$331,750,000.00	\$1,253,390,000.00
	Relocation Assistance Benefits	\$15,694,000.00	50%	\$7,847,000.00	\$23,541,000.00
	Total	\$3,288,884,000.00		\$1,515,387,000.00	\$4,804,301,000.00
Subsequent Actions (High)	Lands and Damages, Administrative (01 Account)	\$2,041,209,000.00	50%	\$1,020,604,500.00	\$3,061,813,500.00
	Utility/Facility Relocations (02 Account) (Cost Eng)	\$25,149,000.00		\$95,300,000.00	\$120,449,000.00
	Relocation Assistance Benefits	\$2,234,400.00	50%	\$1,117,200.00	\$3,351,600.00

	Real Estate Cost Summary of Maximum Recommended Plan	LERRDs	Contingency	Contingency Value	Total Value
	Total	\$2,068,592,400.00		\$1,117,021,700.00	\$3,185,614,100.00
	TOTAL LERRDs	\$5,357,476,400.00		\$2,632,408,700.00	\$7,989,915,100.00

15.0 Public Law 91-646, Relocation Assistance Benefits

Based on the Recommended Plan, there are identified properties that may require relocation assistance; however, if the project is approved and funded, the alignments and real estate requirements would be evaluated more thoroughly in Planning, Engineering, and Design (PED) which could reduce real estate impacts and costs.

In addition to Real Estate administrative costs, relocation assistance payments to the property owners are calculated separately. Displacements are dealt with on a case-by-case basis and costs will vary. The inventory of potential displacements was based on a conceptual design and can decrease or be eliminated in the design phase. The inventory is for planning purposes only to assist in the development of total project cost for relocation assistance costs. It is estimated for the Recommended Plan that approximately 43 parcels will have businesses impacted due to construction of the project. Approximately 295 businesses are to be impacted in the first action and an additional 42 businesses in the second action. Actual counts are subject to change.

The non-federal sponsor must comply with the Uniform Relocation Assistance and Real Properties Acquisition Policies Act of 1970, as amended, 42 U.S.C. 4601 et seq. (P.L. 91-646, "the Uniform Act") and provide relocation assistance to qualifying residences and businesses within the project area that are displaced, as defined in the Uniform Act, as a consequence of USACE project implementation.

The sponsor has also been advised of PL 91-646 requirements to pay Fair Market Value for property as part of the acquisition necessary for the project and the requirements for documenting expenses for credit purposes.

In accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, payment allows the tenant to rent a comparable decent, safe and sanitary replacement dwelling for a 42-month period. If the replacement dwelling and the cost of rent and utilities are higher than what the tenant was paying, rental assistance payment may be available.

Additional relocation assistance benefits allow for moving expenses to displaced persons or businesses. Recent relocation assistance information was not readily available from the non-federal sponsor, so a maximum fixed payment amount of \$53,200.00 was used to estimate the approximate costs associated with Relocation Assistance Benefits for business.

Relocation Assistance Benefits Costs are captured under the Baseline Cost Estimate (Table F-1).

The impacts and estimates relating to potential displacements, and the anticipated need to provide relocation assistance benefits, are provided exclusively for project cost estimating purposes only and are not intended to be relied upon for provision of benefits and/or the payment of the estimates referenced herein. If relocations assistance is necessary, a draft Relocation Assistance Plan will be provided by the non-federal sponsors and will be refined during PED phase.

16.0 Mineral or Timber Activity

There is no known present or anticipated mineral activity or timber harvesting in the project area that will affect construction, operation, or maintenance of the project.

17.0 Project Sponsor Responsibilities and Capabilities

USACE has completed the Assessment of the Non-Federal Sponsor's Real Estate Acquisition Capabilities with the sponsor and is attached as **Exhibit 25.2**. The sponsor has the capability to acquire by negotiation or condemnation and to hold land titles. The Port will be responsible for all project real estate acquisitions subject to the guidance and supervision of the Real Estate Contracting Officer and applicable federal legal requirements. USACE will verify that the appropriate real estate laws and policies are followed, as well as the appropriate lands and estates are acquired. The sponsor has mentioned obtaining contracted services to complete real estate acquisitions. The assigned USACE District Real Estate Division will be willing to assist, as able and provided in USACE policy and guidance.

18.0 Zoning Ordinances

No zoning ordinance issues have been identified by The Port of San Francisco in meetings involved with this Project. If identified in the future, it will be the sponsor's responsibility to resolve them. No zoning ordinances are proposed in lieu of real estate acquisition.

19.0 Acquisition Schedule

We recommend a real estate acquisition schedule of a minimum of two and a half years from initiation of acquisition activities, depending on resources and manpower availability. This schedule would be expected to extend up to two years for condemnation procedures or where significant utility/facility relocation issues are involved. Quick Take authority is available in California if condemnation is required for any interest to determine either value or where complex and indeterminate ownership issues are involved.

Table F-2 shows the tasks and duration for acquisition of the LERRD which is based on the premise that the Recommended Plan will impact approximately seven landowners for the first actions and five landowners for the subsequent actions. The tasks will be required for implementation during each phase, First Action and Subsequent Action,

and duration would be comparable, based on the information available to the PDT at this time.

Table F-2: Acquisition Schedule

	USACE	NFS
Receipt of preliminary drawings from Engineering/PM (Conceptual, 10%, 30% Designs)	8 mos.	N/A
Receipt of final drawing from Engineering/PM	12 mos.	N/A
Execution of PPA	N/A	1 day
Formal transmittal of final drawings & instruction to acquire LERRDs ("Take Letter")	8 mos.	N/A
Obtain/review title evidence	N/A	3 mos.
Prepare/review mapping & legal descriptions	N/A	3 mos.
Notice to appraise	N/A	3 mos.
Conduct landowner meetings (if applicable, NFS responsibility)	N/A	2 mos.
Obtain/review tract appraisals	N/A	1 mo.
Conduct negotiations	N/A	3 mos.
Perform closing	N/A	5 mos.
Prepare/review condemnations (if needed)	N/A	4 mos.
Perform condemnations (if needed)	N/A	18 mos.
Obtain Possession	N/A	6 mos.
Complete/review PL 91-646 benefit assistance	N/A	14 mos.
Conduct/review facility and utility relocations	14 mos.	14 mos.
Certify all necessary LERRDs are available for construction	N/A	24 mos.
Prepare and submit credit requests	3 mos.	N/A
Review/approve or deny credit requests	3 mos.	TBD
Establish value for creditable LERRDs in F&A cost accounting system	2 mos.	TBD

NOTES:

- Times are based upon average time for acquisition actions. Some actions can occur simultaneously with one another.

Should Eminent Domain Proceedings be required, an additional year would be added to the acquisition schedule unless quick-take authority is utilized. A detailed acquisition schedule will be developed once final plans and specs have been completed and the PPA has been executed.

20.0 Utility/Facility Relocation

The real estate assessment discussed herein is based upon the following assumptions and estimates to assist in preliminarily analyzing and determining compensability for planning and budgeting purposes during the feasibility phase:

If an impacted utility/facility is likely supported by a permit that has been issued to the utility/facility owner by the underlying property owner, and the terms of the permit include conditional language stating the utility/facility owner must relocate the impacted utility/facility at its own expense at the request of the underlying fee or easement owner, the relocation was considered to be a non-compensable relocation. The costs of a non-compensable relocation are borne by the utility/facility owner and/or the non-federal sponsor, and not included in the total project cost estimate. If the relocation was categorized as a compensable relocation, then the costs are borne by the non-federal sponsor and included in the total project cost estimate.

For cost-shared projects, the non-federal sponsor has the responsibility to perform or assure the performance of relocations. The term "relocation" as defined in applicable law and regulations, generally means providing a functionally equivalent facility to the owner of an existing utility, cemetery, highway, or other eligible public facility, and railroad (excluding existing railroad bridges and approaches thereto) when such action is authorized in accordance with applicable legal principles of just compensation. Providing a functionally equivalent facility may take the form of alteration, lowering, raising, protecting in place or replacement (and attendant removal) of the affected facility or part thereof. Project features that require lands on railroad property may cause potential delays in acquisition based on recent current events on other USACE projects.

To date, a definitive list of impacted facilities/utilities have not been developed. There are multiple public and private utilities that include water, sewer, gas and electric lines within the project footprint. During the first action, the area includes public transportation lines that will have disruptions in service during construction to include the Embarcadero and Terry Francois Boulevard. Deployables on the Third Street, Fourth Street, and Illinois Street bridges would likely require temporary closures. These closures could require the Muni light rail track to be temporarily relocated as well as detouring the Bay Trail by adding additional mileage. Assumption is that the public utilities will have minimal impacts, however, for those areas where land is raised as a measure of protection, the utility lines will potentially be raised in order to keep them at a reasonable level to make repairs. It is also assumed that the facilities and utilities within the project footprint are of the type to be compensable.

Any conclusion or categorization contained in this report that an item is a utility or facility relocation to be performed is preliminary only. The government will make a final determination of the relocations necessary for the construction, operation, and maintenance of the project after further analysis and completion and approval of final attorney's opinions of compensability for each of the impacted utilities and facilities.

The number of utilities and facilities being impacted by this project has not yet been determined; therefore, preliminary Attorney's Opinions of compensability have not been completed, however per RE PGL 31, paragraph 4(b)(1), preliminary opinions are not necessary at this stage of the feasibility study. However, this information is still pertinent as a Real Estate Assessment of these utilities and facilities must be completed in lieu of the preliminary Attorney's Opinions of compensability. Due to lacking utility/facility information, a Real Estate Assessment will not be completed. This element has been categorized as a high risk for the project moving forward.

21.0 Hazardous, Toxic, and Radioactive Waste (HTRW)

The result of a records search identified over 157 potential environmental contamination sites within the study area. Of the potential sites identified, approximately 61 are located within the project area with known impacts to the soil or groundwater due to hazardous substances. Screening of the sites was performed to determine the potential for these sites to impact the construction activities. As a result of the screening, 18 sites were identified within the Project footprint with a potential to impact the future construction activities. An additional 34 Leaking Underground Storage Tank (LUST) Sites that have received regulatory closure were identified within the project footprint. Although these LUST sites have received regulatory closure, there is potential for waste/contamination to remain in the soil and ground water that may require special management and disposal related to future construction activities. Given the industrial history of the Port of San Francisco (Port), the non-federal sponsor has extensive experience with environmental site investigation and remedial activities conducted either by themselves or other responsible parties. It is the responsibility of the non-federal sponsor to perform clean-up and response to provide USACE with contaminant free working areas. They are also responsible for all associated costs and does not include LERRDS reimbursement or credit.

22.0 Attitude of Property Owners

As mentioned in the Draft Waterfront Adaptation Strategies Community Engagement Summary, waterfront wide, community members indicated that flooding around where they live and work, impacts to community safety, and disruption to transportation or waterfront access are their top sea level rise related concerns. Community members raised many concerns in response to the draft strategies. Common concerns ranged from equity and environmental justice implications, technical practicalities, and questions about cost and feasibility. If the project is approved and funded, the real estate footprint and requirements would be evaluated more thoroughly in PED which could reduce real estate impacts and cost to remain on schedule.

23.0 Non-Federal Sponsor Risk Notification

The Port does not intend to acquire any real estate until the final drawings and plans have been approved and the PPA signed. A formal letter advising the non-federal sponsor of the risks associated with early acquisition is attached hereto and incorporated herein by reference as **Exhibit 25.3**. The non-federal sponsor may take action in advance of execution of the PPA to perfect and document its title to the SFWCFS footprint where documentation is missing. Such action is necessary and appropriate, and the costs associated will not be creditable against the Port's share of the costs under the current project.

24.0 Other Real Estate Issues

There is missing documentation pertaining to non-federal sponsor ownership within the project footprint. These missing documents will affect what we know to be owned by the Port and the LERRDs required to acquire for the project. These missing documents are the reason for the difference in acreage between what should be acquired and what the Port of San Francisco owns. Upon further examination of any new documentation provided after the publication of the Final Report, the missing acreage should be accounted for.

There are four ground leases along the waterfront, each with a term of either 50 or 66 years, under which the Port does not have the right to unilaterally terminate the leases. These businesses are planned to be relocated for an estimate of 5-10 years and moved back once construction is complete. The cost of these temporary relocations is currently being captured in the Relocation Assistance Benefits costs. However, the Port is concerned that the lessees will not accept the payment associated with relocation and believes these actions will result in condemnations of the leases and incurring higher costs than what is currently being captured under Relocation Assistance Benefits. If acquisition of the leases result in condemnation, the cost of these actions will be captured in the contingency of the Baseline Cost Estimate.

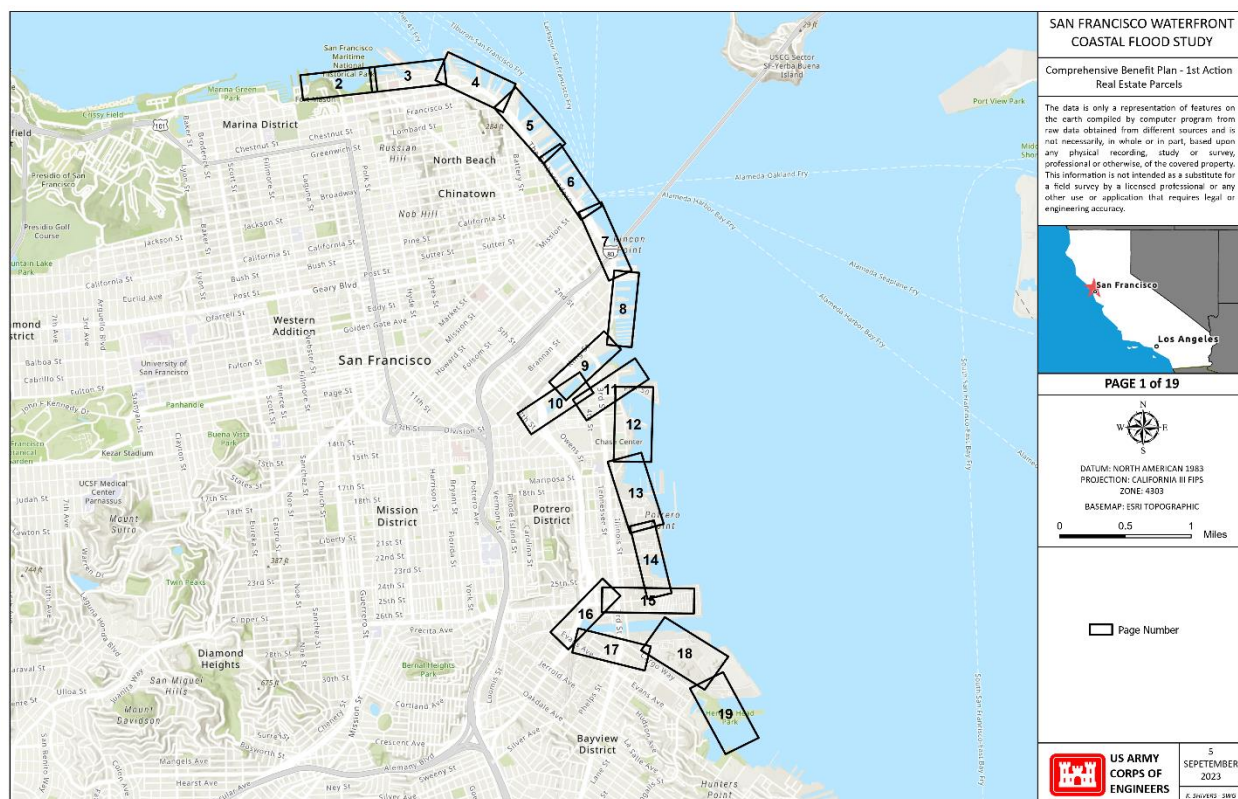
Assumptions were made that features would be constructed within ownership by the City and County of San Francisco or Port owned property where applicable. If it is determined that during design the footprint is extended beyond this ownership, additional acquisitions and relocations may be needed.

The map exhibits in the Real Estate Plan were created on September 5, 2023. There was not enough time and funding to create new Real Estate maps after the footprint was finalized.

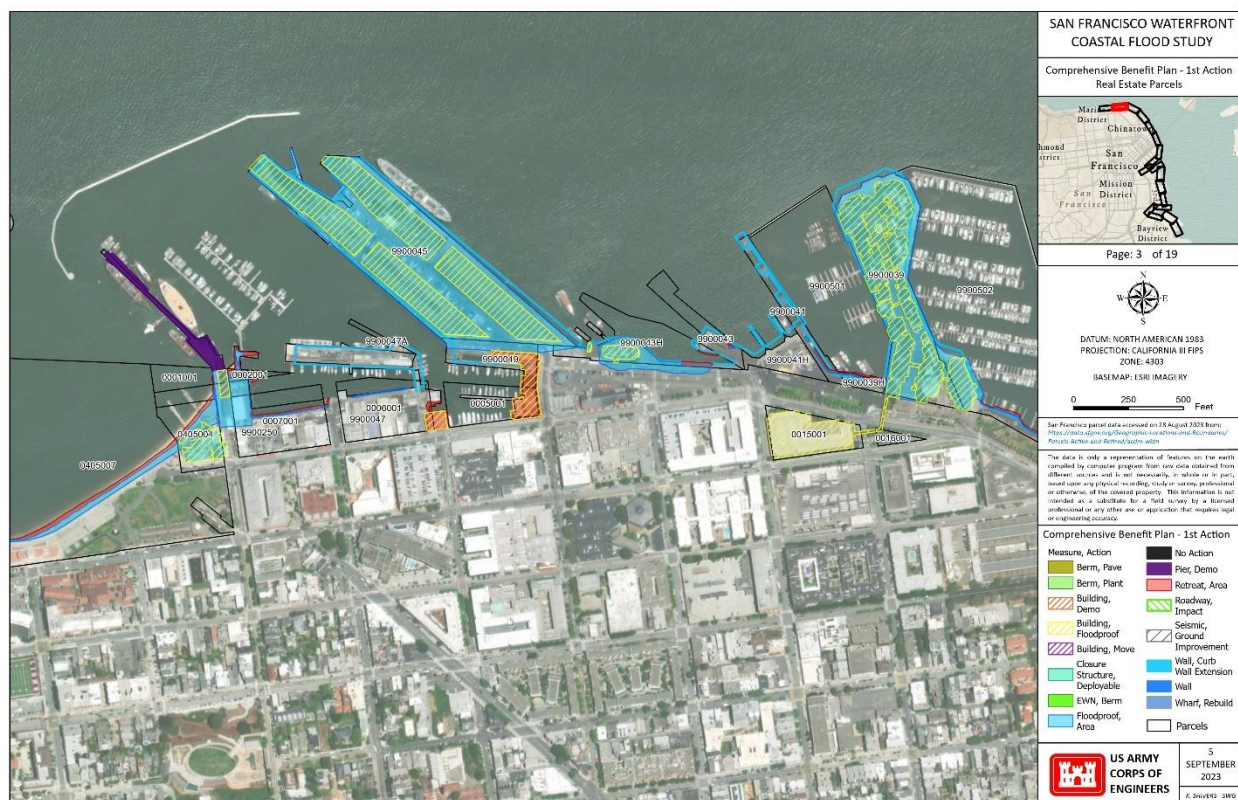
25.0 Exhibits

25.1 Project Maps

Figure F-2: Recommended Plan – First Actions



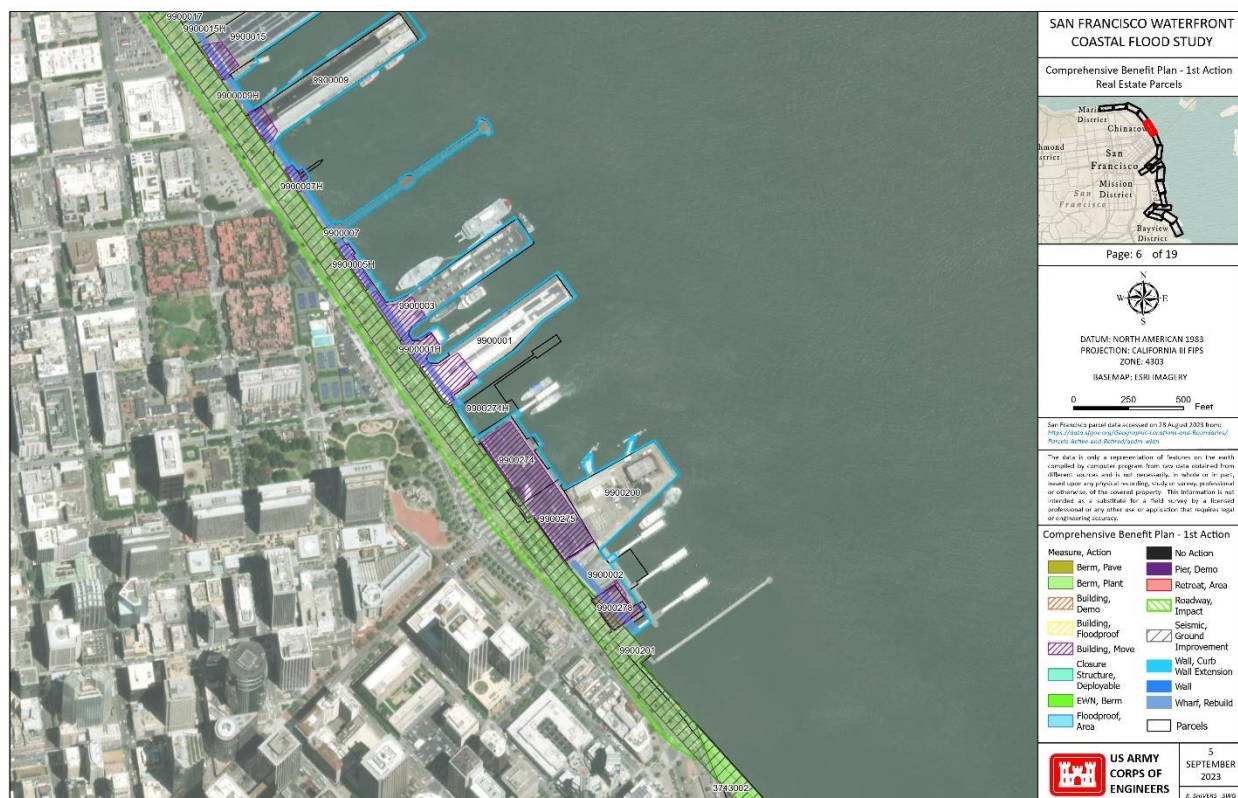
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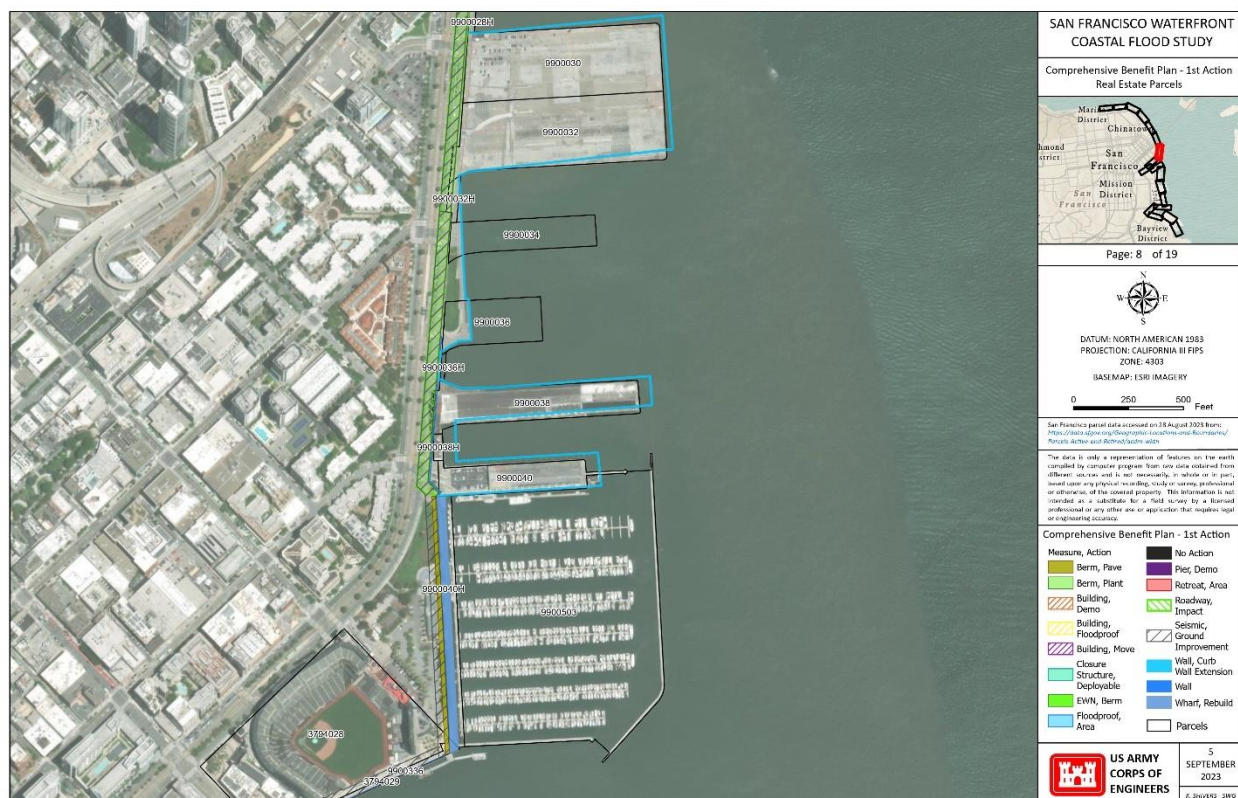
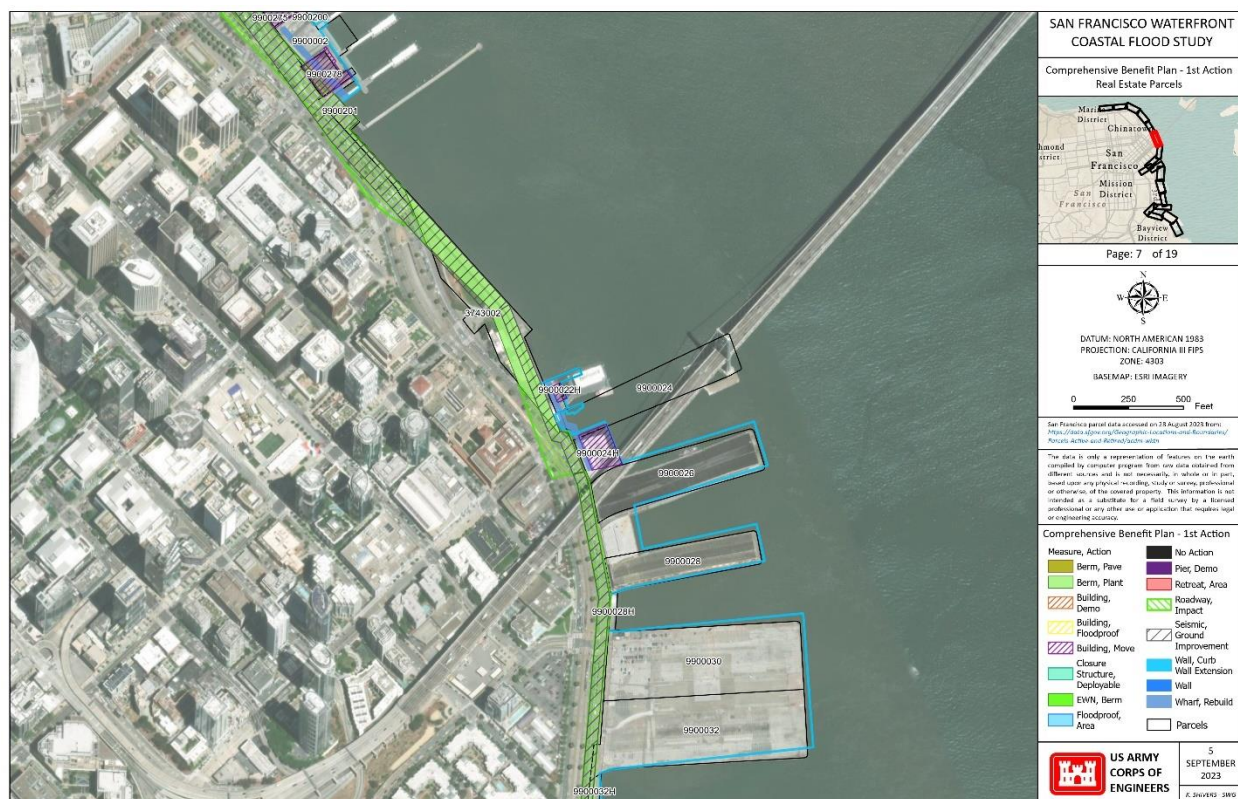
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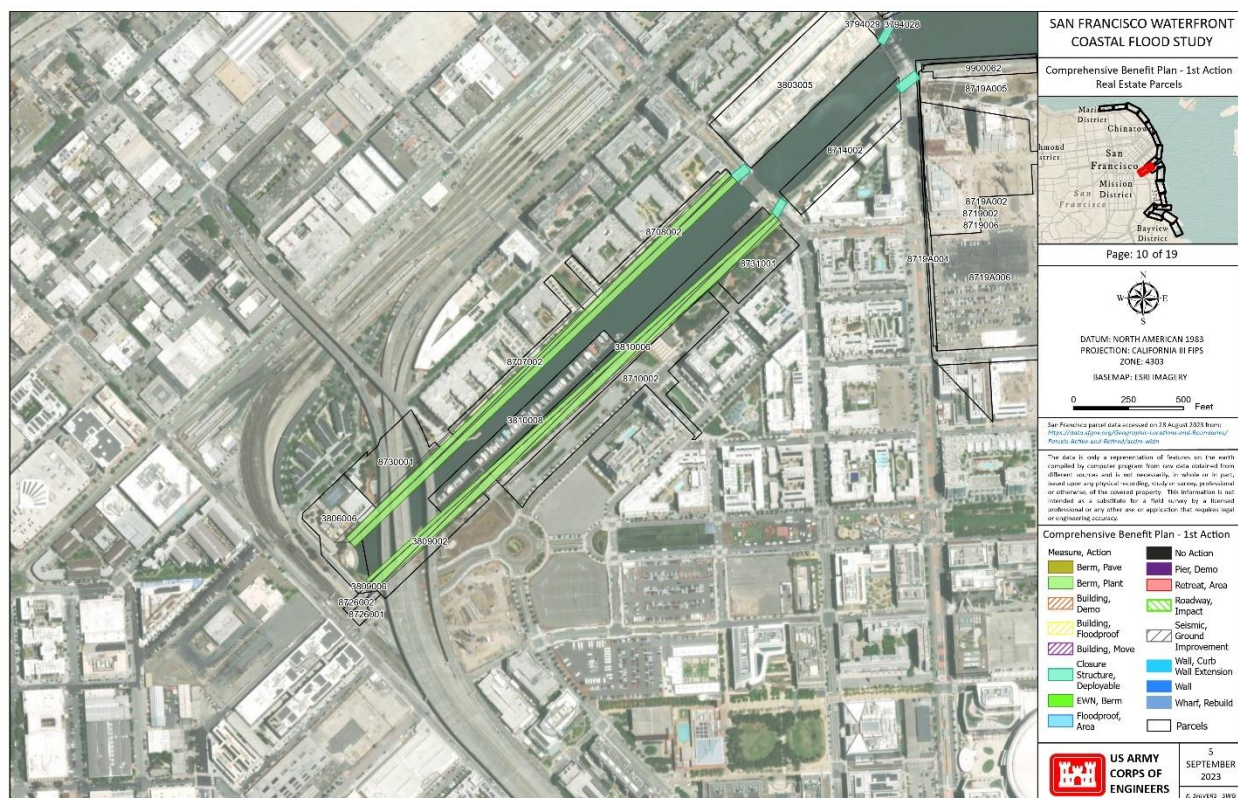
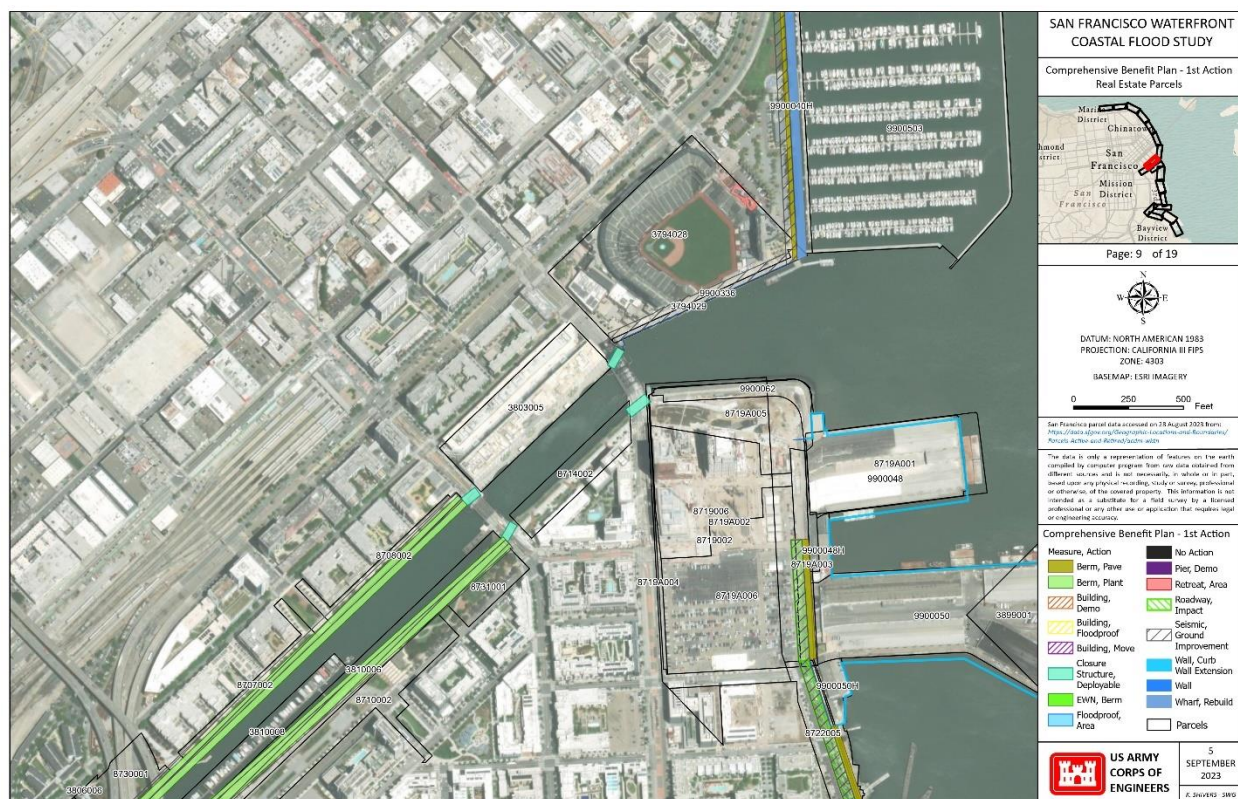
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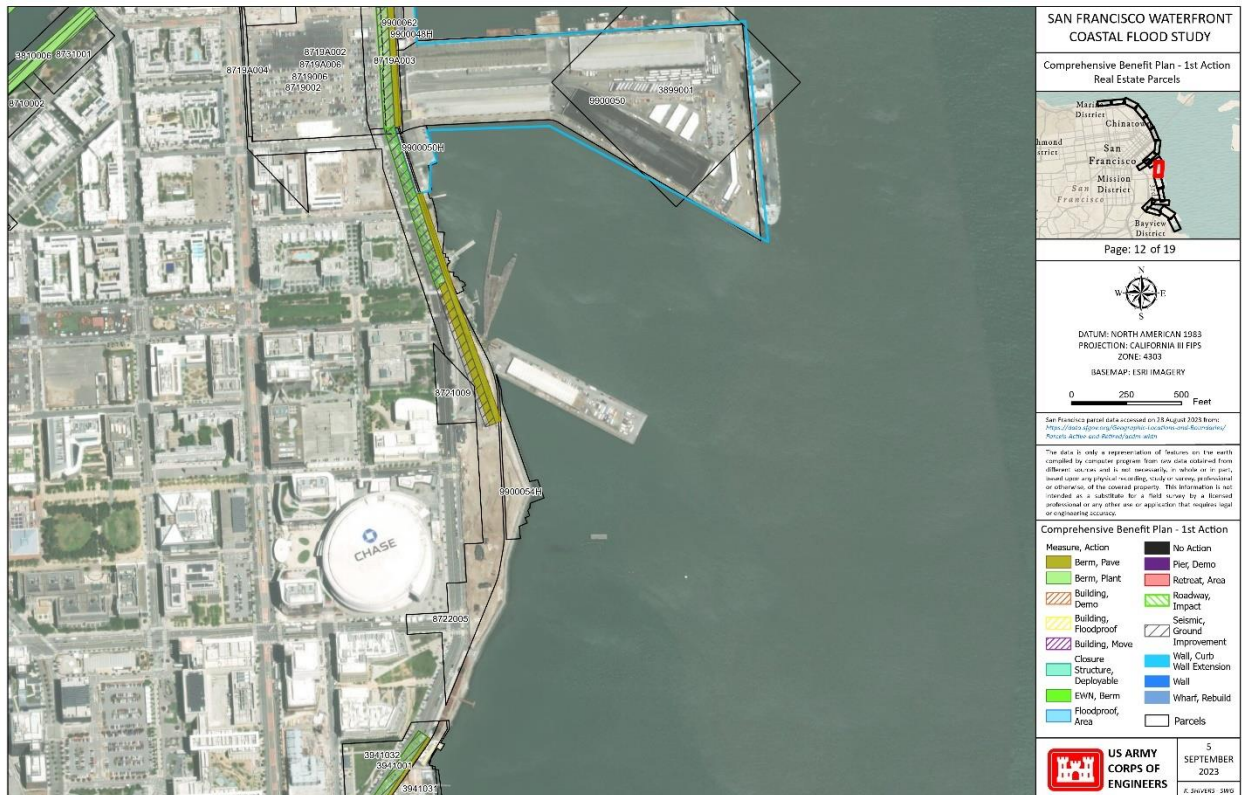


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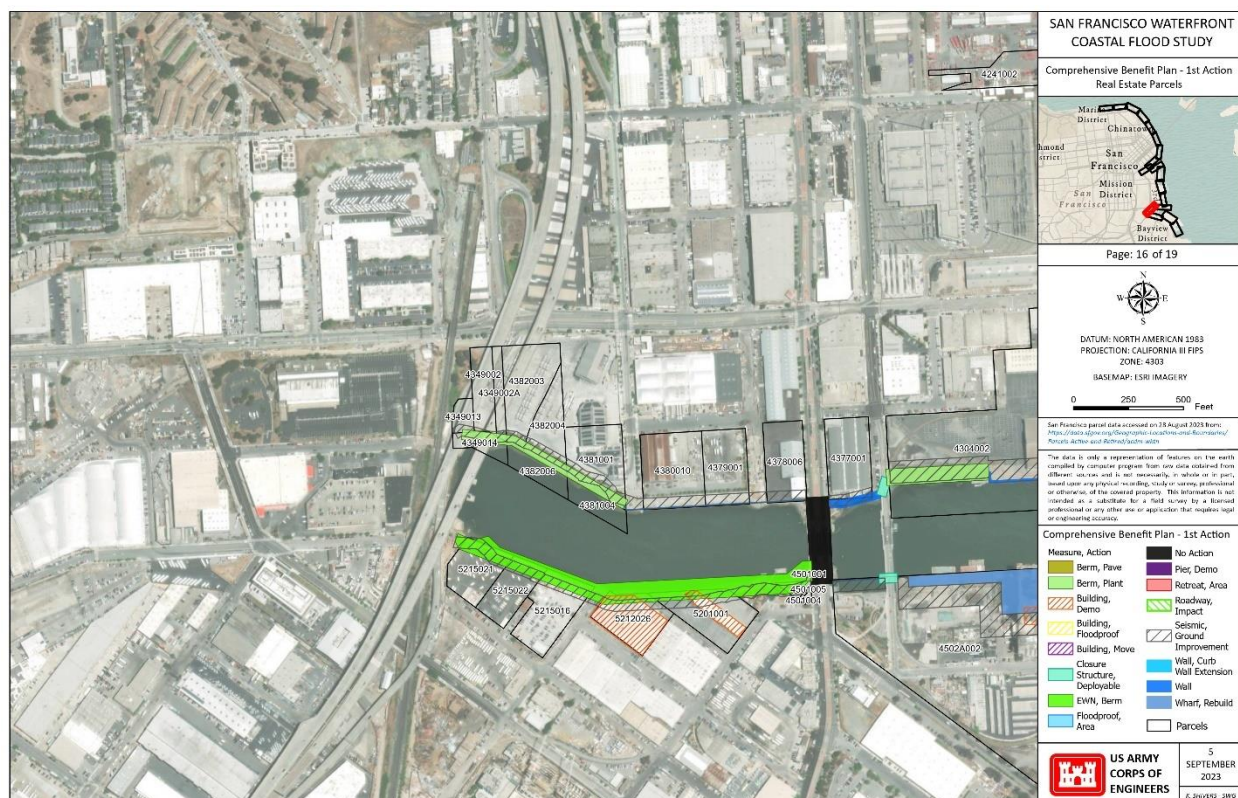




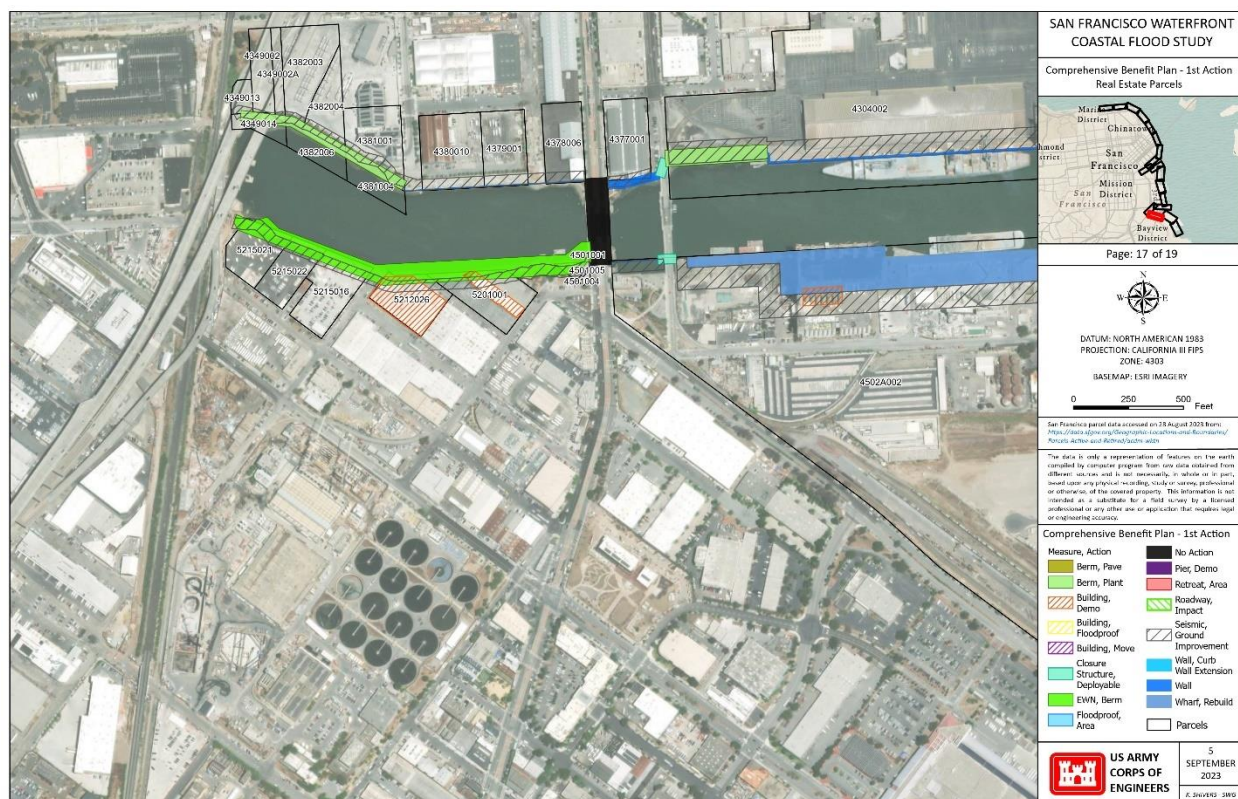
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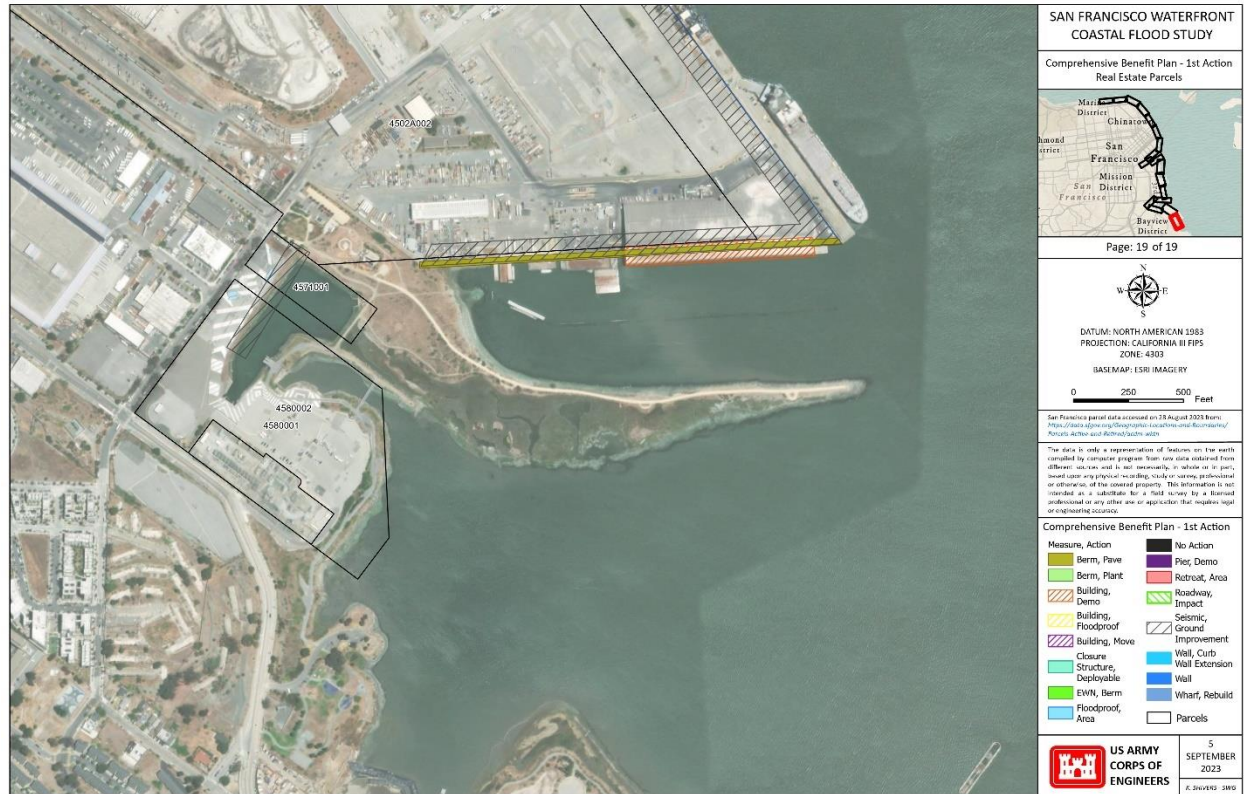
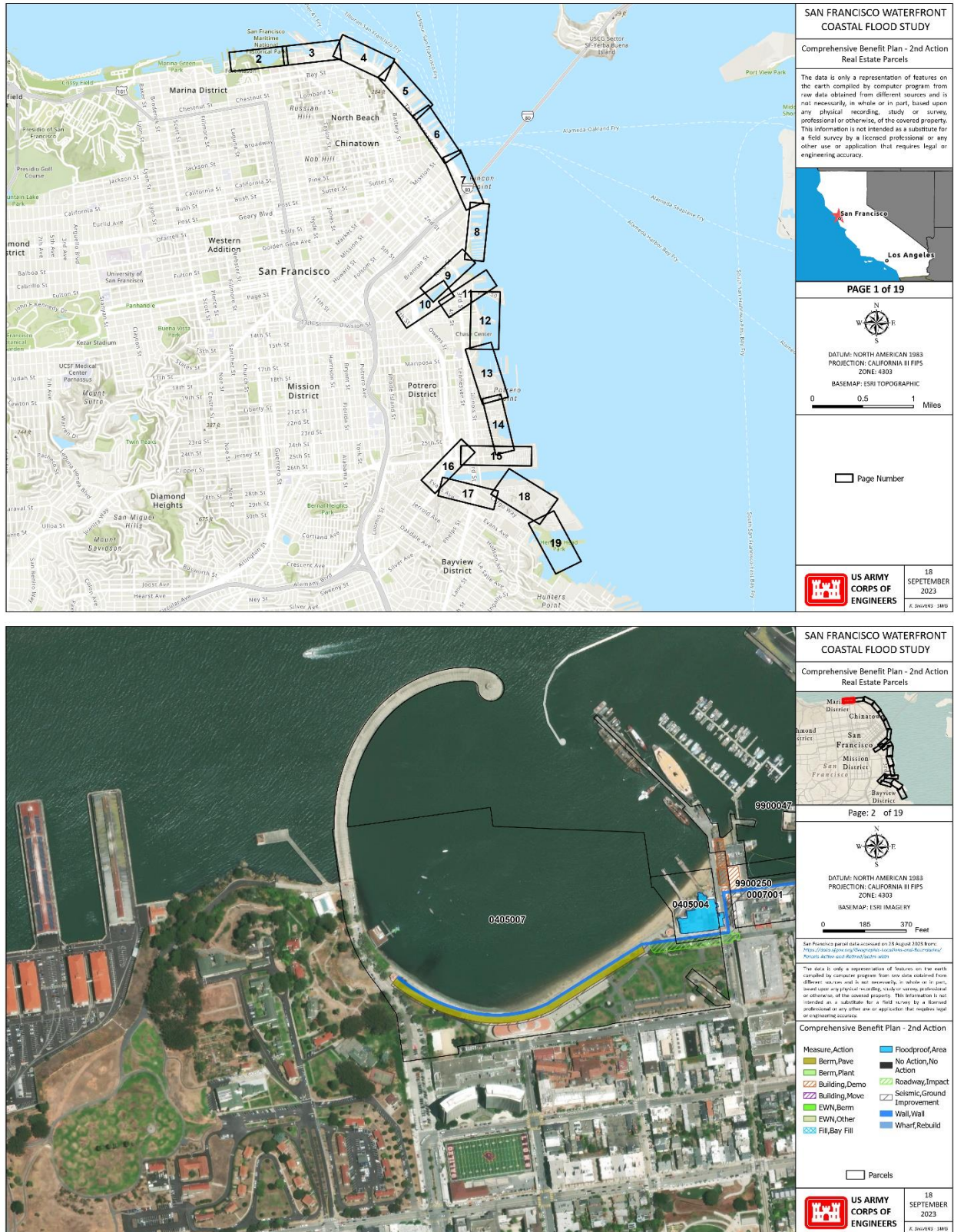
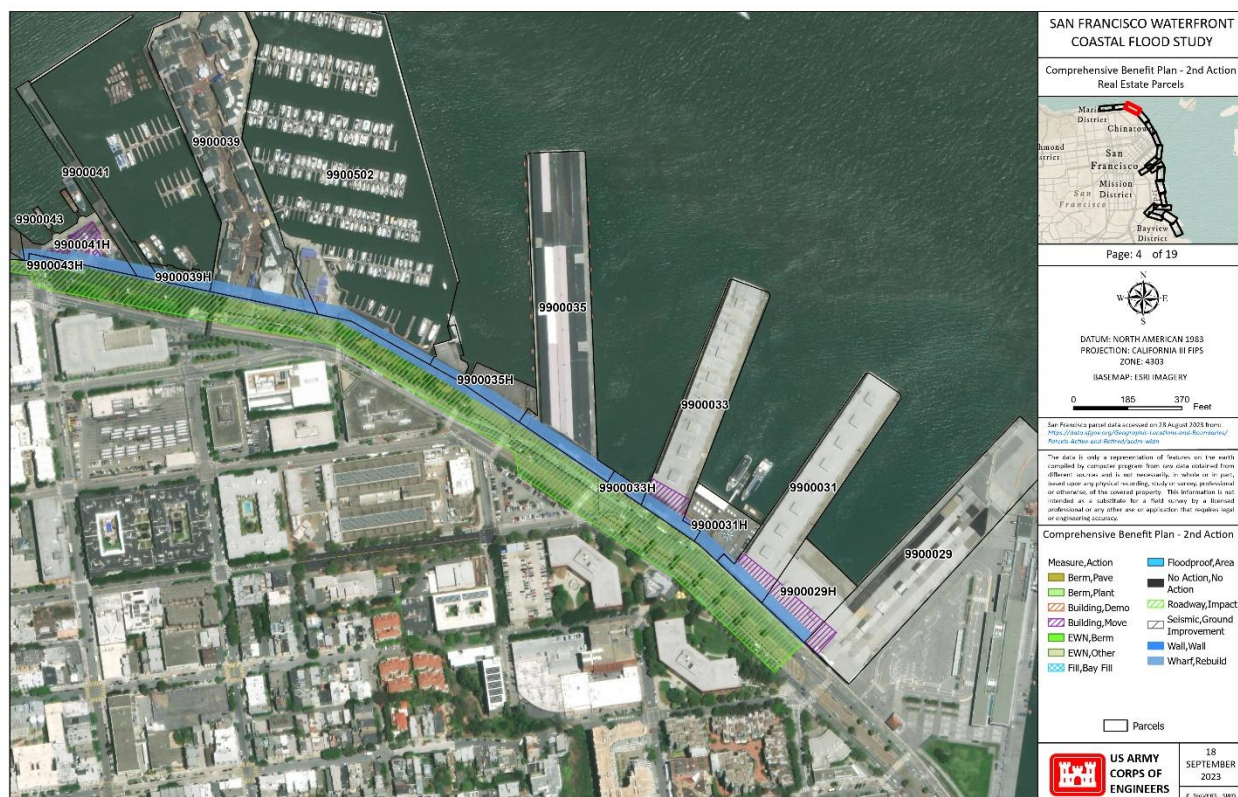
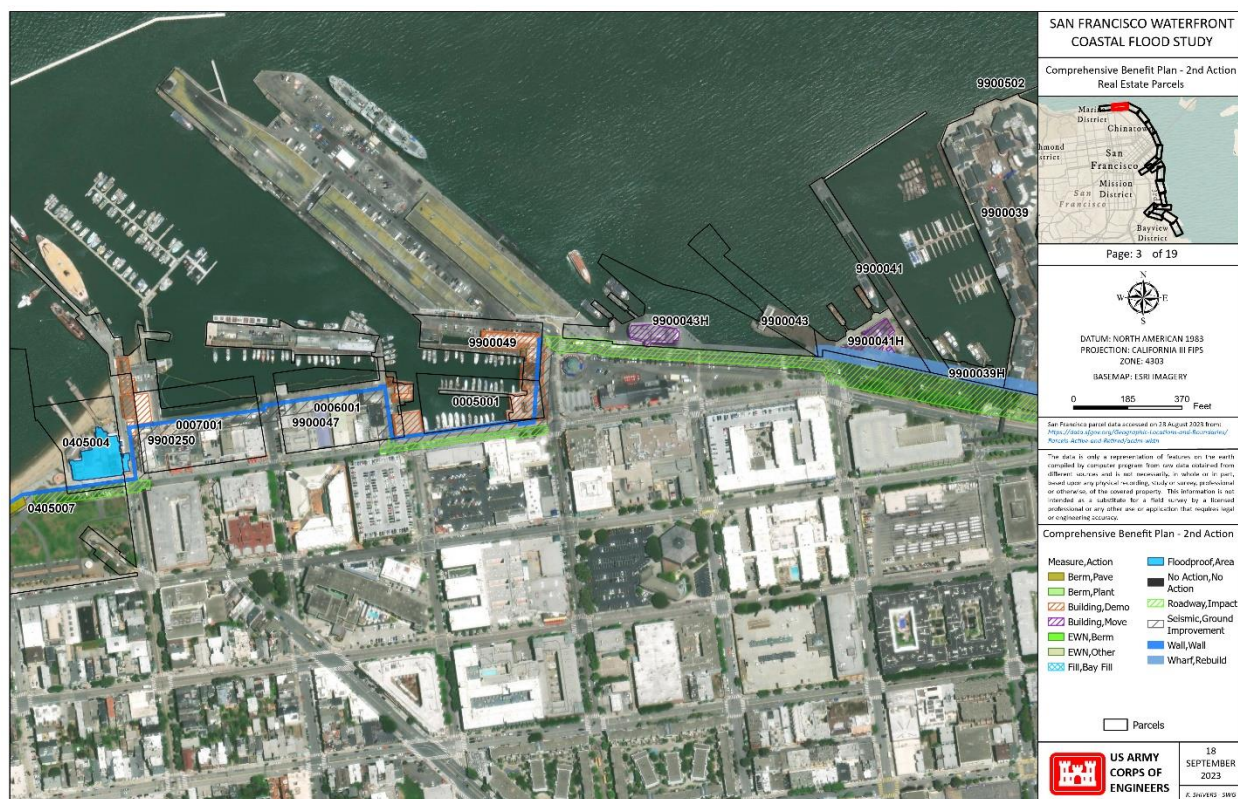


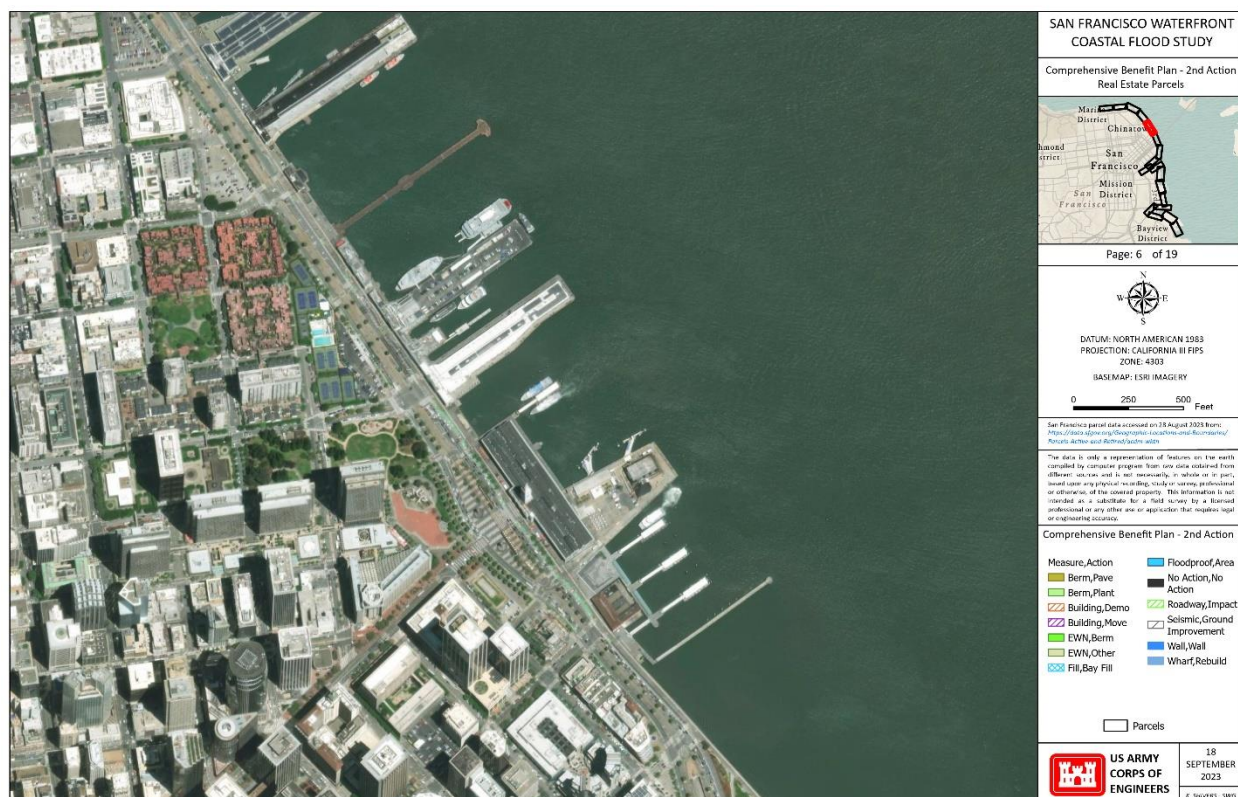
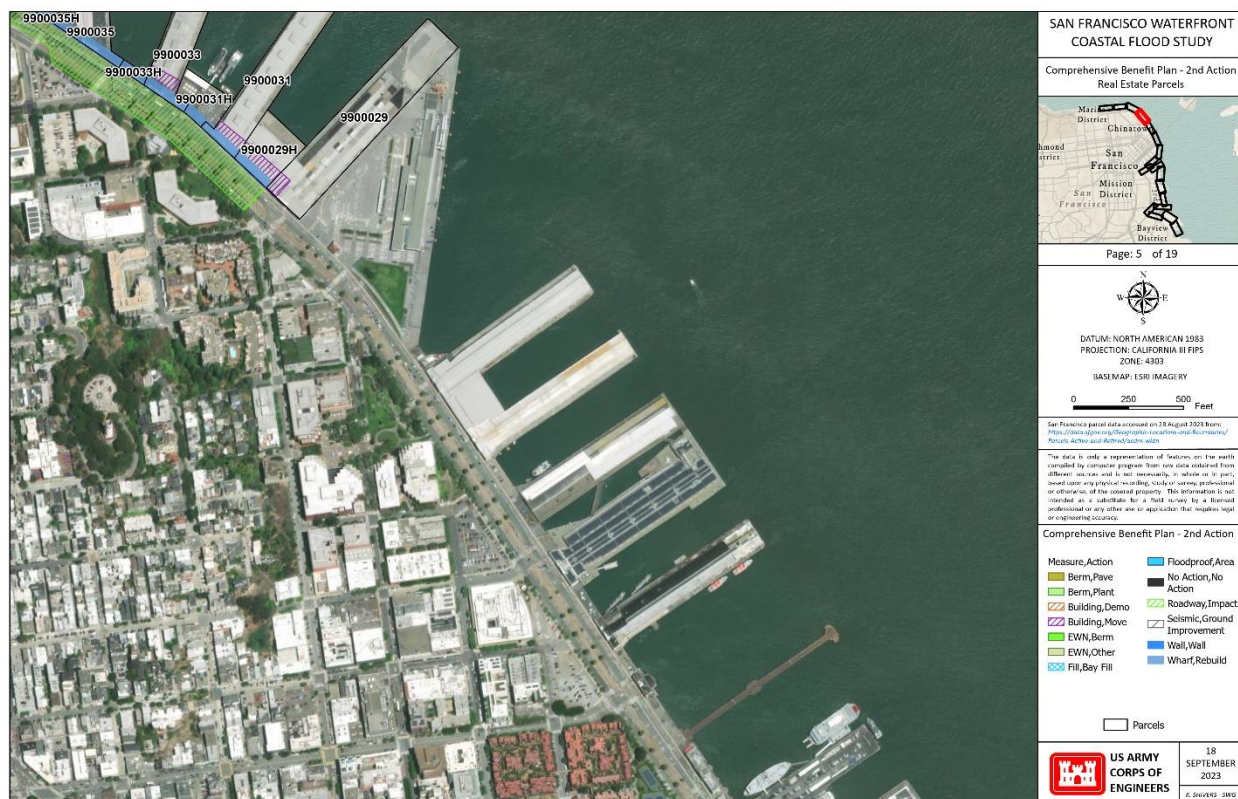
Figure F-3: Recommended Plan – Subsequent Actions



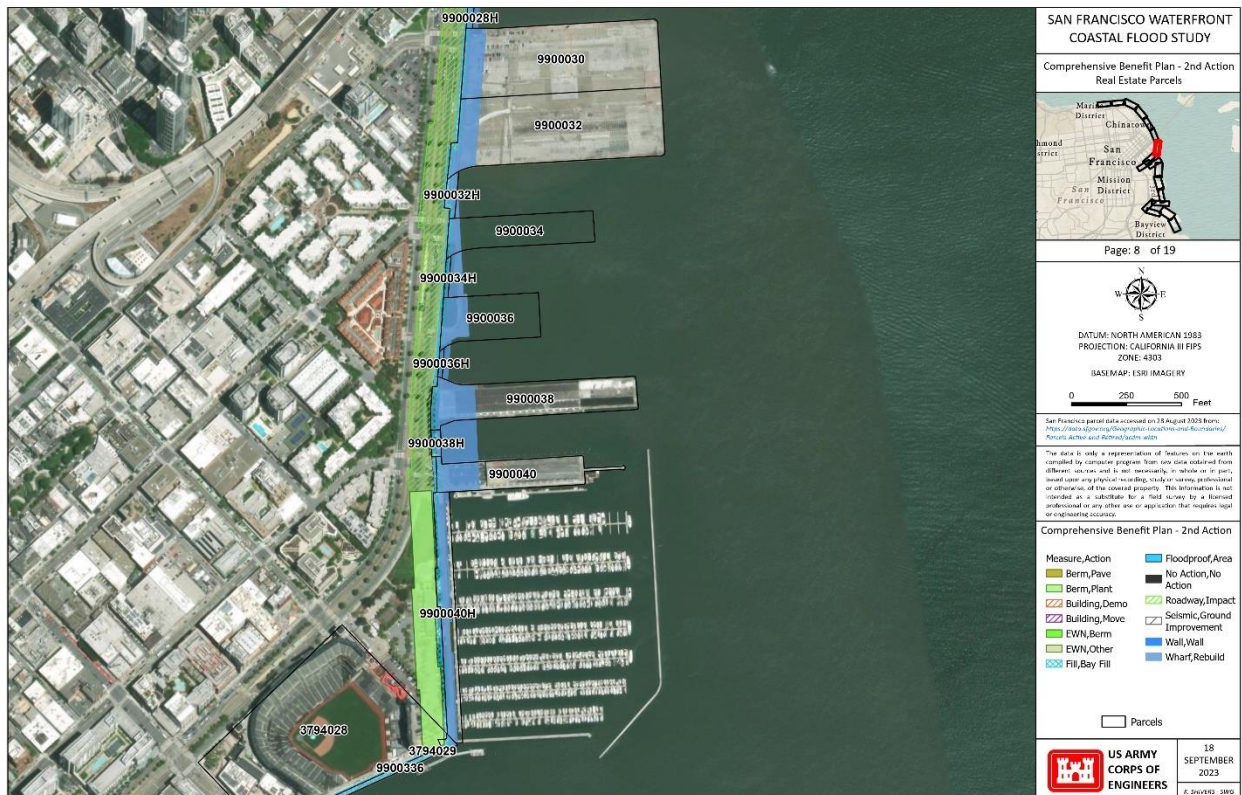
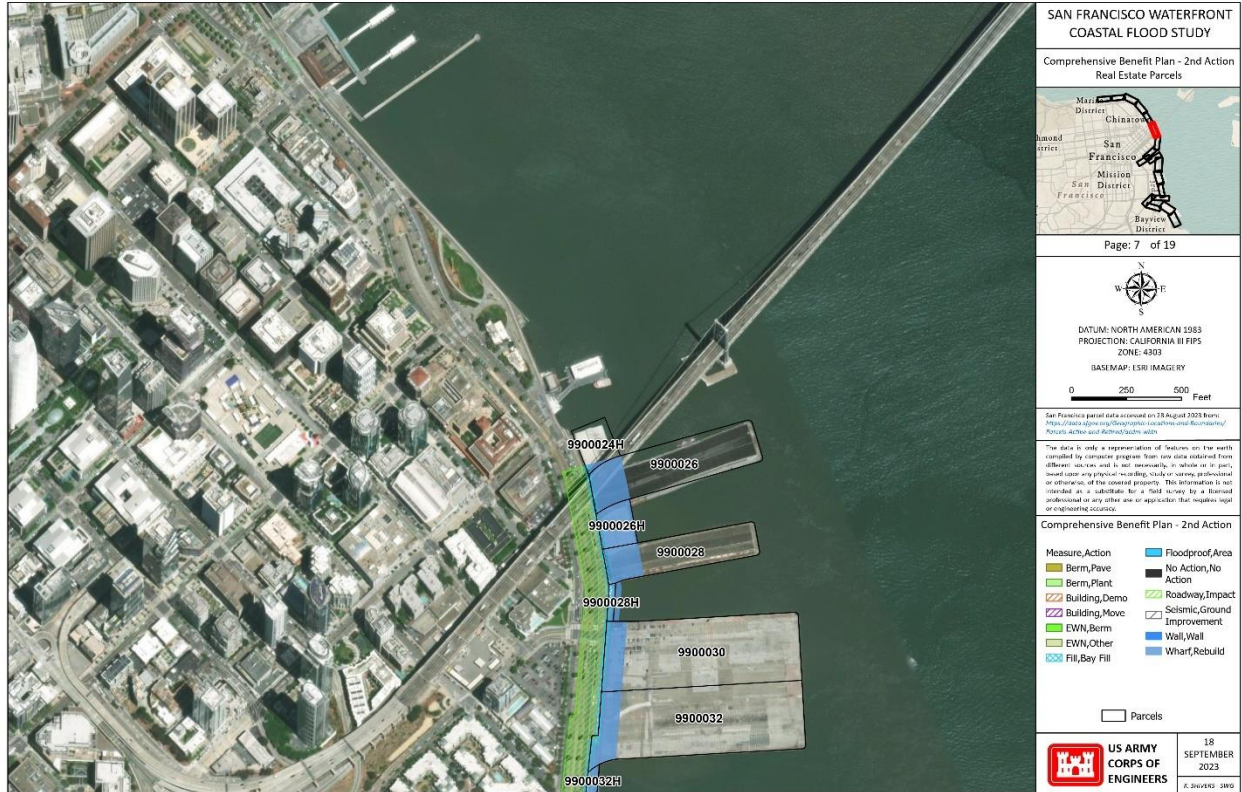
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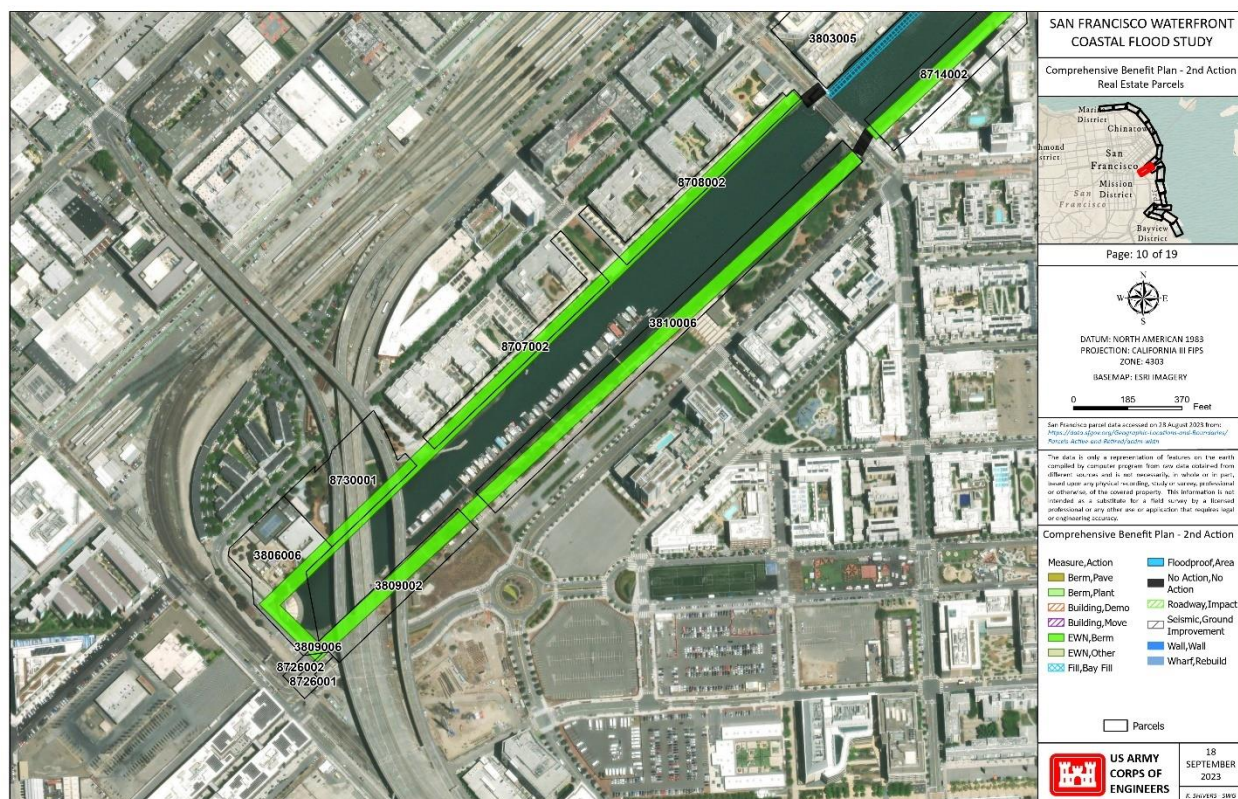
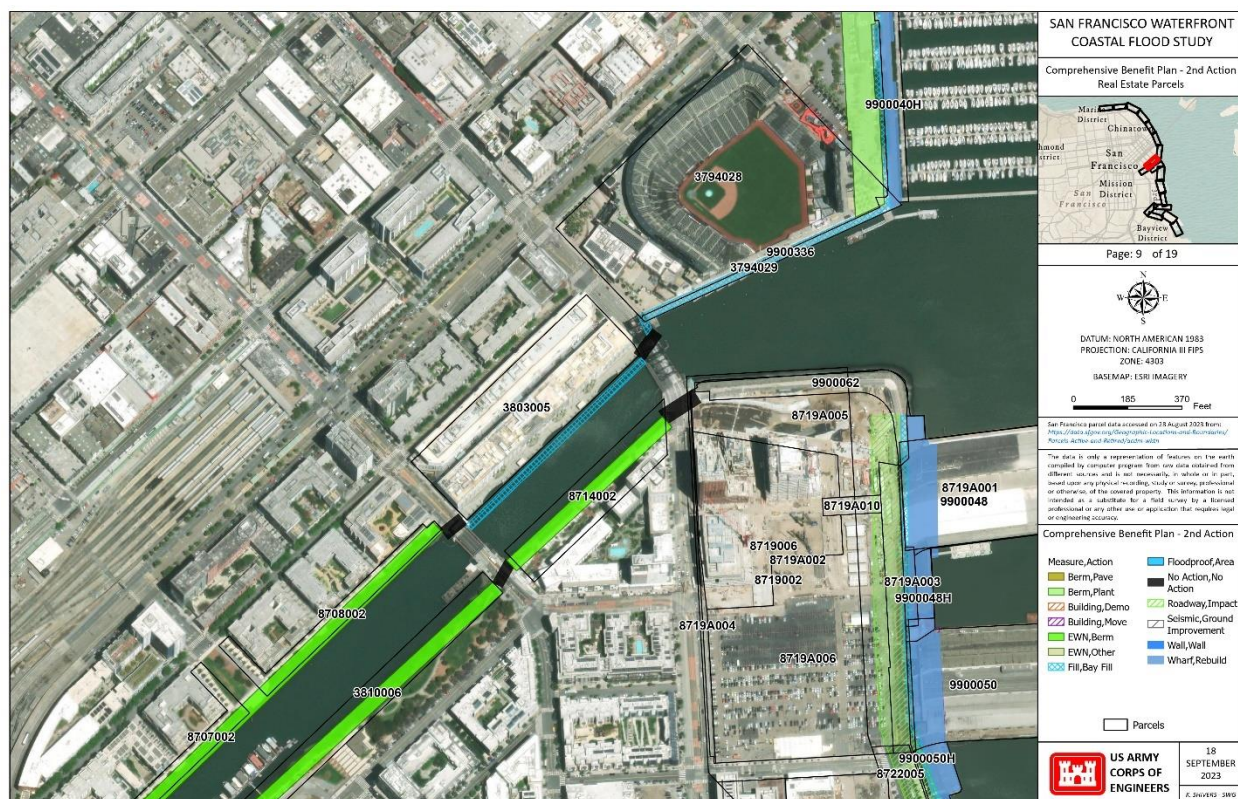
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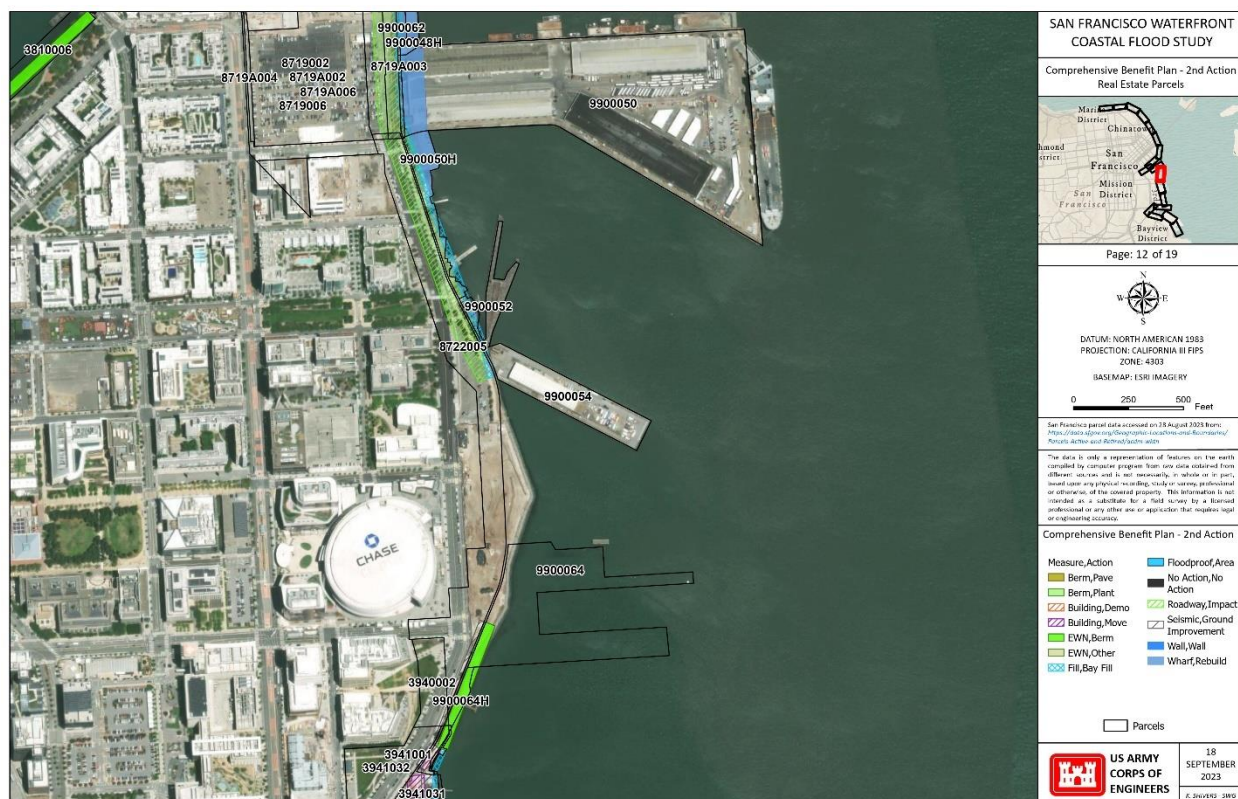
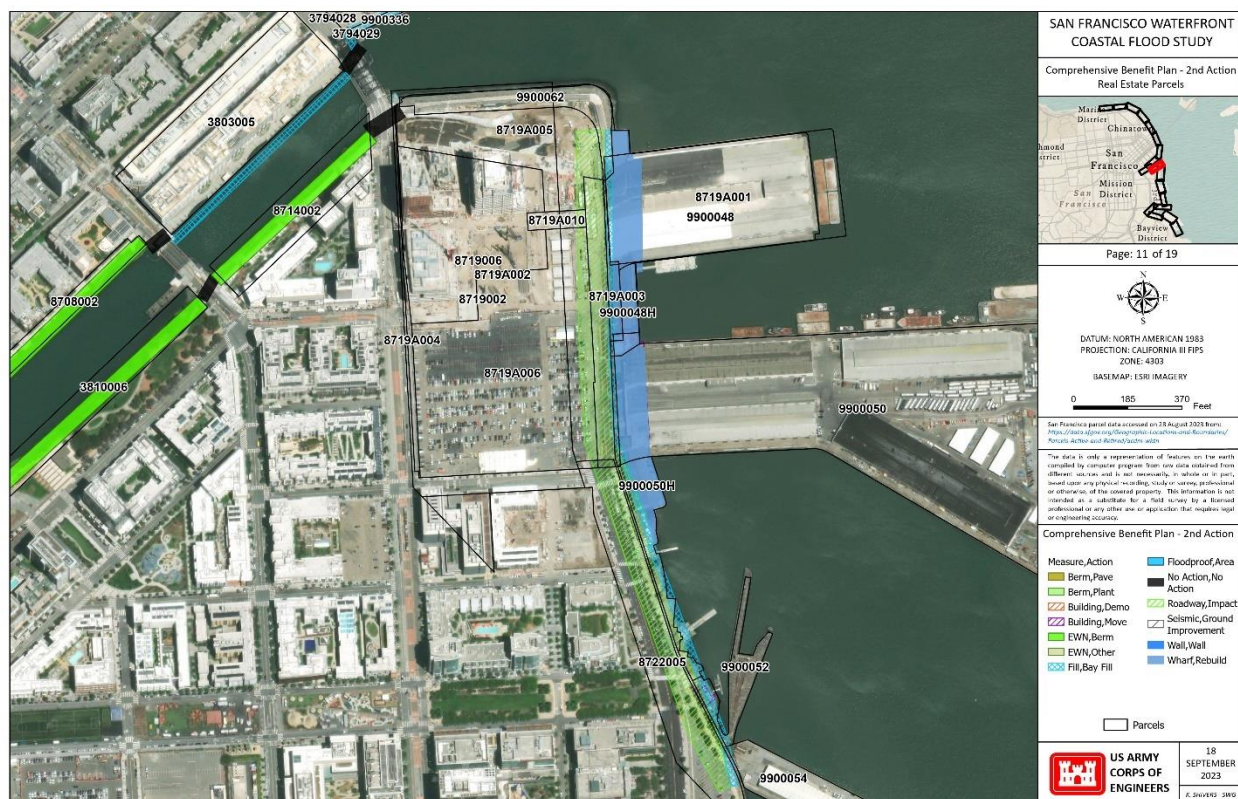
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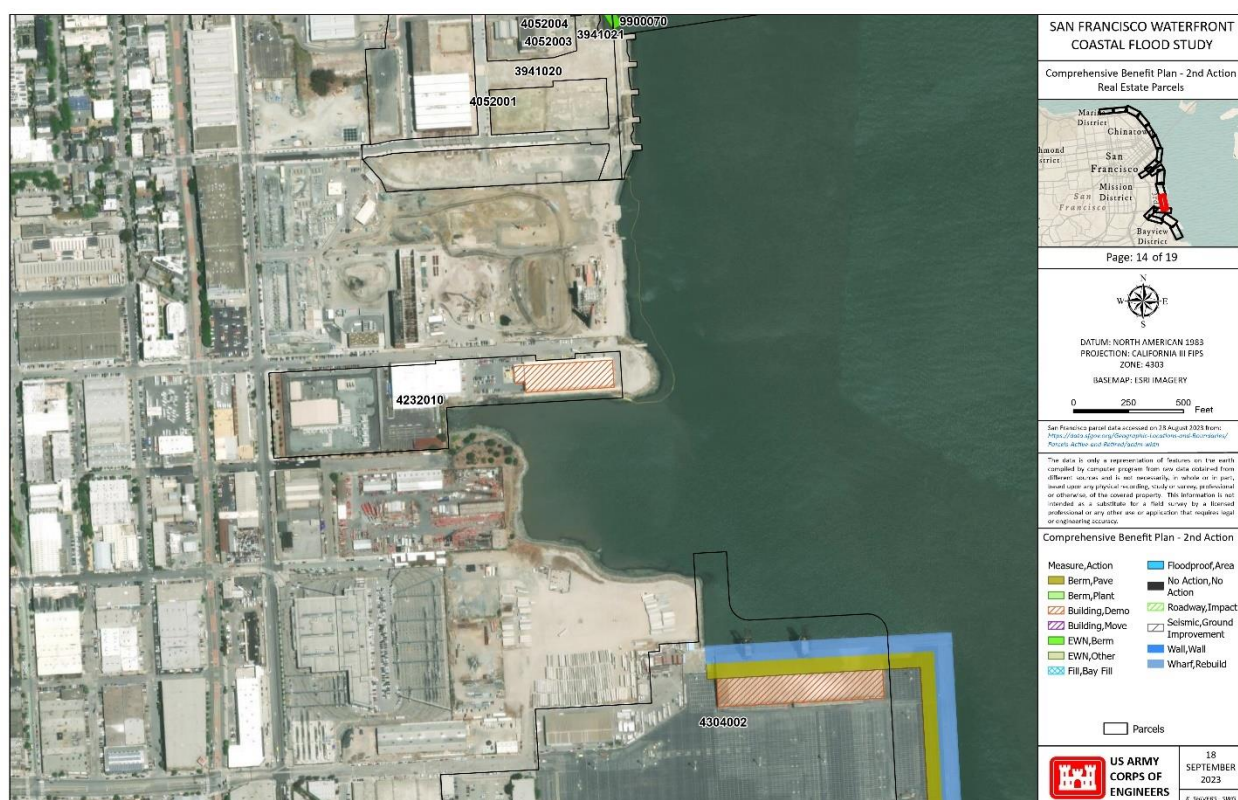
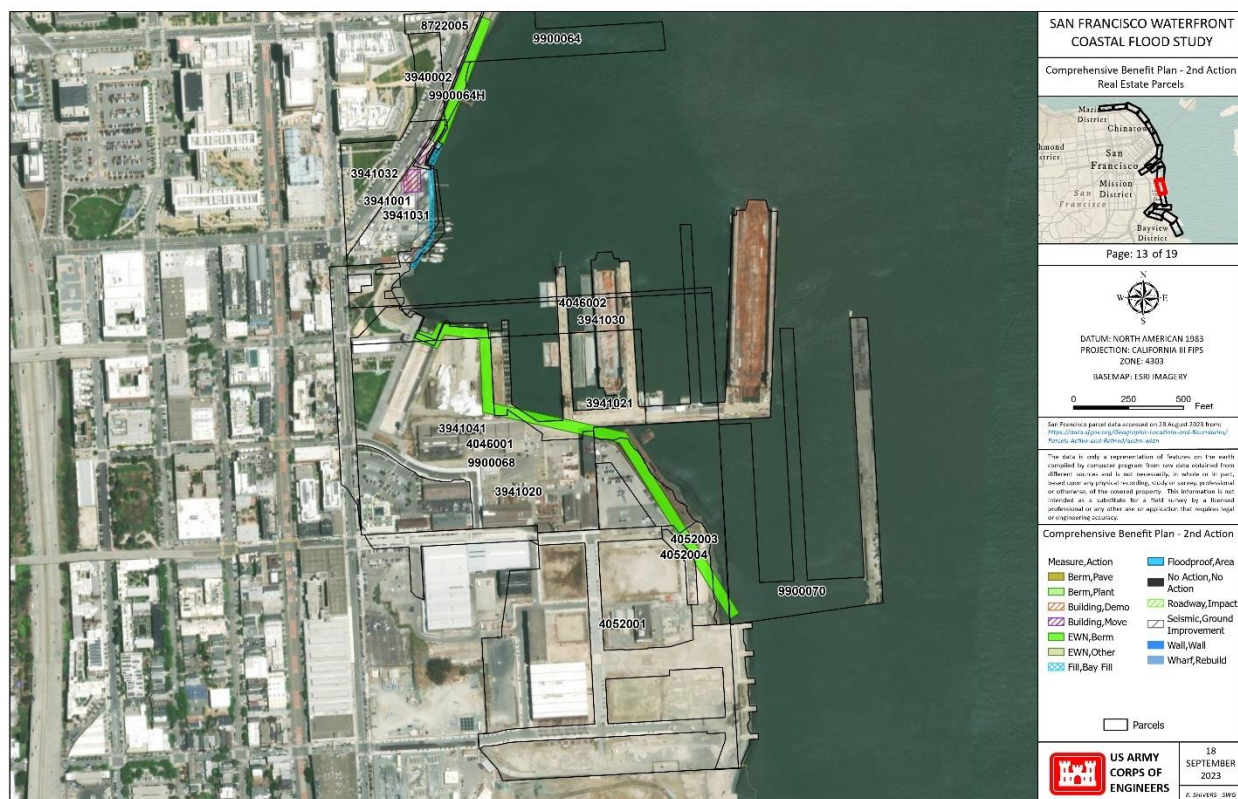
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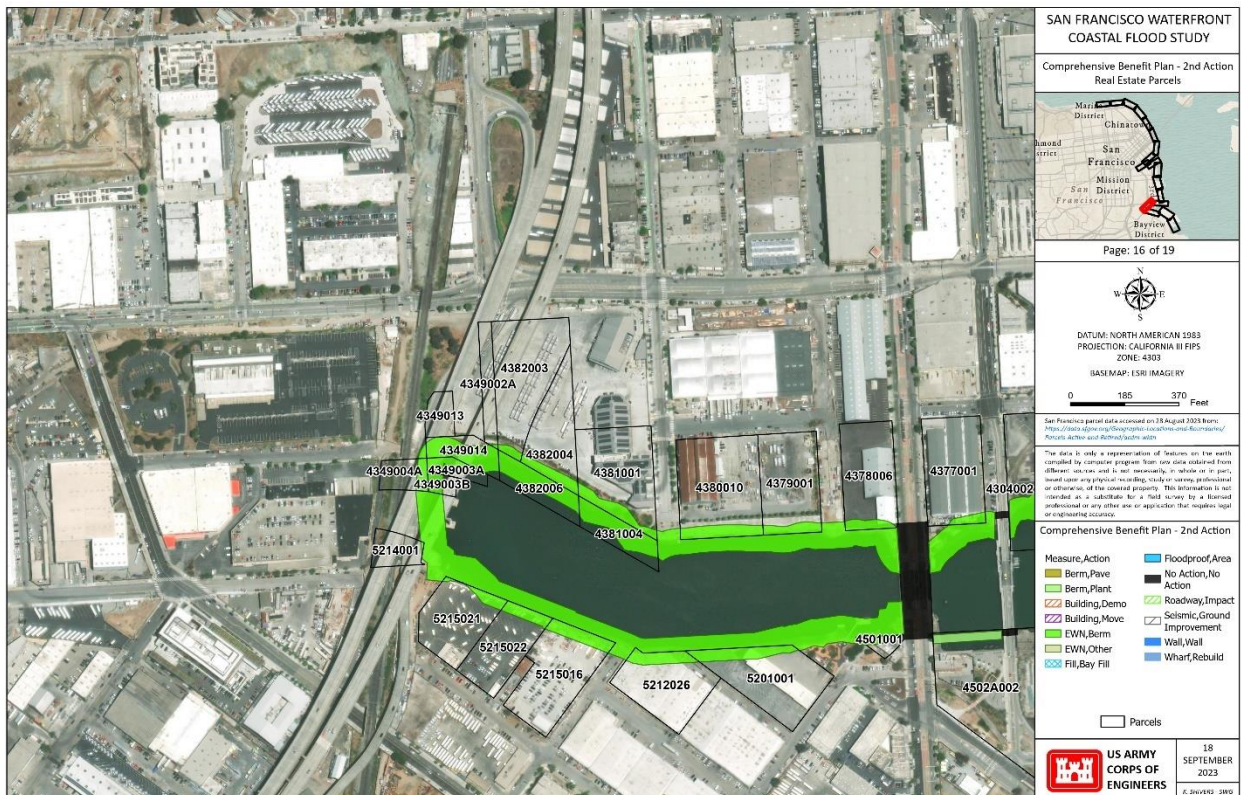
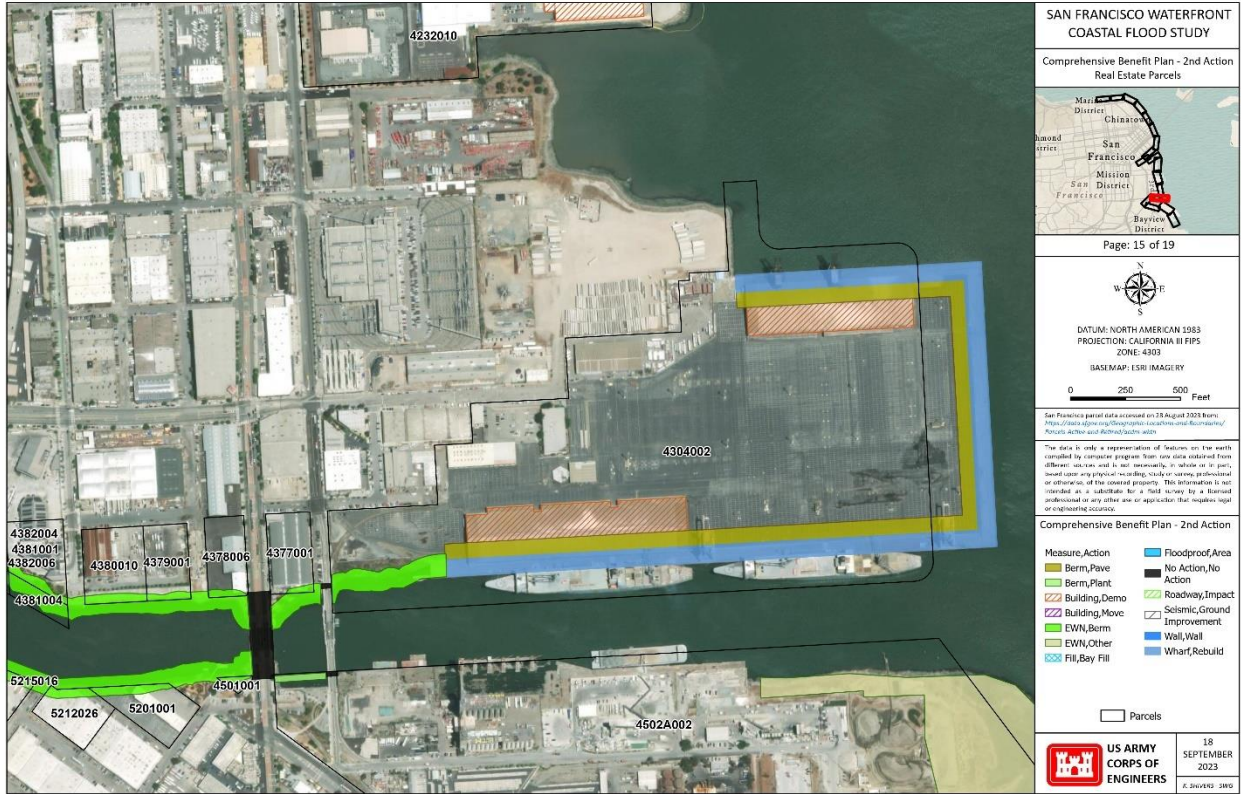
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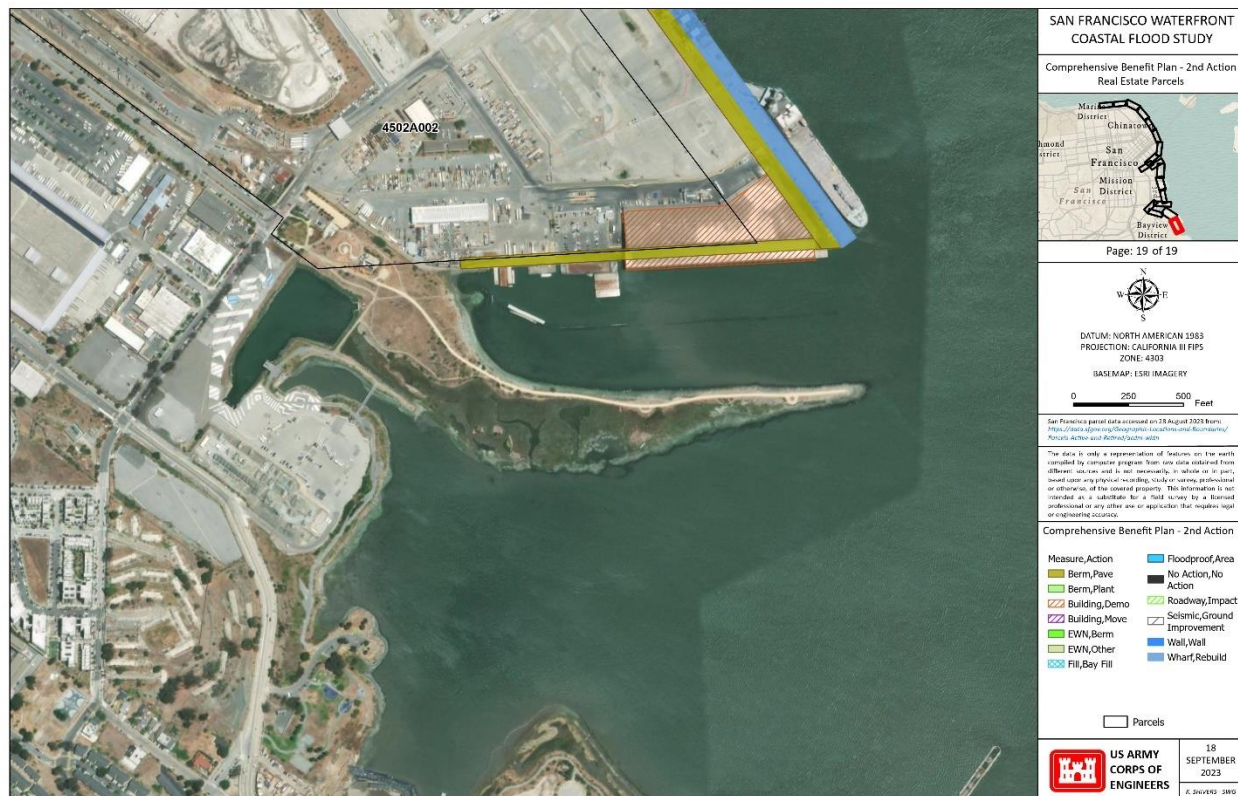
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25.2 Non-Federal Sponsor Capability Assessment

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ASSESSMENT OF NON-FEDERAL SPONSOR'S REAL ESTATE ACQUISITION CAPABILITY

San Francisco Waterfront Feasibility Study San Francisco County, California

I. Legal Authority

- a. Does the Sponsor have the legal authority to acquire and hold title to real property for project purposes?

Yes. The Port of San Francisco and the City and County of San Francisco have the legal authority to acquire and hold title to real property for project purposes.

- b. Does the Sponsor have the power of eminent domain for this project?

Yes. The City and County of San Francisco has the power of eminent domain for this project.

- c. Does the Sponsor have "quick-take" authority for this project?

Yes, the City does have the power of eminent domain and has sought and obtained prejudgment possession in the past.

- d. Are there any of the lands/interests in land required for the project outside the Sponsor's political boundary?

All lands/interests in land required for the project are located within the City and County of San Francisco.

Most of lands required for the project are owned by the City and County of San Francisco and are managed in trust for the people of California by the San Francisco Port Commission under the Burton Act of 1968.

Additional properties required for the project are owned by the City and County of San Francisco, its departments or the successor to the San Francisco Redevelopment Agency, the Office of Community Investment and Infrastructure.

A small portion of the properties required for the project are owned by private interests.

Several parcels are owned by the Federal government through the National Park Service.

- e. Are any of the lands/interests in land required for the project owned by an entity whose property the Sponsor cannot condemn?

The Project Delivery Team continues to evaluate ownership interests in parcels required for

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the project. Certain properties in Reach 1 are owned by the Federal government through the National Park Service and cannot be obtained by eminent domain if these properties are part of the final project.

II. Human Resource Requirements

- a. Will the Sponsor's in-house staff require training to become familiar with the real estate requirements of Federal projects including PL 91-646, as amended?

Yes.

- b. If the answer to II.a. is "Yes", has a reasonable plan been developed to provide such training?

The Project Delivery Team will develop a plan for this training in consultation with the San Francisco City Attorney by the Agency Decision Milestone.

- c. Does the Sponsor's in-house staff have sufficient real estate acquisition experience to meet its responsibilities for the project?

Yes.

- d. Is the Sponsor's projected in-house staffing level sufficient considering its other workload, if any, and the project schedule?

Additional staff will likely be needed to address project real estate needs.

- e. Can the Sponsor obtain contractor support, if required, in a timely fashion?

Yes, but Port Commission and possibly Board of Supervisors approval(s) may be required.

- f. Will the sponsor likely request USACE assistance in acquiring real estate?

No.

III. Other Project Variables

- a. Will the Sponsor's staff be located within reasonable proximity to the project site?

Yes. Project staff is currently headquartered at the Port of San Francisco, Pier 1, The Embarcadero, San Francisco, CA, 94111.

- b. Has the Sponsor approved the project/real estate schedule/milestones?

Yes.

IV. Overall Assessment

- a. Has the Sponsor performed satisfactorily on other USACE projects?

The Port has been party to the following USACE studies and projects:

Fisherman's Wharf. This project provides protection to the existing fishing fleet and the federally-owned historic fleet (National Park Service) at Fisherman's Wharf, San Francisco, California. Originally constructed in 1988, the project includes a 1,509-foot -long solid concrete sheet-pile breakwater, which is located along the west side of Pier 45, and a segmented concrete sheet-pile breakwater, which is located on the northeastern side of Pier 45. The latter has one 252-foot-long segment and one 150-foot-long segment. A Section 216 study was conducted in FY 07 to identify relationships and impacts between the Corps' project and the National Park Service's San Francisco Municipal Pier.

San Francisco Waterfront Seawall Section 103 Study. This study was initiated in 2013 under the continuing authority of Section 103 of the River and Harbor Act of 1962, as amended. The study included the Embarcadero area of the San Francisco waterfront. The study focused on two areas of concern – a low point approximately 40 feet wide between two buildings near Pier 5 and a half-mile low section of seawall between the Agricultural Building and Pier 22 1/2. The study was put on hold in 2018 due to the funding and initiation of this Congressionally authorized feasibility study under the Investigations account that includes the entire 7.5-mile waterfront.

Pier Repair/Removal Program. Section 5051 of WRDA 2007 provides discretionary authority to the Secretary of the Army, in cooperation with POSF, to carry out a project for repair and removal, as appropriate, of Piers 30-32, 35, 36, 70 (including Wharves 7 and 8) and 80 in San Francisco, California, substantially in accordance with the Port's Redevelopment Plan. The first phase of the project consisted of removing the deteriorated and partially collapsed Pier 36 using funding provided in FY 2010. Built in 1909 of both reinforced concrete and wood elements, Pier 36 was originally 721-feet long and 201-feet wide. Removal of Pier 36 made way for construction of the Brannan Street Wharf public park, the centerpiece of the South Beach Waterfront neighborhood redevelopment plan. A letter report on the removal of Pier 70 was completed in 2016, but the work was not undertaken due to the redevelopment of Pier 70.

- b. With regard to this project, the Sponsor is anticipated to be:

The City and County of San Francisco, acting through the San Francisco Port Commission.

V. Coordination

- a. Has this assessment been coordinated with the Sponsor?

Yes.

- b. Does the Sponsor concur with this assessment?

Yes.

San Francisco Waterfront Coastal Flood Study

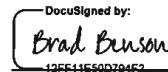
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Prepared by:



Emma Long
Realty Specialist
USACE

Approved by:

DocuSigned by:
 11/29/2023
13FE11E50D794F3
Brad Benson
Waterfront Resilience Program Director
Port of San Francisco

25.3 Non-Federal Sponsor Risk Letter



DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, TULSA DISTRICT
2488 EAST 81ST STREET
TULSA, OKLAHOMA 74137-4290

AUG 31 2023

Real Estate Division
Acquisition and Realty Services

SUBJECT: San Francisco Waterfront Feasibility Study

Port of San Francisco
Brad Benson, Waterfront Resilience Program Director
Pier 1, The Embarcadero
San Francisco, CA 94111

Dear Mr. Benson:

As you are aware, the San Francisco Waterfront Feasibility Study is currently underway. The report contains preliminary maps and drawings, which may change once the detail design of the project is completed. For this reason, in accordance with Corps of Engineers Regulation 405-1-12, Chapter 12, dated May 1, 1998, we are hereby formally advising you of the risks associated with acquisition of real estate rights prior to the signing of the Project Partnership Agreement (PPA) and receiving a request from our agency for the right-of-entry for construction.

Although advance acquisition of real estate by a Non-Federal Sponsor (NFS) is acceptable, it is my responsibility to advise you of the risks associated with advance acquisition for a proposed Federal cost-shared project. The NFS will assume full and sole responsibility for any and all costs, responsibility, or liability arising out of such efforts. The risks associated with advance acquisition include, but may not be limited to the following:

- (1) Congress may not appropriate funds to construct the proposed project;
- (2) The proposed project may otherwise not be funded, or approved for construction;
- (3) A PPA mutually agreeable to the NFS and the Government may not be executed and implemented;
- (4) The NFS may incur liability and expense by virtue of its ownership of contaminated lands, or interest therein, whether such liability should arise out of local, state, or Federal laws or regulations including liability arising out of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), as amended.
- (5) The NFS may acquire interests or estates that are later determined by the Government to be inappropriate, insufficient, or otherwise not required for the project;

-2-

- (6) The NFS may initially acquire insufficient or excessive real property acreage which may result in additional negotiations and/or benefit payments under Public Law 91-646, as well as the payment of additional fair market value to affected landowners which could have been avoided by delaying acquisition until after PPA execution and the Government's notice to commence acquisition and performance of Land, Easements, Rights-Of-Way, Relocation, and Disposal Areas (LERRD); and
- (7) The NFS may incur costs or expenses in connection with its decision to acquire or perform LERRD in advance of the executed PPA and the Government's notice to proceed which may not be creditable under the provisions of Public Law 99-662 or the PPA.

However, should you decide to proceed with acquisition of real estate interests, you are hereby notified that acquisition activities must conform to Public Law 91-646, The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended. The Uniform Act describes the rights of landowners impacted by a Federally funded project and the responsibilities of government agencies performing acquisition of real estate interests for such projects.

Furthermore, in order to ensure that you receive the maximum possible credit once the project alignment is finalized, we suggest that you keep records of the administrative costs associated with any advance land purchases. For lands or easements purchased within a five-year period preceding the effective date of a PPA, the value of the real property interests will also include the documented incidental costs of acquiring such interests, as determined by the Government to be reasonable. Administrative or incidental costs include, but are not limited to: closing and title costs, appraisal costs, survey costs, attorney's fees, mapping costs and relocation assistance benefit payments.

If you have any questions regarding the acquisition and crediting process, please call Ms. Emma Long at (918) 669-7254.

Sincerely,



Terry D. Rupe
Chief, Real Estate
Real Estate Contracting Officer

26.0 References

BURTON ACT. 1968. Chapter 1333. Approved by Governor August 14, 1968. Filed with Secretary of State August 14, 1968.

Prepared By:



Emma Long
Realty Specialist

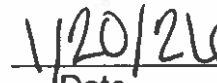


Date

Reviewed By:



Paige Pinkston
Chief, Acquisition & Realty Services Branch

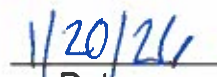


Date

Approved By:



Krista Berna
Chief, Real Estate Division



Date