July 2014

West Sacramento Project Real Estate Plan

US Army Corps of Engineers ®
Sacramento District

WSAFCA
West Sacramento Area Flood Control Agency

Draft Report

Appendix D

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Real Estate Plan
For
West Sacramento General Revaluation Report Draft Study
Yolo County, California

1. Statement of Purpose

This Real Estate Plan (REP) is intended to support and present the real estate requirements for the West Sacramento General Revaluation Report Draft study located in the eastern Yolo County in the north central region of California's Central Valley. The origination of the West Sacramento Project is one of several flood risk management projects authorized within the greater Sacramento River Watershed. It is part of an overall system in place in the Sacramento Valley since the early 1900's known as the Sacramento River Flood Control Project. The initial study for West Sacramento are as follows:

Sacramento River Flood Control System Evaluation Authorization

> The conference report accompanying the Energy and Water Development Appropriation Act of 1987 (Public Law 99-591) included $600,000 in funds over the President's Budget under Operations and Maintenance, General Appropriation, Inspection of Completed Works. Similar language is contained in both the House of Representatives and Senate Version of the Report.

The House of Representative's Report 99-70, states:

> *Inspection of Completed works: Sacramento River Flood Control Project, California.* – The committee has included $600,000 for a comprehensive analysis of the long term integrity of the flood control system for the Sacramento River and its tributaries in collaboration with the State of California. The committee is aware that even before the recent flooding, regional flood control officials felt the need for a thorough survey of the system. While it did serve well in the floods and prevented billions of dollars in damages, under stress it validated concerns that in many places remedial work is necessary as soon as possible, as may be enhanced levels of protection. The Corps is directed to report back to the committee on protection enhancement requirements which it encounters in the review of the project.

The Senate Report, 99-441, states:

> *Inspection of Completed Works, Sacramento River Flood Control Project, CA.* – The Committee is aware of the need for a comprehensive analysis of the integrity of the flood control system for the Sacramento River and its tributaries. Given the importance of this flood protection system, the committee believes that such an analysis is warranted.

In the wake of 1997 flood, the Corps identified underseepage as an area of greater concern in the design and repair of levees. This resulted in a number of design revisions to the levee repairs

in the West Sacramento Project. These design revisions and the associated increase to the total project cost was captured in a supplemental authorization through the Energy and Water Development Appropriation Act of 1999.

The current study area is located in City of West Sacramento comprising the lands within the West Sacramento Area Flood Control Agency's boundaries, which encompass portions of the Sacramento River, the Yolo Bypass, the Sacramento Bypass, and the Sacramento Deep Water Ship Channel (DWSC). California. The primary objective of the West Sacramento GRR is to determine the extent of Federal interest in reducing the flood risk within the study area. The purpose of the study is to bring 50 miles of perimeter levees surrounding West Sacramento into compliance with applicable Federal and State standards for levees protecting urban areas. Proposed levee improvements would address levee height deficiencies, levee seepage, erosion, and stability conditions along the West Sacramento Levee area. This REP focuses on the final alternatives and description of the National Economic Development Plan (NED Plan), and is to be used for planning purposes only. The end result will be to identify the Tentatively Selected Plan which will be refined and progress into a Recommended Plan for Congressional Authorization. There may be modifications to the project and its plans that occur during the Preconstruction, Engineering and Design (PED) phase, thus changing the final acquisition area(s) and/or administrative and land costs reflected in this REP.

This report presents the Real Estate requirements for the West Sacramento General Revaluation Report Feasibility Study, Yolo County, California.

2. Project Authority

The study authority for the West Sacramento area was provided through Section 209 of the Flood Control Act of 1962 Public Law (PL) 87-874 and the West Sacramento Project was authorized in the Water Resources Development Act (WRDA) of 1992, PL 102-580 Sec. 101 (4) (1992), as amended by the Energy and Water Development of 1999, PL 105-245 (1999). Section 1.2.1 of the General Reevaluation Report provides additional pertinent sections of Congressional authorizations.

3. Project Description

The project purpose and objective is to provide flood damage reduction to the City of West Sacramento, Yolo County, California. Providing flood damage reduction would reduce loss of life and damage to property in the project area. The objectives being addressed by the project are to reduce flood stages, address through seepage and underseepage of levees, address inadequate levee heights, address erosion, address slope stability, address vegetation issues, increase protection levels of existing levees, address operations, maintenance and emergency response access. The location of the study area for the West Sacramento Project GRR consists of an area that includes almost all of the City of West Sacramento. The study has been divided into two areas, the Northern and Southern Sub-Basins. The Sacramento River Deep Water Ship Channel and Barge Canal divide the northern Sub-Basins from the southern Sub-Basin at the Southport area. The project map is shown in Figure 1.

The project alternatives consist of components and cost estimates of the various reaches which will be described in further detail below.

Northern Sub-basin – The northern sub-basin, representing approximately 6,100 acres, is bounded by the Port North area and the Deep Water Ship Channel (DWSC) to the south, the Sacramento River North Levee to the north and east, the Sacramento Bypass Levee to the north, and the Yolo Bypass Levee to the west. Land in this area varies in elevation from El. 34.0 feet near Raley Field to El. 16.0 to 18.0 feet adjacent to the DWSC. The north bank of the DWSC is generally about El. 19.5 feet. The right bank (looking downstream) of the Sacramento River extends for approximately 5.5 miles of the northern and eastern sides of the basin. The northern reach descriptions are listed below.

Sacramento River North Levee
This reach extends along the right bank of the Sacramento River from its confluence with the Sacramento Bypass downstream approximately 5.5 miles to the entrance of the barge canal. These measures would be (1) installation of cutoff wall to address seepage and slop stability concerns; (2) a levee raise to address height concerns; and (3) bank protection measures to address erosion concerns.

Sacramento Bypass Training Levee extends for approximately 1.1 miles along the Sacramento Bypass left bank levee from the Sacramento Weir west to the Yolo Bypass Levee. Bank protection is proposed for 3,000 feet to address erosion issues.

Yolo Bypass Levee
This reach extends in a southerly direction along the left bank of the Yolo Bypass approximately 3.8 miles from its intersection with the left bank levee of the Sacramento Bypass to its intersection 21 with the DWSC West Levee. The measure that would be implemented for the Yolo Bypass levee would be (1) installation of a cutoff wall to address seepage and slope stability concerns.

Port North Levee
This reach encompasses the combination of levees, structures, and high ground that exists along the right bank of the barge canal and DWSC from the Sacramento River westward to the levee along the left bank of the Yolo Bypass. This area includes the ground surrounding the Port of West Sacramento's turning basin. The primary issue in the Port North area is overtopping concerns. Remediation measures would be (1) installation of flood walls to address height concerns.

Southern Sub-Basin – The Southern Sub-Basin encompasses approximately 6,900 acres and varies from El. 18.0 feet to El. 8.0 feet. The area is bounded by the Port South Levee and the DWSC to the north, the Sacramento River South Levee to the east, the South Cross Levee to the south, and the DWSC East Levee to the west. The south bank of the DWSC from Lake Washington to the Sacramento River is generally at El. 19.5 feet. The right bank of the Sacramento River extends for approximately 6.2 miles on the east side of the basin. The southern reach descriptions are listed below.

Port South Levee
This reach encompasses the combination of levees and high ground that exists along the left bank of the barge canal and DWSC from the Sacramento River westward until it meets the DWSC East Levee on the left bank of the DWSC. The measures to address the levee would be: (1) installation of convention open trench cutoff wall to address seepage concerns; and (2) a levee raise to address height concerns.

South Cross Levee
This reach extends for approximately 1.2 miles from the intersection of Jefferson Boulevard and the levee along the left bank of the DWSC to the Sacramento River where it intersects the southern limit 8 of Sacramento River South Levee reach. This levee is the southernmost boundary of the city. The South Cross levee remediation measures would address seepage, slop stability, erosion and height concerns. Measures implemented for the South Cross Levee would be (1) installation of relief wells to address seepage concerns; (2) a stability berm to address levee stability concerns; and (3) levee raises to address levee height concerns.

Deep Water Ship Channel Closure Structure
This feature proposes to construct a flood barrier structure within the Sacramento DWSC and gated overflow weir structure that would prevent flood flows from proceeding north in the ship channel. The gated weir would be constructed along the DWSC West navigation levee and would divert flood flows from the Yolo Bypass into the DWSC. The closure structure would be operated to prevent flood flows from proceeding north and potentially flood the Port of West Sacramento or the city. While this alternative may provide some degree of flood protection for the city, it would not meet the objective of providing a 200-year level of flood protection because portions of the city would remain susceptible to flooding. In addition, operation of the closure structure and the weir may require reoperation of flood control system components (e.g., the Yolo Bypass or upstream reservoirs). This features only applies to alternatives 3. It is not a feature in Alternatives 1 and 5.

Deep Water Ship Channel East Levee
his reach extends along the left bank of the DWSC channel for approximately 2.8 miles in a southerly direction from the high ground making up the western limit of the Port South Levee reach 13 to the intersection of Jefferson Boulevard with the South Cross Levee. The measures implemented for the DWSC east levee would be installation of slurry walls to address seepage and stability concerns; (2) embankment fill to address height concerns; and (3) bank protection to address erosion concerns.

Deep Water Ship Channel West Levee
This reach extends along the left bank of the Yolo Bypass and the right bank of the DWSC approximately 22 miles in a southerly direction from its intersection with the western limit of the Port North Levee to Miners Slough. The measures for the west levee would be; (1) installation of cutoff walls to address seepage and slope stability concerns; (2) a levee raise to address height concerns and (3) bank protection to address erosion.

Sacramento River South Setback Levee
This reach extends along the right bank of the Sacramento River from the entrance of the barge canal downstream approximately 6.4 miles to the South Cross Levee The measures that would be implemented would be (1) construction of a setback levee, adjacent levee, seepage berm, and fix in place to addresss seepage, slop stability, and erosion concerns; (2) installation of cutoff walls, sheet pile walls, jet grouting, and relief wells to address seepage and slope stability concerns; and (3) limited bank protection measures to address erosion concerns on the existing levee and bank protection on the setback levee.

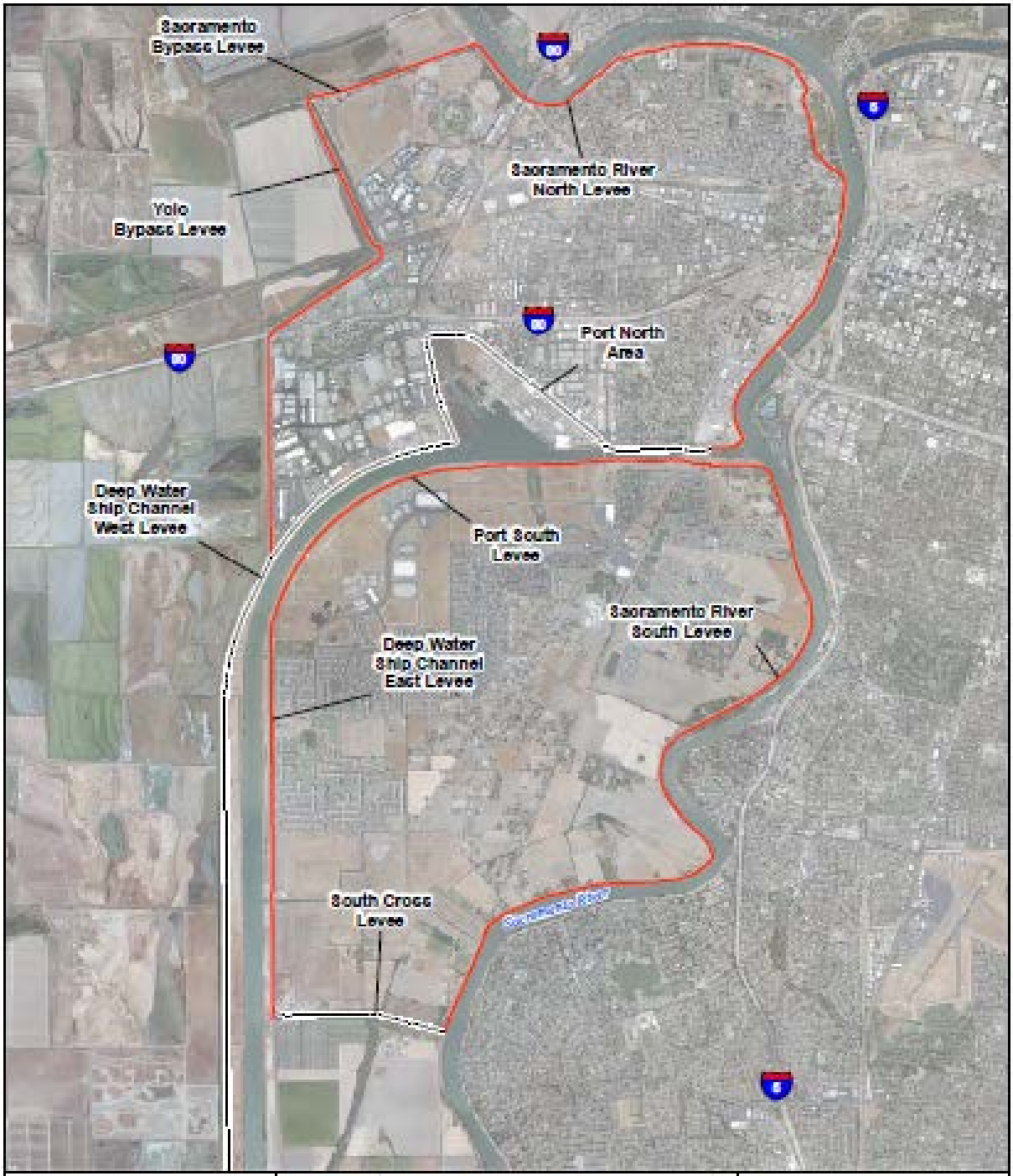
The final array of alternatives is listed below:

Alternative 1 – Improve Levees This alternative would include construction of levee improvement measures to address seepage, stability, overtopping and erosion concerns identified for the Sacramento River, South Cross, Deep Water Ship Channel, Port of Sacramento, Yolo Bypass, and Sacramento Bypass Levees. This alternative provided positive net benefits but other alternatives ranked higher in the benefit to cost analyses.

Alternative 3 – Improve Levees and Deep Water Ship Channel Closure Structure This alternative would include the levee improvement discussed in Alternative 1 on the Sacramento River, South Cross, Yolo Bypass, and Sacramento Bypass training levees to address identified seepage, stability, erosions and height concerns. Levee repairs on the Port North and south Levees and portions of the Deep Water Ship Channel east and west levees would be replaced by the construction of a closure structure in the Deep Water Ship Channel. This alternative provided positive net benefits but other alternatives ranked higher in the benefit to cost analyses.

Alternative 5 - Improve Levees and include Sacramento River South Setback Levee Alternative 5 would include the construction of levee improvements measures to address seepage, stability, erosion and height concerns identified for Sacramento River North, Port North, Yolo Bypass, Sacramento Bypass Training Levee, South Cross Levee, Deep Water Ship Channel East and West, and Port South. A setback levee would be constructed along the Sacramento River South reach. Alternative 5 is the plan that maximizes bet benefits and is therefore identified as the NED plan.

Real Estate Division developed cost estimates which included lands and damages, relocation costs, federal and non federal acquisition administrative costs for each alternative. The total project costs including real estate costs for each alternative were than analyzed by Economics Section to identify the National Economic Development (NED) Plan, which is the plan that reasonably maximizes the net benefits. Alternative 5 provides the most net benefits and therefore would be considered the NED Plan. A real estate cost estimate for Alternative 5 is located in Table 4 Section 12.


Sacramento Bypass Levee
Sacramento River North Levee
Yolo Bypass Levee
Port North Area
Deep Water Ship Channel West Levee
Port South Levee
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Deep Water Ship Channel East Levee
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May 2011
West Sacramento Project General Reevaluation Report
Figure 1
West Sacramento Study Area
U.S. Army Corps of Engineers Sacramento District
Legend
Project Levees
Non-Project Levees

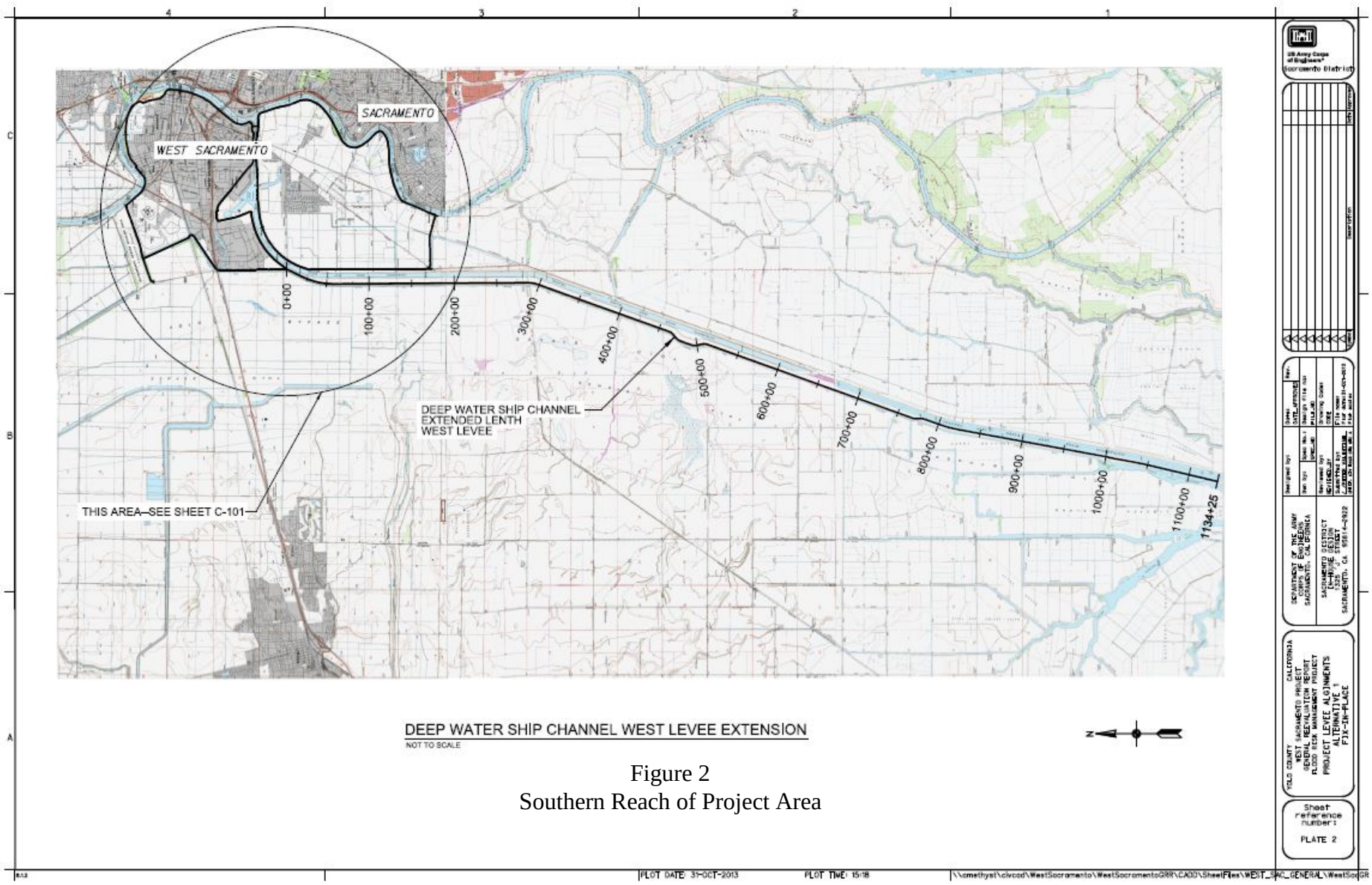


Figure 2
Southern Reach of Project Area

4. Description of Lands, Easements, Rights of Way, Relocations and Disposals (LERRDs)

Alternative 5 is the National Economic Development plan (federal interest plan) and a reach identification system was developed as shown in the table below.

The real estate cost estimate for the tentatively selected plan was developed based on the conventional approach for development of feasibility level design. Cadastral Section has inventoried over 600 parcels that would be impacted by the project. During development of the REP, the real estate cost estimate was developed in accordance with ER 405-1-12 and based upon the footprints delineating project requirements developed by the Sacramento's Engineering Division. The Lands, Easements, Rights of Way, Relocations and Disposal (LERRDs) requirements for the REP include: the acquisition of flood protection levee easements, permanent road easements, temporary work area easements, borrow easements, and mitigation fee title. The basis for the different types of acquisitions is as follows:

- Flood protection levee easements are required for the construction and operation and maintenance of project levee features. The easements vary in width and are delineated by the toe of existing levee and boundary of the seepage berms (within the project's limit), relocated levee segments and new seepage berms.

- 10 foot permanent road easements along the landside and waterside edge of the flood protection levee easements, at a minimum, are needed for providing maintenance access to and for flood fighting purposes along the toe of the project features.

- Flood protection levee easements and permanent road easements together will be sufficient to cover the acquisition needed for the vegetation free zone and to allow for the movement of construction equipments within the construction site.

- Temporary work area easements are required for acquiring staging areas along the length of the project.

- Borrow easements are required for potential borrow sites as shown in the borrow maps.

- Potential on-site mitigation areas will be acquired in fee title or alternatively in mitigation banks.

TABLE 1 - The potential design features of Alternative 5 or NED/federal Plan

Reach	Reach Length Feet	Feature Length Feet	Improvement	Features
Sacramento Bypass	6,478	-	None	None
Yolo Bypass	19,749	3,860	landside slope	Flatten Landside Slope
		2,500	landside slope/seepage	Flatten Landside Slope/ 40' Slurry Wall
		1,900	Seepage	100' Slurry Wall
DWSC West Levee	100,260	9,000	Height/Seepage	85' Slurry Wall
		7,000	Height/Seepage	50' Slurry Wall
		9,000	Height/Seepage	75' Slurry Wall
		75,260	Height	Embankment Fill
		99,010	Erosion Protection	Bank Protection
DWSC East Levee	17,171	1,500	Seepage	120' Slurry Wall, DSM
		7,055	Seepage	130' Slurry Wall, DSM
		5,945	Seepage	50' Slurry Wall
		2,671	Height	Embankment Fill
Port North	23,225	8,245	Height	Floodwall, 4' to 10'
		14,170	Height	Embankment Fill
Port South	16,262	15,560	Height	Embankment Fill
		1,000	Seepage	70' Slurry Wall
South Cross Levee	6,273	1,100	Stability/Height	Stability Berm and Embankment Fill
		5,000	Seepage/Height	Relief Wells and Embankment Fill

Reach	Reach Length Feet	Feature Length Feet	Improvement	Features
Sacramento River North Levee	30,700	30,000	Erosion Protection	Bank Protection
		11,080	Seepage	30' Slurry Wall
		1,470	Seepage	80' Slurry Wall
		500	Seepage	45' Slurry Wall
		5,530	Seepage	110' Slurry Wall
		4,600	Height	Embankment Fill
Sacramento River South Levee (Setback Levee)	29,320	6,578	Erosion	Bank Protection
		29,320	Seepage, Height	
Plug Lock Approach	570	540	Flow Direction	Embankment Fill, Sheet Pile Wall
Training Dike	3,000	3,000	Erosion Protection	Bank Protection
DWSC West Levee	12,300	9,000	Seepage	85' Slurry Wall
		11,160	Height	Embankment Fill
		11,050	Erosion Protection	Bank Protection, 3' X 120'
DWSC East Levee	5,671	5,671	Height/Seepage	50' Slurry Wall

Mitigation Sites

The project will purchase credits from mitigation banks in the service area when necessary or purchase fee on site for mitigation. For planning purposes mitigation acreage by reach is shown in the table below for Alternative 5. If mitigation banks are used than there will be no real estate costs associated with those sites. If the Corps utilizes on site mitigation areas then only the land costs will be provided in this real estate plan. The cost of plantings and construction is not a real estate cost. When the Tentatively Selected Plan is finalized these costs and locations will be refined.

TABLE 2

Reach	Mitigation Acreage Needed	Cost
Sacramento River South Levee	75	$5,175,000
Sacramento River South (SRS)	69	$4,305,000
South Cross Levee	47	$450,000
Deep Water Ship Channel East Levee	31	$3,030,000
Deep Water Ship Channel West Levee	16	$480,000
Port South Levee (PS)	12	$1,050,000
Port North Levee (PN)	8	$480,000
Yolo Bypass Levee	4	$120,000
Sacramento Bypass Training Levee	6	$180,000
		Total: $15,270,000

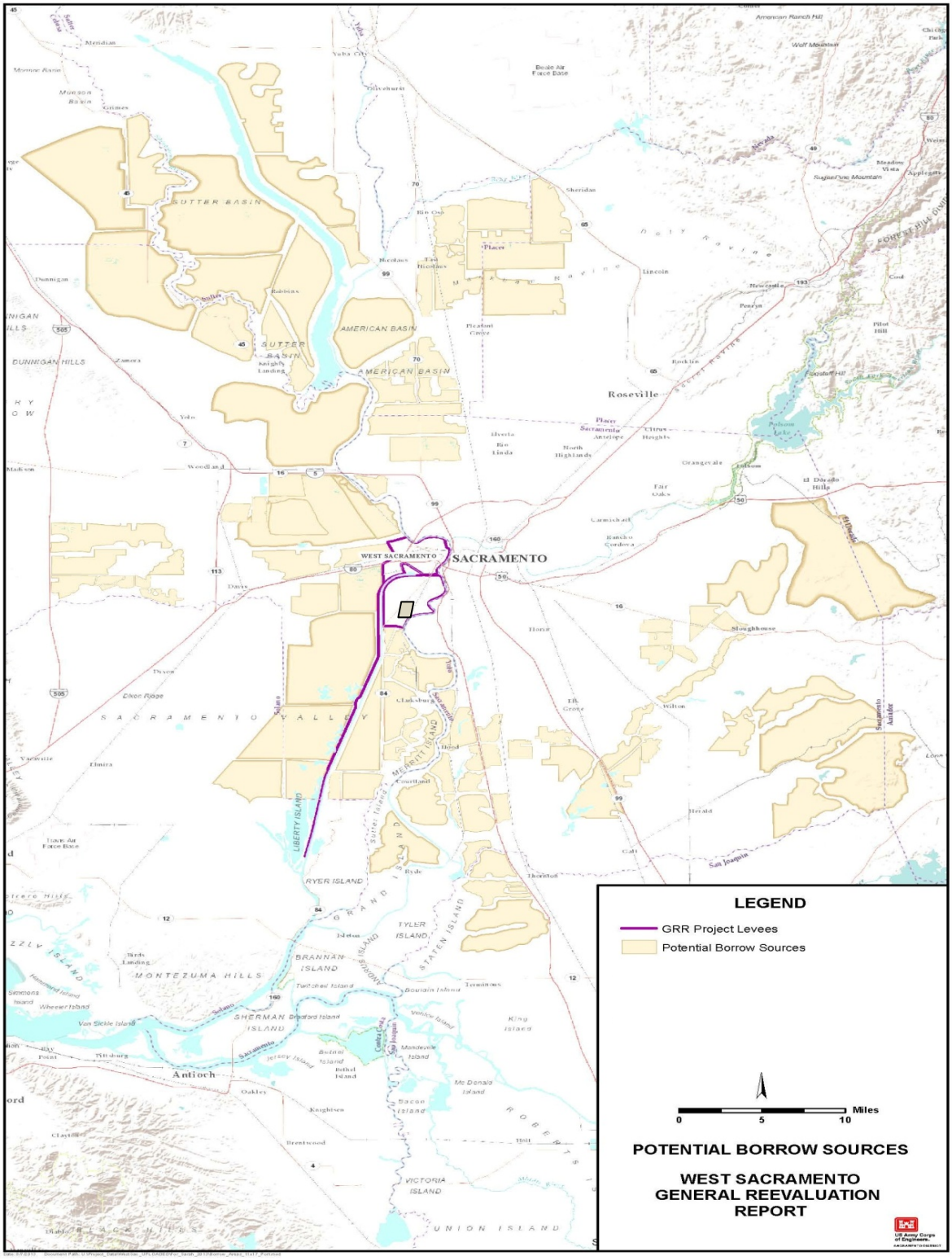
Borrow Sites

It is estimated that a maximum of 9 million cubic yards of borrow material could be needed to construct the project. Because this project is in the preliminary stages of design, detailed studies of each alternative borrow needs have not been completed. For the purposes of NEPA/CEQA a worst case scenario is being evaluated for the volume of borrow material needed. Actual volumes exported from any single borrow site would be adjusted to match demands for fill.

To identify potential locations for borrow material, soil maps and land use maps were obtained for a 20-mile radius surrounding the project area. The criteria used to determine potential locations were based on current land use patterns, soil types from U.S. Soil Conservation Service (SCS), and Corps' criteria for material specifications. These potential borrow locations are shown on the Borrow Site Map (Figure 3). Borrow sites would be lands that are the least environmentally damaging and would be obtained from willing sellers. The data from land use maps and SCS has not been field verified, therefore, to ensure that sufficient borrow material would be available for construction the Corps looked at all locations within the 20 miles radius for 20 times the needed material. This would allow for sites that do not meet specifications or are not available for extraction of material.

The excavation limits on the borrow sites would provide a minimum buffer of 50 feet from the edge of the borrow site boundary. From this setback, the slope from existing grade down to the bottom of the excavation would be no steeper than 3H:1V. Excavation depths from the borrow sites would be determined based on available suitable material and local groundwater conditions. The borrow sites would be stripped of top material and excavated to appropriate depths. Once material is extracted, borrow sites would be returned to their existing use whenever possible, or these lands could be used to mitigate for project impacts, if appropriate.

FIGURE 3 - Proposed Borrow and Disposal Sites



5. LERRDs Owned by the NFS and Crediting

In the event the recommended plan is authorized, crediting will follow standard procedures as set out in the model Project Partnership Agreement (PPA). No credit will be afforded to any lands or interests previously acquired and credited for any applicable Federal project. Credit will only be applied to the acreage within the project footprint, namely the lands or corridor required for the recommended Plan of improvements. Lands outside of the project requirements and lands that may be acquired for the sponsor's own purposes would not be creditable LERRDs. Only land deemed necessary that has not been previously cost shared on a project will be credited.

Corps' policy also prescribes that credit will not be afforded for lands purchased with Federal funds or grants where the granting of such credit is not permissible, whether as prescribed by statute, or as determined by the head of the Federal agency and administer such grants or programs. The Federal Emergency Management Agency (FEMA's) floodplain hazard mitigation and elimination grants are examples of such Federal grant programs where credit would not be allocated.

The Non-Federal sponsors potentially own 264 acres in fee title according the County Assessor's office in the study area which are identified in the tract registers The parcels owned by the Non Federal Sponsors are assumed sufficient for the estates needed. The City of West Sacramento is reviewing city owned parcels. The City of West Sacramento did provide comments on a spreadsheet provided on the DVD Exhibit enclosed with this report. State of California, Department of Water Resources has assumed all Sacramento and San Joaquin Drainage District parcels and all RD 900 parcels would be available for flood projects. The coordination with the State owned parcels is ongoing. All restrictions, prior easements, or inconsistent encumbrances are not known at this time. There is relatively low risk to the sponsor owned lands being insufficient for project purposes because the gross appraisal conservatively estimates the unit costs for the estates required for project purposes and includes seven incremental and improvement contingencies for various unknowns including severance damages, unknowns for level of study definition, unforeseen aspects due to inaccessibility and lack of onsite inspections, cost/value increases from time and development pressure, negotiation latitude above fair market value, potential for excessive cost/awards, potential for unknowns natural resources or minerals, improvement/building contingencies. The contingency assessment should reduce risk and cause no impact to plan selection. The sponsor owned parcels are located in a table found in the Exhibit DVD cadastral maps and tract registers. The Non Federal Sponsors have the legal sufficiency to provide the lands required for the project as stated in DWR and WSAFCA Non-Federal Partners Real Estate Acquisition and Capability Assessment they provided to the Corps as shown in Exhibit A.

Potentially Sponsor Owned Lands	Permanent Levee Easements	Temporary Easements
City of West Sacramento	120.57 acres	22.29 acres
State of California	144 acres	13.9 acres

6. Standard Federal Estates and Non Standard Estates

Standard Estates:

The following **s**tandard estates are anticipated to support project purposes and features.

Fee Simple Title

The fee simple title to [the lands described in Exhibit B], subject however, to existing easements for public roads and highways, public utilities, railroads and pipelines.

Flood Protection Levee Easement (FPLE)

A perpetual and assignable right and easement in the land [described in Exhibit A tract registers] to construct, maintain, repair, operate, patrol and replace a flood protection levee, 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.

Bank Protection Easement

A perpetual and assignable easement and right-of-way in, on, over and across the land hereinafter described for the location, construction, operation, maintenance, alteration, repair, rehabilitation and replacement of a bank protection works, and for the placement of stone, riprap and other materials for the protection of the bank against erosion; together with the continuing right to trim, cut, fell, remove and dispose therefrom all trees, underbrush, obstructions, and other vegetation; and to remove and dispose of structures or obstructions within the limits of the right-of-way; and to place thereon dredged, excavated or other fill material, to shape and grade said land to desired slopes and contour, and to prevent erosion by structural and vegetative methods and to do any other work necessary and incident to the project; together with the right of ingress and egress for such work; 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.

Temporary Work Area Easements (TWAE)

A temporary easement and right-of-way in, on, over and across for a period not to exceed 2 years after the execution of the construction contract, beginning with date possession of the land is granted to the United States, for use by the CVFPB, its representatives, agents, and contractors as a (work area), haul routes, 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 West Sacramento 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.

Permanent Road Easement (PRE)

A perpetual and assignable easement and right-of-way in, on, over and across [parcel number] for the location, construction, operation, maintenance, alternation and replacement of (a) road(s) and appurtenances thereto; together with the right to trim, cut, fell and remove there from 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 the tract register); subject, however, to existing easements for public roads and highways, public utilities, railroads and pipelines.

Borrow Easement

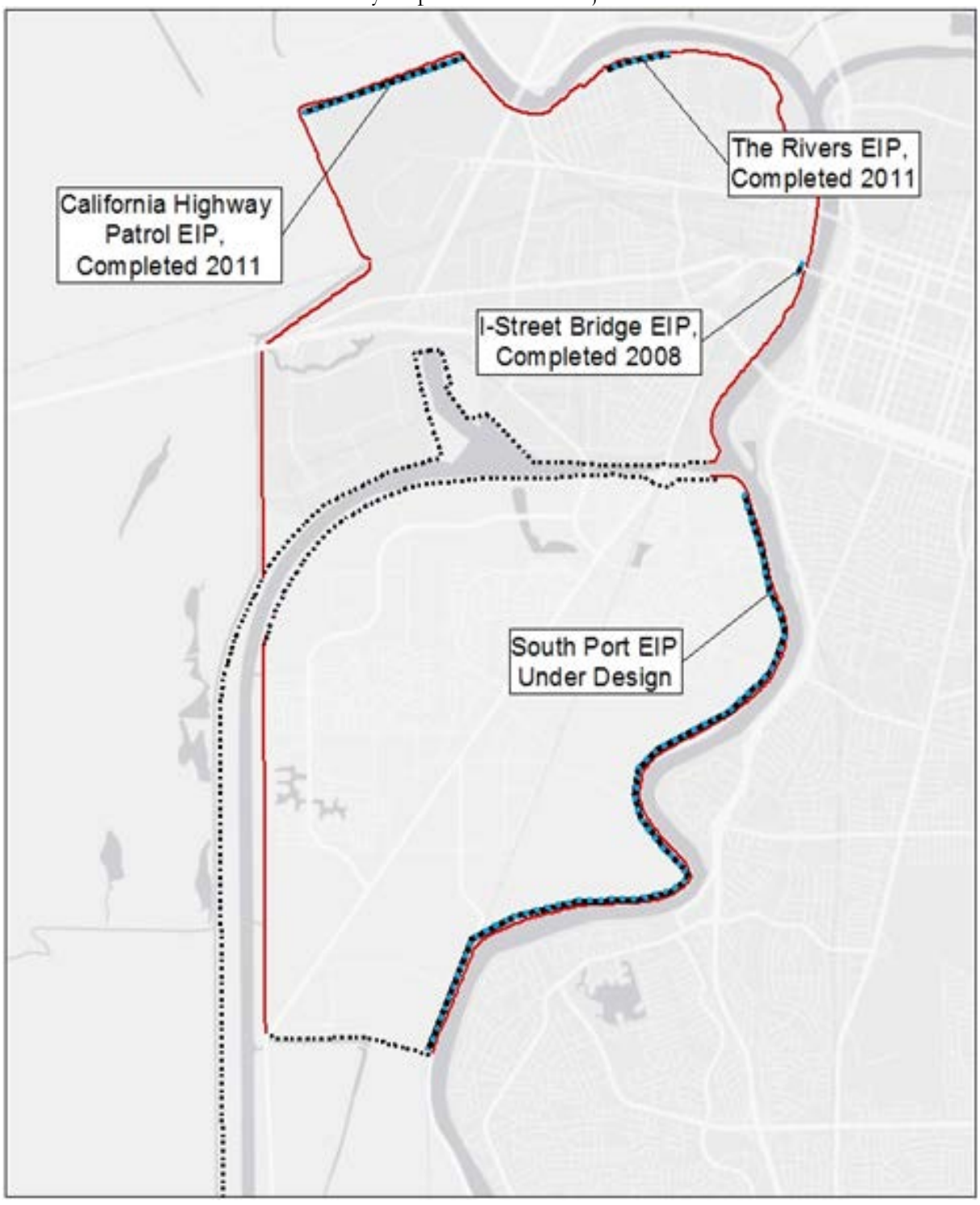
A perpetual and assignable right and easement to clear, borrow, excavate and remove soil, dirt, and other materials from (the land described in Tract register) subject, however, to existing easements for public roads and highways, public utilities, railroads and pipelines; reserving, however, to the landowners, their heirs and assigns, all such rights and privileges in said land as may be used without interfering with or abridging the rights and easement hereby acquired.

7. Description of Any Existing Federal Project in or Partially in the Proposed Project Area

All project designs have taken into account all previous federal projects in the project area and specifically designed around those previous projects. There will be no overlapping areas with the new construction. All previous federal projects are described in the main report in section 1.5 of the main General Reevaluation Report. A brief summary is provided below.

West Sacramento Levee Improvement Program. WSAFCA, in cooperation with the California Department of Water Resources and the Central Valley Flood Protection Board, have initiated urgently needed improvements to the Federal Project levees protecting West Sacramento. These improvements address identified deficiencies in the levee system based on recent recognition of seepage problems and levee investigations. A catastrophic failure of the levee system around West Sacramento would imperil the health and safety of approximately 47,000 residents, shut down two of California's important freeways (I-80 and U.S. Highway 50), an important rail link from the San Francisco Bay area to the rest of the country, and cause significant residential, commercial, and industrial property damage. WSAFCA and the State are addressing these challenges by moving aggressively forward with the WSLIP by constructing Early I Implementation Projects (EIP) at what are considered the most vulnerable locations. One EIP site, the I Street Bridge site was completed in 2008. Construction was completed at two other EIP sites, identified as the California Highway Patrol (CHP) and the Rivers sites, in 2011. The Southport EIP site is in the early design stage and construction is anticipated to start in 2015. The location of these EIP sites is shown on Figure 4.

FIGURE 4 Early Implementation Projects



In addition to approval to modify a federal levee through Section 408, the I Street Bridge site received approval for credit eligibility for levee modifications pursuant to Section 104 of WRDA of 1986.

The CHP and Rivers EIP sites received approval to modify a federal levee through Section 408. However, due to a change in policy the projects were not approved for credit under Section 104 of WRDA 1986. WSAFCA will seek credit approval through Section 221 of the Flood Control Act of 1970 as amended by Section 2003 of WRDA 2007. The final implementation guidance for Section 221 of the Flood Control Act of 1970 as amended is currently being updated.

Sacramento River Bank Protection Project. Current designs avoid all erosion work completed by the Sac Bank Project. The erosive forces from flood events on the Sacramento River have weakened the 100 year-old levees. In response to requests from the State of California, Congress authorized the Sacramento River Bank Protection Project in two phases to maintain levee integrity and other flood control facilities associated with the Sacramento River Flood Control Project. Phase I of the Sacramento River Bank Protection Project started in 1960 and was completed in 1975 with the installation of 480,000 lineal feet of rock revetment bank protection. Phase II was authorized by Congress in 1975 and provided for an additional 405,000 lineal feet of bank protection. To date, approximately 390,000 lineal feet of Phase II have been completed with continued construction planned. Expanded authority has been authorized under WRDA 2007 to provide for an additional 80,000 lineal feet of bank protection before the completion of Phase II.

As time goes on and flood seasons pass, an increasing number of sites are requiring some type of maintenance and/or repair work to provide consistent adequate flood control capability. During the 2010 inspection 187 sites were identified as in need of repair. Some of these sites are deemed "critical" and potentially subject to failure during a flood event. While these critical sites are being monitored to provide early warning for emergency response, emergency flood fighting may be required to prevent levee failure and subsequent flooding unless needed repairs are made prior to the next flood event. Funding for repairs does not meet the needs of the system.

Approximately 7 sites along the Sacramento River in the West Sacramento Project area were identified during the 2010 inspection that are considered subject to bank erosion in the form of bed or levee toe scour and wave-wash that threatens the stability of the adjacent levee. Two of the sites are currently being repaired with construction of a setback levee.

8. Description of any Federally Owned Land Needed for the Project

There are a total of 7 federally owned parcels located in the project area. All parcels are owned by the Corps of Engineers. There are 4 federally owned parcels along the Deep Water Ship Channel West Levee Reach estimated at 69 acres. The federal parcels in the construction area are portions of the ship channel and portions of a drainage canal flowing parallel to the deep water ship channel. There is 1 Corp parcel (Valley Resident Office, lab, storage facility and parking garage) in the North Port Levee Reach estimated at .279 of an acre located off Jefferson Blvd. The construction footprint would require the relocation of the parking garage. There are 2 Corp owned parcels (Corps Maintenance Yard) located in the North Levee Reach estimated at 8.25 acres. There are no other federally owned lands in the project area.

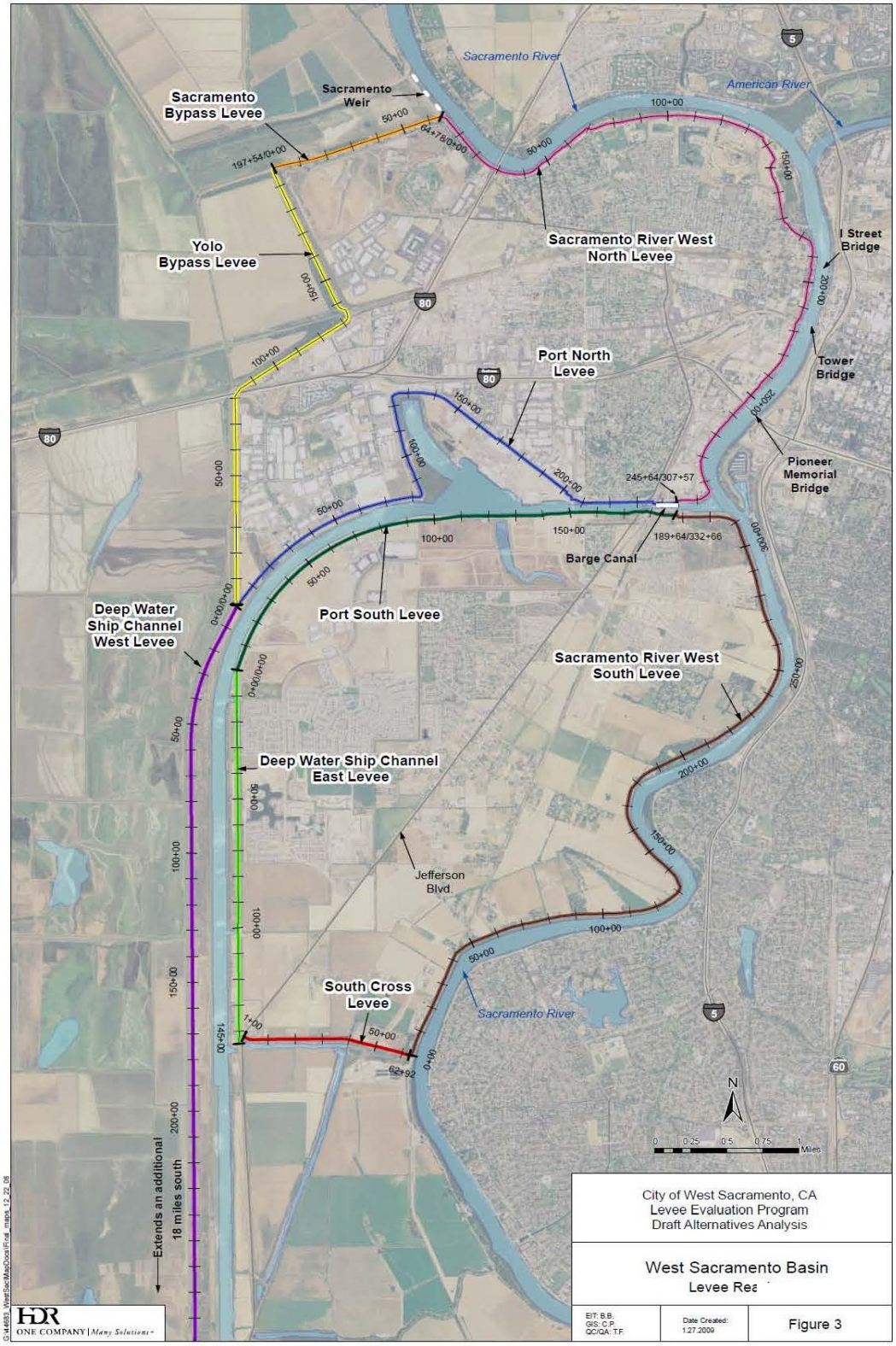
Federally owned Parcels FPLE – Levee Easement TWAE - Temp Easement

Reach Description	Parcels	Acreage	FPLE	TWAE
Deep Water Ship Channel West	4	353	54.17	0
North Levee Reach (Bryte Yard)	2	8.25	5.75	.104
Port North Reach (Valley Resident Office Parking Garage	1	2.55	.279	0

9. **Application of Navigational Servitude to the LERRDs Requirement**

Alternatives 5 erosion/bank protection components will invoke navigational servitude for the barge construction work that is completed from the Sacramento River (water) side of the banks.

10. Project Map FIGURE 5



11. Takings Analysis

Hydraulic Effects

The increase of future flow through the widened Sacramento Weir and Bypass due to the American River Common Features GRR project located across the River from the West Sacramento project and the associated increase of flow in the Yolo Bypass would slightly increase the flood stage on the Yolo Bypass levees which protect the City of West Sacramento. This increase in stage could result in potential damages and the need for hydraulic mitigation. In order to offset this increase in stage, the addition to the Sacramento Weir would be operated in such a way as to mimic the existing conditions at events up to about the 50 year frequency and therefore not increase the water surface elevation against the West Sacramento levees. For larger storms, the weir would be operated to its fullest extent in conjunction with the new operation at Folsom Dam which would allow the larger events to be passed with lower flows as compared to existing conditions. Therefore, no hydraulic mitigation would be necessary. If the West Sacramento levees are improved in the future as envisioned in the West Sacramento GRR or via the local regional planning effort, the widened Sacramento Weir and Bypass would be fully operational for the full range of events.

While a formal analysis on induced flooding was not completed for this feasibility effort, HEC-RAS model results were reviewed to investigate the possibility of each alternative inducing flooding within the project area and elsewhere. The Hydraulic Analysis Section, Sacramento District, USACE reviewed model results for the Future Without Project (FWOP) Condition for each Alternative . Each condition and potential for induced flooding is listed below.

Alternative 5, Fix Levees in Place with Sacramento River Setback Levee – Alternative 5 includes fixing levees in place which have no hydraulic effect plus a setback levee along the Sacramento River. The setback levee is offset approximately 400 feet from existing levee and the land between the two levees could be used as riparian habitat, flood water storage, or dry habitat. The design of the setback levee and changes to the existing levee (if any) will be refined if Alternative 5 is selected as the NED plan.

A setback levee has not been included in the hydraulic model used for the West Sacramento GRR. However, for the Southport 408 application a hydraulic analysis with a setback has been completed by the applicant. Based on these hydraulic models, there is a 0.13 foot and 0.17 foot rise for the 0.1% (1/100) ACE and 0.5% (1/200) ACE, respectively.

Conclusion: The increase in flow will be located in the area between the South River setback levee and the Sacramento River. This area will be a flowage easement and there will be no inhabitable structures located in the flowage easement area.

12. Cost Estimate Summary for Lands and Damages and Relocations

The following is a preliminary analysis estimating the costs of acquiring the required LERRDs to support Alternative 5 to assist in the determination of federal interest for a cost benefit analysis. The table below estimates the costs associated with acquiring real property interests necessary to construct, operate and maintain a local levee project primarily located along the Sacramento River. The date of the approved cost estimate was June 2013.

TABLE 4 COST TABLE

Alternative 5 Features	Cost	Contingency	Total Costs Rounded
Code of Accounts 01	FEDERAL		
Fed RE Admin Account 01	$4,595,238	(5%) $229,762	$4,825,000
Account 01	NON FEDERAL		
Levees, O&M Roads, Staging Areas /Relocation lands and improvements	$104,894,375	Incremental Real Estate Costs 35% Severance Damages 25% $62,936,624	$167,831,000
Non RE Fed Admin	$11,947,619	(5%) $597,381	$12,545,000
PL 91-646 Relocation Assistance Payments Account 01	$1,363,725	(25%) $71,775	$1,435,500
Account 02	NON FEDERAL	SUBTOTAL	$181,811,500
Utility Relocation Costs	$33,000,000	(27%) $8,910,000	$41,910,000
			TOTAL LERRD'S $228, 546,500

13. <u>Relocation Assistance Benefits</u> (as required by the Relocation Assistance and Real Property Acquisition Policies Act, PL91-646)

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 residences and businesses within the project area. The Non-Federal Sponsor has prepared a draft relocation plan, which the Corps has reviewed. The relocation inventory was created by viewing conceptual designs over aerial photographs. The estimated costs of such potential displacements are required for estimating project costs and will be refined by the non federal sponsor when construction designs are completed.

To meet the minimum ROW requirements as stated above, acquisition of additional real estate would be necessary and would require relocations of certain physical structures. Any physical structures falling within the ROW proposed would be considered potential relocations.

Impacts to Potential Structures PL 91-646

TABLE 5

Reach Station ID	Residence, Businesses	Cost	Contingency	Total Cost
Sacramento River North Levee	11	$465000	$93,000	$372,000
Sacramento River South Setback Levee	17	$824,600	$43,400	$868,000
Sacramento Cross Levee	6	$146,250	$48,750	$195,000

Availability of Replacement Housing/Business Properties: There is available replacement housing and available land for relocating businesses in West Sacramento.

The foregoing 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.

14. Mineral/Timber Activity

There are no active mineral or timber activities in the project construction locations. Land use in West Sacramento is predominantly urban and rural. The predominant urbanized area is located in the North Basin. This area contains commercial, residential and industrial properties. Highways and railroad infrastructure are located in the North Basin. The Port of West Sacramento is located in the southern portion of the North Basin. The South Basin includes commercial, residential and rural land uses. The South Basin has undergone significant commercial and residential development in the past twenty years.

15. Non-Federal Sponsor's Ability to Acquire

The State of California Central Valley Flood Protection Board and West Sacramento Area Flood Control Agency have partnered with the Corps on several prior projects and has a full Real Estate staff capable of fulfilling its' responsibilities as a non-Federal sponsor.

The assessment of Non-Federal Sponsor's Real Estate Acquisition Capability has been provided to WSAFCA and is included in Exhibit A1.

16. Zoning Anticipated in Lieu of Acquisition

The Corps does not propose use of a zoning ordinance that would essentially facilitate property acquisition by prohibiting certain uses of property instead of purchasing the property. No such ordinance is proposed. The plan assumes purchasing property along the levee.

17. Acquisition Schedule

The non-Federal sponsors will be directed to begin real property acquisition for the project only after the PPA is fully executed. Construction is proposed to take approximately 18 years if each reach is constructed sequentially. The construction reaches have been prioritized based on a variety of factors, including the condition of the levee, the potential damages that would occur due to levee failure, and construction feasibility considerations, such as the availability of equipment at

any given time. The tentative schedule of construction is shown in below. The durations are for construction activities only, and do not include the time needed for design, right-of-way, utility relocation, etc.

Durations of each tasking after the PPA is executed is estimated at 3 to 6 months per construction contract.

REAL ESTATE ACQUISITION SCHEDULE				
Project Name: West Sacramento GRR Contracts	COE Start	COE Finish	NFS Start	NFS Finish
Receipt of preliminary drawings from Engineering/PM	2011	2012	2010	2011
Receipt of final drawings from Engineering/PM	2014	2014	2011	2013
Execution of PPA/Finalize Chief's Report	Dec 14, 2014			
Formal transmittal of final drawings & instruction to acquire LERRDS	2015			
Years for Construction Sequence and Duration				
South Levee			4 years	2021
North Levee			2 years	2019
Yolo Bypass			1 year	2018
Deep Water Ship Channel East			3 years	2020
Deep Water Ship Channel West			3 years	2020
Deep Water Ship Channel Closure Structure				
Port South			1 years	2018
South Cross Levee			1 year	2018
Port North			2 years	2019
Conduct Landowner Meetings			2016	2021
Prepare/review mapping & legal descriptions			2016	2021
Obtain/review title evidence			2016	2021
Obtain/review tract appraisals			2016	2021
Conduct negotiations			2016	2021
Prepare/review condemnations			2016	2021
Perform condemnations			2016	2021
Obtain Possession			2016	2021
Complete/review PL 91-646 benefit assistance			2016	2021
Certify all necessary LERRDS are available for construction			2016	2021
Prepare and submit credit requests			2016	2021
Review/approve or deny credit requests	2016	2023		

18. **Description of Facility and Utility Relocations update**

On January 10, 2013, the USACE issued a new policy guidance letter (PGL) No. 31 – Real Estate Support to Civil Works Planning Paradigm 3x3x3 pertaining to relocations where the estimated total cost to modify all project utility facility relocations does not exceed 30 percent of the total project cost, the District Office of Real Estate shall, in lieu of an attorney's preliminary opinion of compensability, prepare a real estate assessment.

In accordance with Real Estate PGL No. 31 -

(1) Where the estimated total cost to modify all project utility facility relocations, including the value of any additional lands that may be required to perform the relocations does not exceed 30 percent of estimated total project costs, the District Office of Real Estate shall, in lieu of an attorney s opinion of compensability prepare a real estate assessment. Such a real estate assessment, will address the following questions:

(a) Is the identified utility facility generally of the type eligible for compensation under the substitute facilities doctrine (e.g., school, highway, bridge, water and sewer systems, parks, etc.)

(b) Does the District have some valid data or evidence that demonstrates that it has identified an owner with a compensable interest in the property.

For cost shared projects it is the responsibility of a non-Federal sponsor to perform or assure the performance of relocations.

Alternative yields utility/facility relocation costs in the estimated amount of $41,910,000 (rounded). This cost assumes all utility/facility relocations are compensable and will be refined after the Recommended Plan is selected.

TABLE 6 - Code of Accounts 02 Utility/Facility Relocations for Alternative 5

Reach	Cost
Sacramento River North Levee	$18,425,562
Sacramento River South Levee	$6,803,880
Yolo Bypass	$27,900
Port North Levee	$6,353,760
South Cross Levee	$616,962
South Port Levee	$1,482,048
Sub Total Rounded	$33,000,000
Contingency 27%	$8,910,000
Total	$41,910,000

The Utility Facility Inventory table, maps and costs discussed herein are available on DVD. That DVD identifies the utility relocations generally eligible for compensation and includes the evidence demonstrating the District's identification of an owner.

ANY CONCLUSION OR CATEGORIZATION CONTAINED IN THIS REAL ESTATE PLAN (AND THE REPORT) THAT AN ITEM IS A UTILITY OR FACILITY

RELOCATION TO BE PERFORMED BY THE NON-FEDERAL SPONSOR AS PART OF ITS LERRD RESPONSIBILITIES AND/OR IS OTHERWISE COMPENSABLE OR NON-COMPENSABLE IS PRELIMINARY AND FOR DISCUSSION PURPOSES ONLY. THE GOVERNMENT WILL MAKE A FINAL DETERMINATION OF THE RELOCATIONS NECESSARY FOR THE CONSTRUCTION, OPERATION, OR MAINTENANCE OF THE PROJECT AFTER FURTHER ANALYSIS AND COMPLETION AND APPROVAL OF THE FINAL ATTORNEY'S OPINIONS OF COMPENSABILITY FOR EACH OF THE IMPACTED UTILITIES AND FACILITIES DURING FINAL DESIGNS.

19. Hazardous,Toxic, and Radiological Waste Impacts

A Phase 1 Environmental Site Assessment (ESA) was completed in May 2012 for approximately 50.5 miles of levee system that surround the City of West Sacramento and the Deep-Water Ship Channel to identify recognized environmental conditions involving hazardous, toxic, or radioactive waste (HTRW). Sites that could affect levee construction projects may include those that exhibit the presence or likely presence of any hazardous substances or petroleum products under conditions that indicate an existing release, a past release, or the material threat of a release into structures, the ground, and groundwater or surface waters of the project site.

Any construction activities that include the disturbance of soil or removal of groundwater may encounter HTRW and project alternatives will need to consider the presence of contamination near the site. Remedial alternatives used to address levee underseepage and overtopping will have the greatest potential to be affected by the presence of HTRW. Possible remedies to reduce underseepage include construction of a cut-off wall, installation of relief wells, construction of seepage berms, and installation of sheet pile walls. Moreover, relief wells are located on the landside toe of the levee and operate during flood conditions to reduce built-up pore water pressures that could cause instability in the levee. Drilling these wells would require evaluation of the proposed sites in relation to potential HTRW sites. Lastly, regional contaminants from vehicular use of the existing levee crown and historic agriculture and mining sources may be present and should be considered on a site specific basis if future construction activity generates soil for reuse or disposal.

Environmental Data Resources (EDR) conducted a records search of 71 federal, state, public, and proprietary available databases to identify sites located within a one mile radius of the project area where the presence or likely presence of HTRW has been previously documented. The Phase 1 ESA conducted in May 2012 did not include any sampling or analysis of environmental media. A review of the records search results identified 788 environmental sites including eight sites that have the HTRW concerns with the potential to affect future construction activities and eight sites with HTRW concerns that are not likely to affect future construction activities.

For this GRR, the USACE conducted a second review of previously identified potential HTRW sites in the May 2012 Phase 1 ESA. The USACE utilized updated site information in the EnviroStor and GeoTracker databases maintained by the California Department of Toxic Substance Control (DTSC) and California State Water Resources Control Board (SWRCB) to determine possible impacts that the identified sites may have on future construction activities. Characteristics used to determine potential impacts on construction activities included the suspected mass and

volume of contaminants, their mobility within the soil-groundwater-air matrix, and the likelihood of traditional levee remediation measures impacting contaminated media.

If any evidence of potential HTRW is found during construction, all work would cease, and the Corps and non-Federal sponsor would be notified for further evaluation of the potential contamination. Any unanticipated hazardous materials encountered during construction would be handled according to applicable federal, state, and local regulations. The Corps would require that a contingency plan that outlines steps to be taken before and during construction activities to document soil conditions, as well as procedures to be followed if unexpected conditions are encountered, be prepared by the contractor.

The non-Federal sponsor is responsible for 100 percent of the cost to develop the clean-up procedures (remedial action plan) and to treat the contaminate in place or relocate the material (ER 1110-2-1150).

TABLE 7

Type 1 Sites – HTRW concerns that may impact future activities						
Site Name	**EDR ID #**	**Distance from Centerline (miles)**	**Closest Levee Reach**	**Stationing Along Closest Reach**	**Address**	**Summary**
State Department of Water Resources Maintenance Yard	11-2	0.00	Sacramento River North Levee	50+00	1450 Riverbank Rd., West Sacramento, CA 95605	Leaky underground storage tank with hydrocarbon plume located under the levee
Capitol Plating	27-2	0.13	Sacramento River North Levee	180+00	319 3rd St., West Sacramento, CA 95605	Heavy metals and chlorinated solvents in the soil around the former facility
Van Waters and Rogers Inc./UNIVAR USA	44-5	0.00	Sacramento River North Levee	220+00	800-850 South River Rd., West Sacramento, CA 95691	Former chemical handling and storage facility with solvent contamination in soil and groundwater
Chevron #9-6726 and Epoch Truck Stop	70-4	0.13	Yolo Bypass	100+00	4790-4800 West Capitol Ave, West Sacramento, CA 95691	Co-mingled fuel plume located beneath to fuel dispensers
Shell Oil, Ramos Environmental, KMEP	86-5	0.13	Sacramento River North Levee	260+00	1509-1570 South River Road, West Sacramento, CA 95691	Previous storage, distribution, and recycling facilities for hydrocarbon compounds. Current soil and groundwater contamination
Port of Sacramento	94-5 & 99-5	0.25	Port North Area	160+00	2895 Industrial Blvd., West Sacramento, CA 95691	Ammonia and Nitrate plume associated with previous fertilizer storage and transport
Tesoro-ARCO Remediation Project (TARP)	101-5	0.13	Sacramento River North Levee	270+00	1700-1701 South River Road, West Sacramento, CA 95691	Large fuel storage and distribution terminal with associated hydrocarbon and VOC plume
Agrium U.S. Inc.	132-4	0.13	Port North Area	35+00	3961 Channel Drive, West Sacramento, CA 95691	Nitrogen contamination of groundwater related to previous storage and production of fertilizers

Type 1 Potential Environmental Concerns

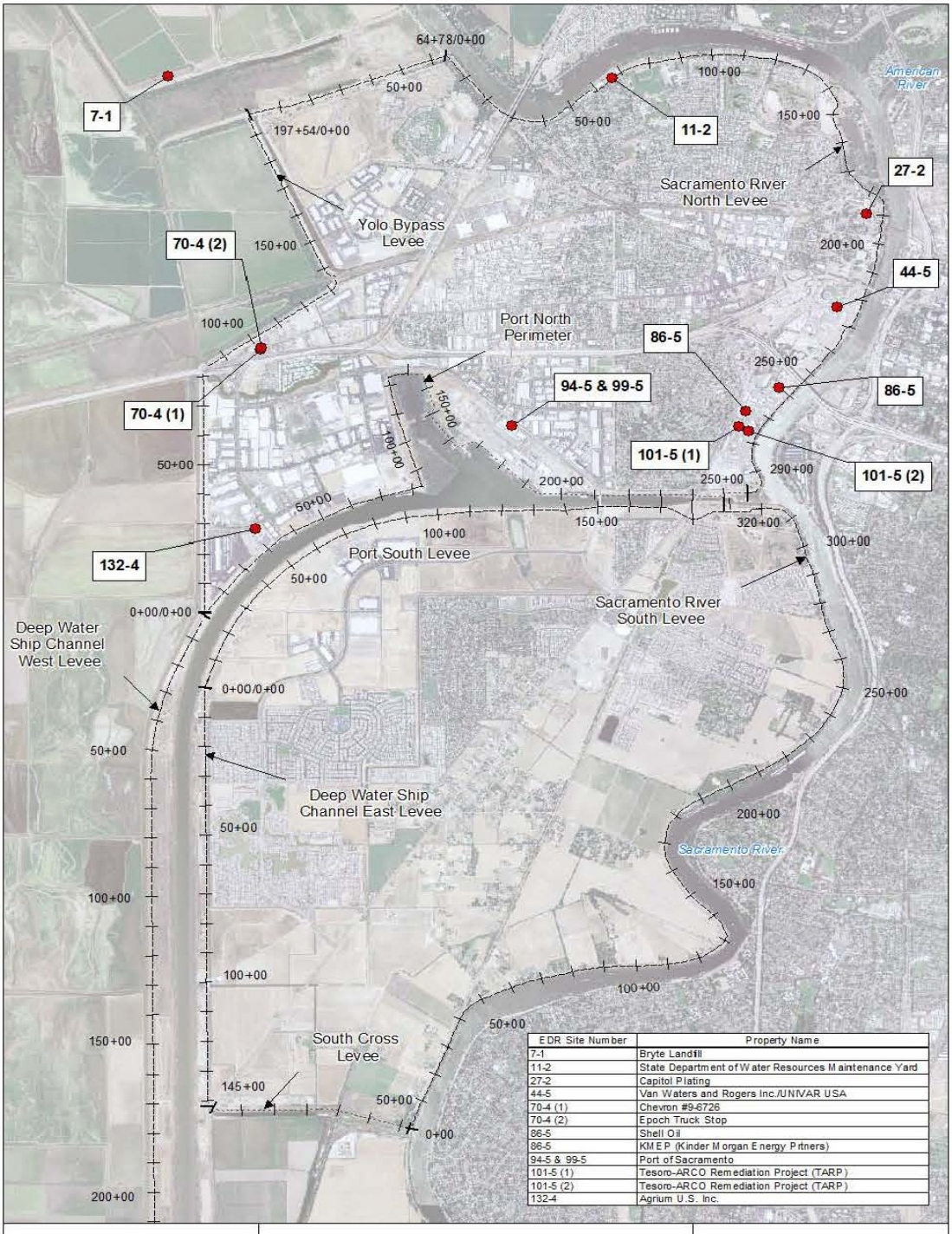


FIGURE 6

20. Cultural Resource Issues

A records search was conducted. There were some prehistoric sites identified in the area of potential effects but no sites specifically in the construction footprints. A physical survey will be completed by Cultural Resource Section to determine if there are any National Historic Preservation Act Issues but at this time there are no known issues.

21. Attitude of Landowners

To date, the results of the outreach program from the public scoping meetings have been very favorable, constructive, and supportive. The tone and substance of the input has been consistent with the voter-approved assessment to fund the local share of the project. The attitude of landowners that are potentially going to be relocated along the South Setback Levee reach varied on a case by case basis. Some residents felt public safety issues were important and could see value in relocating and were supportive. Some residents were angry and did not want to relocate. The attitude of landowners along the Sacramento River North Levee reach and the South Cross Levee reach is unknown but feedback from the sponsors convey it may be unfavorable.

EXHIBIT A

ASSESSMENT OF NON-FEDERAL SPONSOR'S REAL ESTATE ACQUISITION CAPABILITY
WEST SACRAMENTO GENERAL REEVALUTION STUDY

SPONSORS: The State of California, Central Valley Flood Protection Board (CVFPB), West Sacramento Flood Control Agency (WSFCA)

I. Legal Authority:

a. Do the sponsors have legal authority to acquire and hold title to real property for project purposes? Yes CVFPB; Yes WSAFCA

b. Do the sponsors have the power of eminent domain for this project? Yes CVFPB; Yes WSAFCA

c. Do the sponsors have "quick-take" authority for this project? Yes CVFPB; Yes WSAFCA

d. Are any of the lands/interests in land required for the project located outside the sponsor's political boundary? No CVFPB; No WSAFCA

e. Are any of the lands/interests in land required for the project owned by an entity whose property the sponsor cannot condemn? No CVFPB; WSAFCA Response:

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 P.L. 91-646, as amended? Yes CVFPB;

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

c. Does the sponsor's in-house staff have sufficient real estate acquisition experience to meet its responsibilities for the project? Yes CVFPB; Yes WSAFCA

d. Is the sponsor's project in-house staffing level sufficient considering its other workload, if any, and the project schedule? Yes CVFPB; Yes WSAFCA

e. Can the sponsor obtain contractor support, if required, in a timely fashion? Yes CVFPB; Yes WSAFCA

f. Will the sponsor likely request USACE assistance in acquiring real estate? No CVFPB; No WSAFCA

III. Other Project Variables:

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

CVFPB; Yes WSAFCA

b. Has the sponsor approved the project real estate schedule/milestones? Yes CVFPB; WSAFCA Response: No, the approval occurs during the preconstruction, engineering and design phase.

IV. Overall Assessment:

a. Has the sponsor performed satisfactorily on other USACE projects? Yes CVFPB; WSAFCA

b. With regard to this project, the sponsor is anticipated to be: The State of California, Central Valley Flood Protection Board West Sacramento Flood Control Agency

V. Coordination:

a. Has this assessment been coordinated with the sponsor? Yes CVFPB; WSAFCA

b. Does the sponsor concur with this assessment? Yes CVFPB; WSAFCA

Prepared by:

_____
Laurie Parker
Realty Specialist
Acquisition Branch

Date _____

Reviewed and Approved by:

_____
Sharon Caine
Chief, Real Estate Division
U.S. Army Engineer District, Sacramento

Date _____

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS
441 G STREET NW
WASHINGTON, D.C. 20314-1000

REPLY TO
ATTENTION OF:

CEMP-CR

JAN 1 0 2013

MEMORANDUM FOR SEE DISTRIBUTION

SUBJECT: Real Estate Policy Guidance Letter No. 31-Real Estate Support to Civil Works Planning Paradigm (3x3x3)

1. References.

a. Memorandum, CECW-CP, 8 February 2012, Subject: U.S. Army Corps of Engineers Civil Works Feasibility Study Program Execution and Delivery

b. ER 5-1-11, USACE Business Process, 1 November 2006

c. EC 405-1-04, Appraisal, 30 Dec 2003

d. ER 1105-2-100, Planning Guidance Notebook, 22 Apr 2000

e. ER 405-1-12, Chapter 12, Real Estate Roles and Responsibilities for Civil Works, Cost Shared and Full Federal Projects, Change 31, 1 May 1998

2. Purpose. In accordance with reference a, this memorandum provides interim policy and guidance for real estate efforts associated with feasibility studies under the new Planning Paradigm, "SMART Planning," and the 3x3x3 rule. In accordance with the 3x3x3 rule, all feasibility studies should be completed within three years, at a cost of no more than $3 million, utilize three levels of vertical team coordination, and be of a "reasonable" report size.

3. Background. Real Estate has been fully engaged in the implementation of the 3x3x3 by actively participating in each webinar, the planning modernization workshop, and serving as part of the HQ Transition Team. In accordance with references b-e, Real Estate involvement is essential to the development and implementation of any pre-authorization project. Paragraph 12-16 of reference e. outlines the significant topics that must be covered in a real estate plan (REP). The level of detail necessary to apply the requirements of real estate policy and guidance will vary depending on the scope and complexity of each project.

As outlined in Chapter 12, the minimum interests in real property necessary to support various types of projects must be identified. As projects are scoped at the beginning of the feasibility phase (via a Charette or other forum), it is essential that Real Estate become familiar with the project authority and purposes to make a determination of the minimum interests and estate(s), both standard and non-standard, necessary as projects are scoped and alternatives evaluated. If a

non-standard estate will be needed, this should be discussed with MSC and HQ Real Estate as early as possible to ensure that the justification is sound and will serve the project purpose.

4. Policy. Typically, the attorney's preliminary opinion of compensability and gross appraisals are two areas that require more detail than may be readily available during the start of the feasibility phase, and are critical to determination of accurate estimates for real estate and total project costs. Due to the focus on 3 years or less for study duration, it will be essential for Real Estate to be adaptable and scale its requirements, decision making, and risk management in proportion to the significance of total project costs.

a. Gross Appraisals:

Specific to gross appraisals, EC 405-1-04 provides that cost estimates are utilized for preliminary planning of projects and in other cases, brief gross appraisals are acceptable. For purposes of the feasibility phase, the detail will vary as outlined below.

(1) For projects in which the value of real estate (lands, improvements, and severance damages) are not expected to exceed ten percent of total project costs (total cost to implement project), a cost estimate (or rough order of magnitude) will be acceptable for purposes of the feasibility phase.
(2) For projects in which the value of real estate (lands, improvements, and severance damages) do not exceed 30 percent of total project costs (total cost to implement project), a brief gross appraisal will be acceptable for purposes of the feasibility phase. A brief gross appraisal will follow format issued by Chief Appraiser.
(3) For projects in which the value of real estate (lands, improvements, and severance damages) exceed 30 percent of total project costs (total cost to implement project), a full gross appraisal will be prepared in accordance with the appraisal regulation and guidance provided by EC 405-1-04 and the Chief Appraiser.

b. Attorney's Opinion of Compensability:

As described in paragraph 12-17 of Chapter 12, utility/facility relocations may require preliminary attorney's opinions of compensability. While the practice of obtaining preliminary attorney's opinions of compensability provides a high degree of certainty with regard to project costs during the feasibility phase, such opinions can be time consuming and may provide more certainty than may be optimal for feasibility purposes when potential utility/facility relocation costs do not constitute a large percentage of total project costs. In support of the goals set out in the new planning paradigm described in reference a., Districts shall adhere to the following guidance:

(1) Where the estimated total cost to modify all project utility facility relocations, including the value of any additional lands that may be required to perform the relocations does not exceed 30 percent of estimated total project costs, the District Office of Real Estate shall, in lieu of an attorney s opinion of compensability prepare a real estate assessment. Such a real estate assessment, will address the following questions:

(a) Is the identified utility facility generally of the type eligible for compensation under the substitute facilities doctrine (e.g., school, highway, bridge, water and sewer systems, parks, etc.)
(b) Does the District have some valid data or evidence that demonstrates that it has identified an owner with a compensable interest in the property

If the answer to both questions is yes, then the District Office of Real Estate shall reflect the cost of providing a substitute facility in the Real Estate Plan (REP) and all other feasibility study cost estimates. If the answer to either or both questions is no, the District shall not reflect the cost of a substitute facility in the REP or other feasibility study cost estimates. However, the REP narrative should still include a discussion on the facility with results of analysis and project impact. For cost shared projects, the non-federal sponsor must be advised that the inclusion of substitute facilities costs in the REP or other use feasibility study estimates is for planning and budgeting purposes only and does not constitute a preliminary or final determination of compensability by the agency regardless of whether the cost of substitute facilities are reflected in the feasibility study documents. Using a real estate assessment does not eliminate the need to obtain a final attorney s opinion of compensability prior to execution of the PPA.

(2) Where the estimated total cost to modify all project facility relocations, including the value of any additional lands that may be required to perform the relocations, has public or political significance or the costs exceed 30 percent of estimated total project costs, a preliminary opinion of compensability shall be prepared for each owner s facilities. The level of documentation for each relocation item should be based on the significance of the relocation item to project formulation and estimated project costs.

Real Estate products, such as the REP, must be adaptable and scaled based on the project scope. Additionally, Real Estate must utilize the risk register to highlight areas where cost, schedule or uncertainty is greater in order to manage risk. Going forward, the Real Estate Division will continue to work closely with the Planning and Policy Division, Engineering and Construction Division, the Programs Integration Division and the National Law Firm on the Planning SmartGuide. This SmartGuide will provide more on procedures, tips, techniques and tools for

specific types of planning projects to aid in implementation of the new Planning Paradigm. All bulletins and updates on the SmartGuide can be found at: http://planning.usace.army.mil/toolbox/.

5. Duration. The policies stated herein will remain in effect until amended or rescinded by Policy Memorandums, Policy Guidance Letters, Engineers Circulars or Engineer Regulations.

FOR THE COMMANDER:

SCOTT L. WHITEFORD
DIRECTOR OF REAL ESTATE

DISTRIBUTION:
COMMANDER,
GREAT LAKES AND OHIO RIVER DIVISION (CELRD-PDS-R)
MISSISSIPPI VALLEY DIVISION (CEMVD-TD-R)
NORTH ATLANTIC DIVISION (CENAD-PD-E)
NORTHWESTERN DIVISION (CENWD-PDS)
PACIFIC OCEAN DIVISION (CEPOD-RE)
SOUTH ATLANTIC DIVISION (CESAD-PDS-R)
SOUTH PACIFIC DIVISION (CESPD-ET-R)
SOUTHWESTERN DIVISION (CESWD-ET-R)

CF:
COMMANDER,
DETROIT DISTRICT (CELRE-RE)
HUNTINGTON DISTRICT (CELRH-RE)
LOUISVILLE DISTRICT (CELRL-RE)
NASHVILLE DISTRICT (CELRN-RE)
PITTSBURGH DISTRICT (CELRP-RE)
MEMPHIS DISTRICT (CEMVM-RE)
NEW ORLEANS DISTRICT (CEMVN-RE)
ROCK ISLAND DISTRICT (CEMVR-RE)
ST. LOUIS DISTRICT (CEMVS-RE)
ST. PAUL DISTRICT (CEMVP-RE)
VICKSBURG DISTRICT (CEMVK-RE)
BALTIMORE DISTRICT (CENAB-RE)
NEW ENGLAND DISTRICT (CENAE-RE)
NEW YORK DISTRICT (CENAN-RE)
NORFOLK DISTRICT (CENAO-RE)