# REAL ESTATE PLAN

# SACRAMENTO RIVER BANK PROTECTION PROJECT IN SUPPORT OF THE POST AUTHORIZATION REPORT

November 2018

PREPARED
BY THE
SACRAMENTO DISTRICT
REAL ESTATE DIVISION
SOUTH PACIFIC DIVISION

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## SACRAMENTO RIVER BANK PROTECTION PROJECT REAL ESTATE PLAN 19 November 2018

#### 1. Statement of Purpose

The Sacramento River Bank Protection Project (SRBPP) is a long-term project to enhance public safety and protect property along the Sacramento River and its tributaries by periodic levee rehabilitation that protects the Sacramento River Flood Control Project from erosion failures. The U.S. Army Corps of Engineers, Sacramento District (Corps) is responsible for implementing the SRBPP together with its non-Federal sponsor (NFS), the California Central Valley Flood Protection Board.

This report is tentative in nature, focuses on the Programmatic Bank Protection Plan (PBPP), and is to be used for planning purposes only. The Real Estate Plan is intended to support the Post Authorization Change Report (PACR) for the SRBPP and is written to the same level of detail. Once specific sites are identified for construction, Corps real estate will update the information listed in Exhibit D - Site Specific Real Estate Inventory Check-List. The updated Real Estate Addendum containing specific sites will be prepared by the District for review and approval at the Division level. This Addendum will better define the impacted parcels, costs of acquisition, schedule, etc.

The PBPP indicates that erosion sites represent a wide variety of site conditions and pose a variety of challenges to the delivery of the real estate necessary to accomplish and maintain the necessary repairs. This Real Estate Plan adheres to the Engineer Regulations for a Real Estate Plan (ER 405-1-12). The Real Estate Plan addresses what procedures should be implemented to guide and support the acquisition of real estate necessary to complete the PACR for the SRBPP and the measures that will be taken when specific sites are identified for construction.

#### 2. Project Authority

The SRBPP was originally authorized by Section 203 of the Flood Control Act of 1960 and completed in 1975. Phase II, for 405,000 linear feet of bank protection, was authorized by the River Basin Monetary Authorization Act of 1974. Bank protection under this act is near completion. The SRBPP is a continuing construction project that requires ongoing planning and development to achieve project goals of providing erosion protection to the existing levee and flood control facilities of the Sacramento River Flood Control Project, which includes the Sacramento River and its tributaries.

An additional eighty thousand (80,000) linear feet was added to Phase II through a 2007 re-authorization. The 80,000 additional linear feet of river bank will be repaired along the Sacramento River and its tributaries to protect the existing levees and associated flood risk management infrastructure within the SRBPP area from stream erosion. The scope of this Real Estate Plan is the 80,000 linear feet. This report is part of the overall PACR for Phase II 80,000 linear feet, which supports a new or amended Project Partnership Agreement (PPA) between the Corps and the NFS.

A bank protection plan for the 80,000 linear feet was developed as described in the SRBPP Phase II 80,000 Linear Feet Engineering Documentation Report (EDR). The bank protection plan is comprised of representative bank protection measures at 107 sites; one of 107 sites was subsequently eliminated from further consideration. Since erosion is dynamic and unpredictable, the 106 sites and repair measures are prototypical. Actual sites and measures identified during implementation may be different from what is included in the bank protection plan.

### 3. Project Description

The attached maps in Exhibit A indicate the scope of the SRBPP. Attached Exhibit B (Erosion Site Summary) provides a summary of the estimated 106 sites required for the 80,000 linear feet project. Information included in this summary identifies the ownership, location, and assessor parcel numbers for all potential sites. Parcel Information Sheets are attached (Exhibit C-1) providing examples of the typical site within the Project. These summaries were created by the consulting firm of Bender-Rosenthal.

Due to the dynamic and uncertain nature of erosion, sites needing bank protection are identified and selected on an annual basis. Since it is impossible to predict future erosion, this real estate plan addresses the global issues for the project area. The actual sites and bank erosion measures that will be constructed during the implementation phase will vary from the sites and measures known at this time. As, noted in section one above, once specific sites are identified for construction, Corps real estate will update the information listed in Exhibit D - Site Specific Real Estate Inventory Check-List. The updated Real Estate Addendum containing specific sites will be prepared by the District for review and approval at the Division level. This Addendum will better define the impacted parcels, costs of acquisition, schedule, etc.

#### 4. <u>Description of LERRDs</u>

Personnel from the Corps, California Central Valley Flood Protection Board, and the California Department of Water Resources (DWR) have conducted an annual field reconnaissance review of the Sacramento River Flood Control Project (Exhibit A- Map attached). The primary purposes of the review have been to: (a) monitor and document the condition of previously identified erosion sites; (b) inventory any new erosion sites; (c) identify critical erosion sites that appear to pose an imminent threat to the structural integrity of the flood control system; and (d) inventory sites better suited for maintenance practices.

Each site is essentially a "project" in itself. Repair options include: (1) waterside rip-rap; (2) construction of an adjacent landside levee, (3) construction of a setback levee; (4) construction of a landside berm and toe drain and (5) environmental mitigation measures. When the specific sites are identified for construction, a standard take letter will be issued to the non-federal sponsor identifying the required estates and area necessary for the project. Typical required estates may include but not be limited to, permanent flood protection levee easements and temporary easements for access/haul routes and construction. If non-standard estates are required Division and Headquarters will be notified. It is not anticipated that non-standard estates will be required.

#### 5. LERRDs Owned by the NFS and Crediting

Once the specific sites are identified, the extent of NFS-owned property and crediting implications can be determined. The NFS is entitled to receive credit against its share of project costs for the value of lands it provides and the value of the relocations that are required for the project. Generally, for the purpose of determining the amount of credit to be afforded, the value of the LERRD is the fair market value of the real property interest, plus certain incidental costs of acquiring those interests, that the non-federal sponsor provided for the project as required by the Government. In addition, the specific requirements relating to valuation and crediting contained in the executed PPA for a project must be reviewed and applied.

#### 6. Standard Federal Estates and Non-Standard Estates

The Non-Federal Sponsor will acquire the minimum interests in real estate to support the construction, operation and maintenance of the project. The following standard estates are anticipated to be required for the project. Non-Standard Estates are not expected to be used. If needed, a separate request will be made.

- FLOOD PROTECTION LEVEE EASEMENT (FPLE): A perpetual and assignable right and easement in (the land described in Schedule A) (Tracts 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.
- BANK PROTECTION EASEMENT (BPE): 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 EA	ASEMENT (TWAE):	A temporary ea	sement and i	right-of-way
in, on, over and across (the land described in	n Schedule A) (Tracts I	Nos,	and	_), for a
period not to exceed	_, beginning with date	possession of t	he land is gr	anted to the
United States, for use by the United States	, its representatives, ag	gents, and contra	actors as a (b	orrow area)
(work area), including the right to (borrow ar	nd/or deposit fill, spoil	and waste mater	ial thereon) (1	move, store
and remove equipment and supplies, and ere	ect and remove tempora	ary structures on	the land and	to perform
any other work necessary and incident to the	e 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.

#### 7. Description of any Existing Federal Projects in or Partially in the Proposed Project

There are two existing federal projects in the project area. Any potential overlap with these existing federal projects will be evaluated once specific sites are identified for construction. Below is a brief summary of each existing federal project.

#### West Sacramento

The West Sacramento Project encompasses levee improvements along portions of the Sacramento River, the Yolo Bypass, the Sacramento Bypass, and the Sacramento Deep Water Ship Channel (DWSC). The project aims to bring 50 miles of perimeter levees surrounding West Sacramento into compliance with applicable Federal and State standards for levees protecting urban areas.

A few years ago levee improvements were completed that were intended to provide an increased level of flood risk management for the City of West Sacramento. Since those upgrades were completed, under seepage deficiencies have been discovered with some of the levees surrounding the city. While levee improvements authorized for construction were redesigned to address any under seepage deficiencies, the remaining levees were not authorized to be reevaluated. As a result, the West Sacramento Area Flood Control Agency (WSAFCA) initiated a thorough state and locally-funded review of its flood risk management system. Since 2009, the Corps of Engineers has been conducting a General Reevaluation Report in cooperation with project sponsors (WSAFCA and the Central Valley Flood Protection Board) to evaluate the levee system and determine the federal interest in reducing the flood risk for the City of West Sacramento.

Approximately 4 of the 106 prototypical sites lie within the West Sacramento project area.

#### American River Common Features

The Sacramento Area Flood Control Agency (SAFCA), in cooperation with the State of California, DWR through the Central Valley Flood Protection Board, has initiated urgently needed improvements to the Federal project levee system protecting the Natomas Basin. These improvements address identified deficiencies in the levee system based on changing engineering standards that have caused experts to significantly downgrade the system's performance capability. In July 2006, the Corps withdrew the certification of the Natomas Levee System. In response, FEMA withdrew the 100-year flood protection certification that was granted to the levee system only a decade ago. A catastrophic failure of the levee system around the Natomas Basin would imperil the health and safety of 80,000 residents, shut down Sacramento International Airport and two of California's most important interstate freeways (I-80 and U.S. Highway 50), severely damage an emerging Federal wildlife refuge, and cause a loss of over \$7 billion in residential, commercial and industrial property damage. SAFCA and the State are addressing these challenges by moving aggressively forward with the Natomas Levee Improvement Program.

Approximately 3 sites overlap with the American River Common Features project area.

### 8. <u>Description of any Federally-owned Land Needed for the Project</u>

There are no anticipated Federally-owned lands needed for the Project.

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

The determination of the availability of the navigation servitude is a two-step process. First the Government must determine whether the project feature serves a purpose which is in the aid of commerce. Such purposes recognized by the courts include navigation, flood control and hydro-electric power. If it is so determined, then the second step is to determine whether the land at issue is located below the mean or ordinary high water mark of a navigable watercourse. Navigational servitude may be applicable in instances where barges will be used to place material or where below mean high water mark armoring of the bank will occur. Barges will only be utilized at project sites downstream of the confluence of the American and Sacramento Rivers.

#### 10. Project Map

(See attached Exhibit A). These maps indicate the overall project site. Once specific sites are determined, maps will be generated and provided to the NFS.

#### 11. Anticipated Increased Flooding and Impacts

As the design for each site is refined, an analysis for potential impacts will be performed.

#### 12. Baseline Cost Estimate

Baseline Cost Estimates for the selected sites will be obtained prior to construction. This information will be provided to the PDT and incorporated in the total project cost estimates. A programmatic cost estimate for 80,000 LF was extrapolated from the certified cost estimate based on the average cost per LF. The State of California, DWR has provided the following generalized cost estimate: The estimated cost for all parcels cannot be referenced until further field review and project impacts are determined. Prior to construction, a cost estimate will occur and provided to the PDT.

Baseline Cost Chart:

Typical Repair Site	Description of Typical Repair Sites	Average NFS Cost to Acquire Rights 12	Average NFS Administrative Cost 23	Average Federal Administrative Cost
1	Waterside Rock Slope Repair Site where: A. Sponsor has existing levee rights in place that allows for construction B. Need to acquire waterside planting rights C. Need to acquire 10' easement for O&M requirements (Title 23)	\$8,000/parcel	\$75,000/parcel	\$10,000/parcel
2	Waterside Rock Slope Repair Site where:  A. Need to acquire all necessary real property rights including waterside planting rights B. Need to acquire 10' easement for O&M requirements (Title 23)	\$12,000/parcel	\$120,000/parcel	\$10,000/parcel
3	Land Side Berm Repair Site where: A. Need to acquire all necessary real property rights including waterside planting rights B. Need to acquire 10' easement for O&M requirements (Title 23)	\$35,000/parcel	\$150,000/parcel	\$10,000/parcel
4	Setback Levee Repair Site where: A. Need to acquire all necessary real property rights including waterside planting rights B. Need to acquire 10' easement for O&M requirements (Title 23)	\$75,000/parcel	\$250,000/parcel	\$10,000/parcel

- a.Costs shown represent an estimate of average expenditures per parcel to acquire easements, access, staging, planting, O&M, and spoil site rights.
- b. All figures shown in this table to do NOT include costs associated with any potential condemnation process or eminent domain proceedings.
- c. The administrative cost shown, represent the average labor costs of DWR's Real Estate office only for site analyses, appraisals, negotiations, phase site assessments, legal coordination, environmental support, negotiations with respect to existing utility relocations, and closing of escrow. These figures do NOT include cost associated with efforts that may be required of the Geodetics Branch, Division of Environmental Services, and/or Division of Flood Management offices.

The cost estimate was refined by using 15 representative sites to be constructed within the 7 current economically-justified basins. (represented by table below)

Economically- Justified Basins	Erosion Site (Waterway/River Mile/L or R Bank)	Number of Parcels	<b>Total Cost</b>	
	Sacramento River 152.8 L	1	\$142,000	
D 44	Sacramento River 163.0 L	4	\$568,000	
Butte	Sacramento River 168.3 L	2	\$284,000	
	Sacramento River 172.0 L	4	\$568,000	
	Cache Creek 3.9 L	3	\$426,000	
Yolo	Knights Landing Ridge Cut 0.2 R	3	\$426,000	
	Bear River 0.8 L	1	\$142,000	
Rio Oso	Feather River 0.6 L	2	\$284,000	
	Feather River 5.0 L	2	\$284,000	
Natomas	Sacramento River 78.3 L	1	\$142,000	
	Sacramento River 62.9 R	2	\$284,000	
West Sacramento	Sacramento River 63.0 R	2	\$284,000	
	Sacramento River 56.5 R	3	\$426,000	
Southport	Sacramento River 56.7 R	2	\$284,000	
Sacramento	Sacramento River 56.6 L	3	\$426,000	

d. Total Cost were determined by using an average cost per parcel of \$142,000, which is most represented with these selected sites with fixed variables.

#### 13. Relocation Assistance Benefits

The NFS 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. A setback levee is the only type of repair that is anticipated to include possible relocation assistance benefits under P.L. 91-646.

#### 14. Mineral/Timber Activity

There are no mineral or timber impacts associated with this project.

#### 15. Project Sponsor Responsibilities and Capabilities

The California Central Valley Flood Protection Board will be the NFS for the project. The NFS has the responsibility to acquire all real estate interests required for the Project. The NFS shall accomplish all alterations and relocations of facilities, structures and improvements determined by the government to be necessary for construction of the Project. The sponsor will have operation and maintenance responsibility for the project after construction is completed.

Title to any acquired real estate will be retained by the NFS and will not be conveyed to the United States Government. Prior to advertisement of any construction contract, the NFS shall furnish to the government an Authorization for Entry for Construction (Exhibit E) to all lands, easements and rights-of-way, as necessary. The NFS will also furnish to the government evidence supporting their legal authority to grant rights-of-way to such lands. The NFS shall comply with applicable provisions of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, Public Law 91-646, approved 2 January 1971, and amended by Title IV of the Surface Transportation Uniform Relocation Assistance Act of 1987, Public Law 100-17, effective 2 April 1989, in acquiring real estate interests for the Project, and inform all affected persons of applicable benefits, policies, and procedures in connection with said Act(s).

The NFS should not acquire lands required for the project prior to execution of the PPA. Should the NFS proceed with acquisition of lands prior to execution of the PPA, it is at the risk of not receiving credit or reimbursement for any costs incurred in the connection with the acquisition process should the PPA not be signed. There is also risk in acquiring lands either not needed for the project or not acquired in compliance with requirements for crediting purposes in accordance with 49 CFR Part 24, dated March 2, 1989. Letters advising the NFS of the risks of early acquisition will be sent as appropriate.

#### 16. Zoning Anticipated in Lieu of Acquisition

There is no zoning in lieu of acquisition planned in connection with this Project.

#### 17. Acquisition Schedule

Schedules will be completed once the specific sites are selected.

## 18. Description of Facility and Utility Relocations

As specific sites are selected for potential construction, the Corps will identify the specific locations and the nature of the potential impact to the facility/utility. The NFS will be responsible to insure the facility/utility is relocated prior to the completion of the construction, as required in the Corps regulations. Sample Parcel Information Sheets (Exhibit C-1) illustrate the type of documentation which will be provided to Corps Office of Counsel for their completion of the required Opinion of Compensability when a utility or facility is impacted by the specific construction site. A complete inventory of all utility/facilities has not been completed for all 106 sites

ANY CONCLUSION OR CATEGORIZATION CONTAINED IN THIS REPORT THAT AN ITEM IS A UTILITY OR FACILITY RELOCATION TO BE PERFORMED BY THE NFS AS PART OF ITS LERRD RESPONSIBILITIES IS PRELIMINARY 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 FINAL ATTORNEY'S OPINIONS OF COMPENSABILITY FOR EACH OF THE IMPACTED UTILITIES AND FACILITIES.

#### 19. Hazardous, Toxic and Radiological Waste (HTRW)

While there is minimal likelihood of HTRW on these sites; soil sampling will be conducted for any borrow material required. In addition, Underground Service Alter (USA) will be consulted prior to digging at any site and all site workers will be made aware of the proximity of any natural gas production operations which will also be communicated in the Site Safety and Health Plan (HTRW Reconnaissance Report, Corps, 2007; see section 8.1.2 of the PACR).

### 20. Attitude of Land Owners and Community

This on-going project has been supported by the local reclamation districts and the local land owners. Once specific sites are identified, determination of local attitudes will be addressed as provided in Exhibit D.

## 21. Assessment of Non-Federal Sponsor's Real Estate Acquisition Capability

SPONSOR: State of California, Central Valley Flood Protection Board

#### I. Legal Authority:

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

  Yes
- b. Does the sponsor have the power of eminent domain for this project? Yes
- c. Does the sponsor have "quick-take" authority for this project? Yes
- d. Are any of the lands/interests in land required for the project located outside the sponsor's political boundary? **No**
- e. Are any of the lands/interests in land required for the project owned by an entity whose property the sponsor cannot condemn? **No**

## 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? **No**
- b. If the answer to II.a. is "yes," has a reasonable plan been developed to provide such training? N/A
- 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 project in-house staffing level sufficient considering its other workload, if any, and the project schedule? Yes
- e. Can the sponsor obtain contractor support, if required, in a timely fashion? Yes
- 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
- b. Has the sponsor approved the project real estate schedule/milestones? N/A

#### IV. Overall Assessment:

- a. Has the sponsor performed satisfactorily on other USACE projects? Yes
- b. With regard to this project, the sponsor is anticipated to be: State of California Central Valley Flood Protection Board

#### V. Coordination:

- a. Has this assessment been coordinated with the sponsor? Yes
- b. Does the sponsor concur with this assessment? Yes

Prepared by:

Bill Casale

Supervisory Realty Specialist

Acquisition & Management Branch

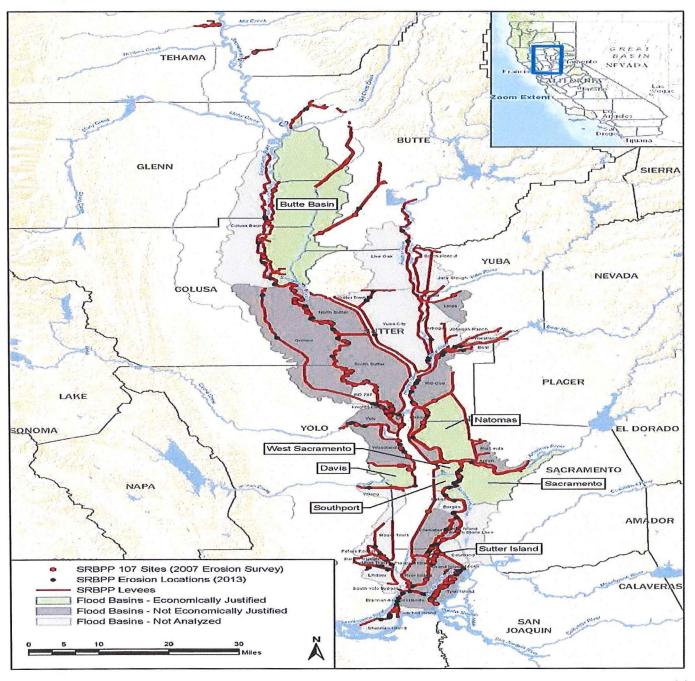
Reviewed and Approved by:

Deputy Chief, Real Estate Division

U.S. Army Engineer District, Sacramento

#### **EXHIBIT A**

## **PROJECT MAPS**



#### SITE SPECIFIC REAL ESTATE INVENTORY CHECK LIST

The following topics will be updated and the information provide to the PDT when sites are identified and selected prior to construction. A Real Estate Addendum to this Real Estate Plan will be provided to SPD real estate for review and approval.

The numbering references the categories listed in the Table of Contents to this Real Estate Plan.

- 4. DESCRIPTION OF LERRD'S
- 5. LERRD'S OWNED BY THE NFS AND CREDITING
- 7. DESCRIPTION OF ANY EXISTING FEDERAL PROJECT IN OR PARTIALLY IN THE PROPOSED PROJECT
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- 20. ATTITUDE OF LAND OWNERS AND COMMUNITY

# **EXHIBIT B**

# **EROSION SITES SUMMARY**

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Erosion Si	es				and the same of	-							
				USL	(USACE)	DSL (t	SACE)						
	1							-			100		
Errer	Marker	Left or Right		Lst		Let 1		Evalumed Alternatives	APN		Land	County	Owner Allens
			EM I	38.9470					SSUDI	ALLES		County	Date All Bi
1 BR 2 CC	3:		LM	38 7282	-7937.0000				027-170-39-1	1 202	A¥.	Yelo	County Road 17A, Wood and Ca 97693
3 CS	155	The state of the s	173	38 2000			-121 6558		0177-060-08	166	Ag	Seitas	Size H. Matery 34. William Grove, CA 97690
3 C5	15		P.M	32,3000			-121.6558	139	0177-050-01	2521	die	Solmo	Size Hafren H. Walter Grove, CA P. 669
4CS	22		143	32.2810		38.2814	-121 7166		0042-160-13	647.4		Solmo	Solano Ca (4471)
SICS	23		234	39 1923		38.2965	-121.7230	1,3,10	0042-140-22	3146	Ag		Solmo Ca 94571
6CAC	1		LM	39.4223	-121.7724	39.4218	-121.7727	1	022-120-644-00		Ag		Ban Ca. 95917
7 ChC	21		IN	39.3653	-121.8517		-121 8573	1.23	022-060-035-00				Bip Ca, 95917
& DWSC		SIL	171	33.4377		38.4374	-121 5977	1	044-110-21		S AE		Willow Point Foad
S DAZC	50	L	171	33 4374	-121 5978	38.4372	-121 5979	1	033-180-19				West Secrements
0 DC	2.		T71	39.9629	-121 0314		-122 0317		079-130-11-1			Telam	Commg, Ca 94021
1 EC	1.		174	40.0516		40.9520	-122 1631		064-060-03-1			Telum	Oeter Ca 95035
2 EC		R	LM	40 0548		40.0550	+122 1403		064060-29-1			Tehtren	Gerber Ca 96035
3 EC	4.		T71	40.6553		40.0547	-122 1272		054-040-05-1	89.7	N.	Telum	O E Chard Ave, Gerber Co 9:0035
3 EC	4		L71	40.0553		40.0547	-122 1272	1.10	064260-141	257.5	Ay	Telum	Holman Roof, Gerber, Ca 95035
4 FR	0		371	32.7937		38.7934	-121 7934	1,43	122 640 503	1 1100	dia	Ir-	Code the Major to Math
5 FR	41		RM	38 8503		38.8478 38.1363	-121.6304 -121.5823	1.89.10	33-050-001 156-0070-001	432.7	Ag	Surrer Sacramento	Gurden Hwy, Niccelma Ca 65659 Tyler Island Rocel, Islamm Ca 65641
6 GS	1		224	33.1435		38.1403	-121 5972	189.10	156-0070-001		AF	Sacramento	Type (units room, 0.89704) Type (land Room Ca 8764)
1 05	2		RM	38 1508		38.1512	-121.5947	1,3.10	156-0070-001		Ag		Tyle Island Rood, Bletta Ca 55:641
9 GS	3		RM	33.1561		35 1529	-121.5913	1.8.9.10	155-0060-018		AI		Tyler bland Food Blenn Ca \$5641
005	3.7a	1	RM	33.1570	-121 5013	38 1564	-121.5917	1.8.9.10	156-0060-018	451.4	Ag	Sacramento	Tyler [shand Road h.lerm Ca 5754]
21 65	3.76	1	RM	33 1570		38 1569	-121.5908	1.8.9.10	156-0060-018	452.4	At	SACRETATION	Tyler Julend Ecoel Science Ca 91641
22 GS	1	4 L	PM	38.1571	-121 5374	3\$ 1572	-121 5891	1.8.9.10	156-0060-018	453.4	AF	Sacramento	Tyler Island Rend, Islaton Ca 95641
23 GS	4.	IL.	RM	33 1600			-121_5357	LS 9.10	155-0060-018	453.4	As	Sacramento	Tyler Island Pond, Islaton Ca 9:541
23 GS	4.		377	33,1600		38.1576	-121.53-57	1.8.9.10	156-0050-034		AF	Sacramento	Tyler Island Road, Islaton Ca #5641
24 05	4.		EM	33 1612			-121.5846		156-0050-024		Ag	Sacrantero	Tyler Island Road, Bleron Ca 95641
15 GS	4	L	PAS 14.S	33,1645	-121 5332	38.1516	-121.5846	LS.9.10	156-0050-032	18	Ar	Sagramento	Tyler Island Road, Island Ca 95641
25 GS	4	L	RM	38.1645		38 1616	-121.5846	1,8.9,10	156-0050-033		Ag	Sacramento	Tyler Island Rood, Isleton Ca 95641
25 65	5.	6L	ME	33.1645	-121.5332	3\$ 1616	-121.5346		156-0050-034		Az	Sacramento	Tyler Island Road, Islanton Ca 95641
26 G3			P.M	38,1763		38.1680	-121.5817	1,89.10	155-0050-014		Ag	Sacramento	Tyler Island Road, falence Co 95641
26 GS	5.		P.M.	33.1763		38.1680	-121.5817 -121.5817	1.89.10	156-0050-030 156-0050-031		Ag	Sacramanto	Tyler hland Road, Island Co \$1541 Tyler Jaland Road, Island Co \$1541
26 GS 27 GS	5.		377	32 1921		38.1680 38.1815	-121.5761		156-0050-001		AS	Satramento	Type tunn good, tunn ca yeers
	6		221	32 1321		38.1815	-121.5761	1.8.9.10	156-0030-008		AF	Sacramento	Tyler taland Rosel, Maison Ca 97001  Tyler taland Rosel Walson Grove Ca 97600
27 GS 28 GS	6	1	234	38 1834		38.1827	-121.5690	1.89.10	156-0030-008	146.2	AF	Sacramento	Typer Links Form when Crove Co 54500
25 GS	6		EM	32 1355		38.1852	-121 5645		156-0030-008		AZ		Tyler bland Road Waless Grove Co 97500
10 05	6	E L	F.M.	33 1530		38.1860	-121.5617	1,8,9,10	154-0030-002		AZ	Sacramento	Tyler Idland Food, Waltur Grove Ca 55000
31 G5	3		571	38,3008	-121.5426	3\$ 2007	-121.5428	1.8.9.10	156-0030-002	546.5	Ag	Sacramento	Tyler Jaland Road, Waltert Goove Ca 95500
32 GS	9.	3 L	RM	33 2139	-121.5377	38 2117	+121.5356	1,89,10	156-0020-025	169	Ag	Sammento	Larree Road, Walmer Grove Ca 91500
33 KIRC		2 R	171	33.7223	-121.6563	38.7189	-121 6639	1,23	057-090-06-1	140.1		Yolo	Woodland, Ca 95695
3. KLP.C		2 R	DI	33.7223	-121 6563	38.7189	-121 6639	1.23	057-000-08-1			Yelo	Woodland. Ca 95695
3) NIRC		2 R	LM	33.7223		38.7189	-121 6639	1,23	057-130-02-1			Yelo	West Sacramento, CA 95695
HELEC		3 L	171	33.7579	-121 6930	38.7549	-121 6936		056-230-07-1	185.	Ag	Yelo	County Road 1169. Woodand Ca 95776
35 KLEC			LM	34.7595		38.7586	-121 6933	1,23	056-230-07-1	165.	Ag	Yelo	County Fassi 1149. Woodand Ca 95776
MALEC			LM	33.7719		38.7709	-121.7015		056-220-04-1			Yelo	Woodland Ca 95695
37 KLEC	5.		LM	33,7925		38.7758	-121.7038	1,23	056-360-06-1			Yelo	Woodland CA 95776
37 MIRC			LM	38.7926	-121.7240 -121.7240	3\$.7758 38.7758	-121 703\$ -121 703\$	1.2.3	056-350-28-1			Yelo rr Yelo	Woodland CA 95776 Ridge Cut P.4. Woodland CA 95776
37 KLRC			IN	38 7926		38.7758	-121 7035		056-170-37-1			Yelo	Wooding CA 95776
37 KLRC			174	38.7926		38.7758	-121 7038		056-220-05-1	1460	44.	Yolo	Westman A 937/0  Court Paul 1143, Weedland CA 95776
18 LAR		3 P.	2.10	38.5610		38.5614		1	295-0040-012	7.0	Daba.	Sacramento	Sections CA 19825
H LAR		312	143	38.5610		38.5614	-121 4165	i	395-0040-004			SACREMAND	University Avs. Socremento Ca 95428
39 NCC		3 L	DI	33 8040		38.8039	-121.5751		35-130-001			Sumur	Hav SP Patient Grove CA 95443
40 Sac	21		27	38,2006		38.2002	-121.5578		156-0030-001		Ag		liders Read Library CA 97541
41 Sac	22		EM	33.2134			-121 5571	1.89	156-0020-016		Az		Lileton Rond, Sacramento Ca 95541
41 Sac	22		277	33 2134		3\$ 2111		1,8,9	156-0020-066			Sagramento	Inform Rend, Inform Ca \$5541
42 SAC	22		FM	33.2190		38.2181			156-0020-065	45.6	Af	Sacramento	Dietra Fond, Bierca CA 97541
43 Sac	23.		RM	33.2249		38.2232			156-0010-023			Sacramamo	Lileton Food, Sarramemo Ca \$1341



HER											
43 Sac	23.2 L	PM	38.2246			-121.5558		155-0020-001			Sammento
44 215	23.3 L	RM	38.2271	-121.5557			1, 8, 9, 10	156-0010-023			Sacramento
45 SM	248L	RM RM	38.240			-121_5463 -121_546\$	1, 8, 10	155-0010-008 156-0010-000			Sacremento Sacremento
40 SM	2531	1231	38,2391			-121.5388	1.8.9.10	156-0010-044		Ar	Sacramento
46 536	25.2 L 25.2 L	123	38,2391			-121.5253	1.8.9.10	155-0010-043	1 72	SEZ	Sagrameno
46 5 ac	25.2 L	2.14	38 2391			-121.943	1.8,9,10	156-0010-010			Sattemento
47 532	31.6 P.	F.M	39.2657	-121.5562			1,23	142-0030-005			Samment
47 Sac	31.6 2	F.M	38.2957			-121.553	1.2.3	142-0030-004			SMIRRA
45 Sac 42 Sac	353 R	149	38.3421				1.4.5,10	043-070-13-1	71.76	A#	Yolo
49 Sac	35.4 R	EM	38.3431				1.4.5,10	034-070-12-1		Ag	
50 Sac	32.5 R	RM	38.3715		3\$.3709	-121 5230	1. 2. 3. 10	043-090-10-1	243 15		
51 Sac	54.5 R	PM	38.5511				1.6,7	046-010-14-1	6.15	Zeráde	Yele
52 Sac	54.6 L	574	33.5520				1, 4, 5	012-0010-032			Sacramento
59 Sac 54 Sac 54 Sac 54 Sac 55 Sac	55.7 R	824	38.5541		38,5524	-121.5150	1.6.7	045-010-44-1		Recrea	
54 530	58.4 L	14.5	38.5934		35.5922	-121.5058	1, 2.3	009-0012-073	2.15	Palak	SATEMEN
54.255	58.4 L	14.9	31.5934			-121 5055	1.2.3	009-0012-045			Sacramento
55 5M	601 L	177	38 5716				1, 4, 5	001-0190-009	1 62	Public	Sacramento
55 2 PE	621 L	14,9	31.571:				1.4.5	001-0190-001	0.92	Public.	SACRESSERV
32 Sac	60.1 L	125	38.5715				1.4.5	001-0190-012			SATURATED
56 5 80	62.5 R	P.M	38.6013				1.6.7	014-500-34-1		Vacas	
56 Sac 57 Sac	625 2.	124	32.6013	-121.5532	38.6009	-121.5528	1.6.7	014-990-03		Unkas	Yelo
21/295	63 R	PM	38.6011				1, 6.7	014-500-34-1	1.4	Vacan	1000
57 Sac 58 Sac	63 R.	12.5	38.7213					014-600-15-1	31313	Service	Yelo
24 255	74.4 2.	P.M	33.7213		38.7177	-121.6079 -121.6079	1, 6, 7	057-110-03-1	319 13 254 03	4	Y 010
58 Sac 59 Sac	75.3 2	F.M	38.7105			-121.6150	1, 2, 3	057-060-07-1	415.60		
59 3 82	75.3 P.	RM	33.7105			-121.6150	1,23	037-110-01-1			
59 Sac	75.3 %	RM RM	32.7105	-121 6123	19.7004	-121.6150	1,2,3	057-110-01-1	319.13	44	100
60 Sac	75.3 R	274	38.7653		76.7642	-121.01.0	1.2.3	057-040-02-1	585.72	1.	100 Vala
61 Sac	73.3 L	F.M	35.7745	121.3930	10.7040	-121 5978	1,23	35-020-010			Somer
6) SK	863 L	RM	28.7773			-121.6906	1.2.3	34-022-017			Sumer
65 SM	\$4.5 7.	724	38.7773		33.7704	*111.6506	1.6.7	056-170-17-1	1.00	Ar	3 ULBE
	84.5 R	12.1	33,7773			-121 6365	1.4.7	056-120-20-1		AS	
£2 (5)											
64 Sac	85.5 P.	PM	38.7864	-121.6552	38.7790	-121.6373	1.6.7	056-170-16-1		Ag	
64 510	\$5.9 R	P24 P24	38.7804	-121.6352	38,7790	-121.6973 -121.7362	1.6.7	056-170-17-1	22.14	At	Yolo
65 Sac	928L						1, 2. 3, 10		2	A\$	Switter
65 2m	92.8 L	EM	38.8404	-121.7269	32.8328	-121 7302	1.2.3.10	29-190-059	33	A#	See
66 Sac	95 8 L	14.9	38.8766				1,23	29-150-014			Steam
67 532	95.2 L	P.M	38 1692	-121.7564			1,23	29-180-014			Switz
67 Sac	962L	14.9	32 6693	-121.7564			1.23	29-180-003			Sunter
67 534	95.2 L	231	38.8693	-121.7564			1,23	29-190-027			Scares
67 Sac	95.2 L	RM	32.8603	-121.7564 -121.7841			1.23	29-180-020			Somer
63 5.80	99 L	M	38 8616				1.2,3,10	29-180-015			Surar
69536	101.3 R	14.9	38 6751		38,5749	-121 4130	1, 6, 7, 10	053-120-05-1	234.36		
70 Sac 71 Sac	103.4 L	7.11	33.9011				1	29-020-009			Sener
71 Sac	104 L 104 L	EM EM	38.5027	-121.7909 -121.7909	35,5014	-121 8012 -121 8012	1.23	29-020-013	26	A	Sma
71 586	104 L	231	38,5027				1.23	29-020-014	3.74	AS.	Sumer
	104 L	F34	34.5027			-121.5012	1.23	29-020-009	105.25	A\$	7225
71 Sac 72 Sac	104 L 104 S L	121	38,9056			-121.7904	1, 4, 5	\$\$10D!	413	^£	See .
			39,0014					22110;			
73 Sac 73 Sac	116 L	143	39.0014				1.4.5				
73 534	116 L	F.M	39.0014				1.4.5	24-090-017	1		
74 Sac	1165L	1231	39,0063			-121.8050	1.4.5	24-010-005		Vicini	Senier
74 510	116.5 L	1251	39.0063				1.4.5	24-009-001			Sinter
75 5 AC		577	39 6640				1 6 7 10	19-120-011			
76 Sac	122 R	143	39.066				1.6.6.10	19-120-011			Celms
763E	1223 R	725	39.0663				1.6,6,10	19-120-009	12	AI .	Colesa
76 Sac 77 Sac	123.3 L	731	39.0692				1, 4.7	21-050-047	1 1/		Sumer
7//335										AF.	
78 Sac	123.7 R	RM	39.6666		29.0007	-171.8462	1, 4, 5	19-120-017	2.9	Ag	Colma
79 Sac	127.5 7.	12.5	39.1007	-121.9042			1.23,10	19-030-043			Copen
80 Sac	131.5 L	571	39.132	-121.9365			1,4,5	13-060-033			States
262 13	1325 R	371	39.1443	-121.9356			1, 4, 5	17-010-062	7.7	Af	Colem
21 Sac	132.9 R	12.5	39 1443			·121.9376	1,4,5	17-080-064	3.8	Ag	Colosa
E: 5M	133 L	7.14	39 1424	-121.9327	39 1433	-121 63 50	1.4.5	13-060-002	122	Ag	States



# **EXHIBIT C**

# PARCEL INFORMATION SHEET

Ro	ENDER SENTH	AL, INC.	<i>m</i>	oin: 016.9/4.49)	n Boulovard, Scitu 107 Oceanionto, CA 96941 O • Asst. 916,970 4904 Doublettosottilul com
	SRBPP - P	rolect Site Inform	nation S	hee <u>t</u>	
BRI Site No.	pwr	Site No	_		
Unstra Latitude: -121-5: Longituda: _38,76	am Waypoint 919669 5106172	38.75920993	nt Mida N N	relot /A /A	
Type of Repair: Construction:	□ rip-rap □ landside	☐ rock benches ☐ waterside	sethae	K IAVA#	U other
	ated January 19	2,2008			=
Design Submittal:	Economic Control	. and . 4			
Plats		Receiv			
Legals:					_
Construction Plans: Date: Received Date:		60%	90%	100%	
		els (2 property owners)			
Rights Required: Last Name	(Owner 1)	(Owner 2)		Owner 31	
APN: Scoping PTE Securod? Y/N Effective Date	35-030-008				
Expiration Date: Fee (acres)			_		-
Easement (type) Size (acres):		_	= =		=
TCE (acres): Timeline:			_ =		_
Mitigation (type) Size (acres):					_
Encroachment Ranking Technical Priority Rank RE Dolivery Ranking II					

			SRBPP - Parcel Information Sh
	SRBPP - Parce	lnformation S	heet
Dwner No. 1		BRI Site No.	DWR Site No.
Vame:			
Vialling Address: APN: 35-030-008	Garden Highway	, Sacramento, CA 958	37
existing Rights: Preliminary Title Reportasement Interest:	t: 📓 Not ordered	☐ Ordered	Date:
greements (JUA, CCU	A, etc) with:		
eases:	i.		
incroachments:	Permitted Yes	□ No	☐ Both
oseribe Encroachmen	ts: See attached		
ncroachment Ranking	#		
lights Regulred:			
coping PTE: Secure	d (Y) (N) (Effect	tivo date	& Expiration date
	лс (Тура)		
viltigation ac TCE	ac (Timeline	).	
escription of work/mi	tigation fulfillment:		The Parket State of
echnical Priority Rank			
te Impact Analysis:			
mprovements impacte	d: (Description, )		
Damages: Yes	No		
Construction Contract	Work:		

RE Dollvory Banking # \_\_\_\_\_ Rank 1 (6-12 months), Rank 2 (12-18 months), Rank 3 (18-24 months)

Property Detail Report

Page 1 of 1

#### **Property Detail Report for:**

DIGITAL MAP Drypted Mapping

RIEGO RD, SACRAMENTO CA, 95837-

Owner Information:

Owner Hame:

GARDEN HWY, BACRAMENTO, CA, 95897- 9106

Mailing Address: Vosting Code:

Phone Number:

Location Information:

Legal Description:

Centrity: APN

SUTTER 38030008 FIPS Code: Allomative APM.

06101 35030008 35-03/

Consus TrcV8lk: Map Pel: Tract No:

0071002/2

Twishp-Roge-Sect: Logal Lot:

Lagal Book/Page:

Legal Block:

Sale Price:

NATOMAS BENNETT Subdivison:

Last Market Sale Information:

Boto Dato:

Bala Type: Dund Type:

Baid Dag No: Transfer Doc No: MultVSplit Salo:

0000027246

Price Per SqFt: Price Per Acre:

1<sup>at</sup> Mag Doo No:

1<sup>57</sup> Mtg Antount: 1st Mig bit Type:

and Mig Amounti 2nd Mig Int Typu:

Titia Company: Londor: Bollet Namo:

Properly Characteristics: Building Area: Living Area: Garage Aren: Basement Aren:

Parking Type: Yr Buil/Effootive: Paol Cede:

Total Flooms: Declosoma

Boths: Fliapisce: No of Stories: Quality

Construction: Hoat Type: Al Comt Hoof Typo: Roof Material:

Blylo:

Tex and Value Information:

Assassed Value: Land Value:

Improvement Value: Total Taxable Value: \$239,692 \$4,603 Assessed Year: Property Tex: Improvement %: Tex Exemption:

Est Market Val: Assessor Appd Val:

Site information:

Assessor Acres:

Angessor Lot W/D:

Calculated Acres:

72.60 Assesser Lot SqFt:

3,161,596

Zoning:

No of Buildings; Ros/Comm Units: Sower Type:

Water Type:

Land Uso: Land Use Dane:

County Use Code:

VACANT LAND (NEC)

Calculated Lot SqFt: Not in Fault Zong Hazard

Not in One Mile industrial Commercial Zone In 100yr. FEMA Flood Zone

Nor in Wildland Fire Hazerd Not in Severe Fire Hazard

In Dam Inundation Hazard

http://maps.digitalmapcentral.com/production/LandVision/v07\_01\_062/index.html

9/17/2009

SRBPP	- Parcel	nformation	<u>Sheet</u>	
Owner No. 2	BR	I Site No	DWR Site No	
Name:				
Mailing Address: Wolfe Street APN:	Lakewood, C	Λ 90713		
Existing Rights:				
Preliminary Title Report: 🗵 N Eusement interest:		☐ Ordered	Date:	-
Agreements (JUA, CCUA, etc) with:				
Zoning: Encroachments: Permitted		□ No	☐ Both	
Describe Encroachments: See a Modification/Relo/Removal Notificat		ent to Owner:		7. acc 2 4. acc 2
Encroachment Ranking #				
Rights Required:				
Scoping PTE: Secured (Y) (N)	(Effectiv	e date	& Expiration date	)
Fee ac Easementac (Type)		Setback Leve	eac	
Mitigation ac TCE ac (Ti Description of work/mitigation fulfilli	meline ment:	)		
Technical Priority Ranking #				
RE Impact Analysis: Improvements impacted: (Description Damages:   Yes  No	n)		16	
RAP required: Vos No				
Improvement modification/removal:	☐ Yes ☐	No		

RE Delivery Ranking # \_\_\_\_\_ Rank 1 (G-12 months), Rank 2 (12-18 months), Rank B (18-24 months)

Property Detail Report

Page 1 of 1 -

#### Property Detail Report for:

DIGITAL MAP | payond hispains

114	$\sim$	ALIO	CA	A G A G A
1 1A1	CU	LAUU	UM	, 95659

Owner Information:

Owner Name:

Mailing Address: Vesting Code:

WOLFE BT, LAKEWOOD, CA, 80713- 1747

Phone Number.

Location Information:

Logal Description:

County: AFIN: Twishe-Hige-Sect: Logal Lot:

SUTTER 35302001 FIPS Code: Alternative Afth: Legal Book/Page: Logal Block:

06101 00008001 36-38 /

Concus TrovBlks Map fini: Tract No:

Last Market Sale Information:

Sale Dale: Sale Doc No: Transfer Doe Nos Multi/Spilt Bala:

Sale Type: Good Type: Titla Company: Londers Soller Name:

Subdivision:

5601650000

CH82

Bala Price: Pride Per SqP1; Price Per Acre: 1<sup>et</sup> Mig Dec No: 1<sup>st</sup> Mtg Amount; 1st Mig Int Type: 2<sup>nd</sup> Mtg Amaunt: and Mig Int Type:

Property Characteristics:

Building Area: Living Area: Garnga Arna: Onsement Area: Parking Typo: Yr DullVEffactive: Pool Code:

Folal Rooms: Bodrooma Betten: Pirenlana: No of Storles: Quality:

Construction: Heat Type: Air Condi Root Type: Figal Material: tityle;

Tax and Value Information:

ARRESTED VALUE Land Value: Improvement Value: Total Taxable Value:

neo Yournad Proporty Tax: Improvement %: l'ax Examption:

2008 \$158 Fet Market Val Assessor Apad Val:

Site Information:

Auggser Agres: Assessor Let SqFt! Assessor Lot W/D:

Calculated Acres:

Calculated Lot EqFI:

0.82

27,007 0.6404

Zoning: No of Bultdings; Res/Comm Units: Sower Type: Water Type:

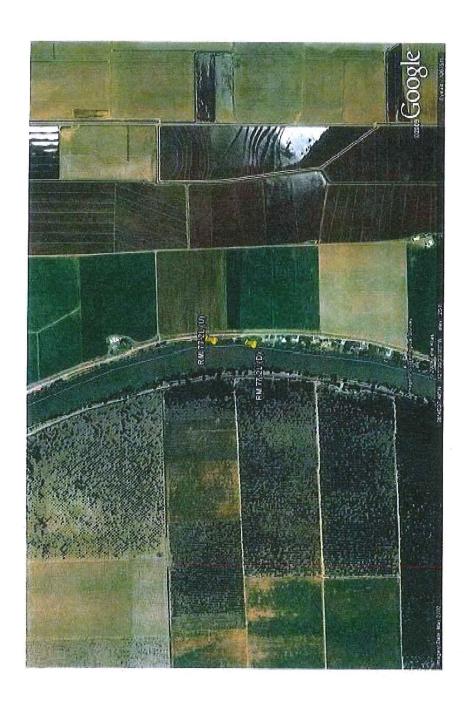
Land Uso: Land Use Deco: County Use Code:

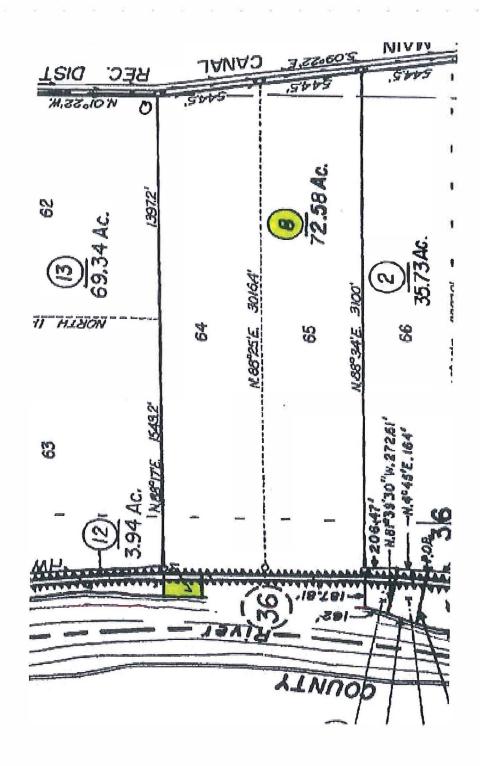
400 VADANT LAND (NEC)

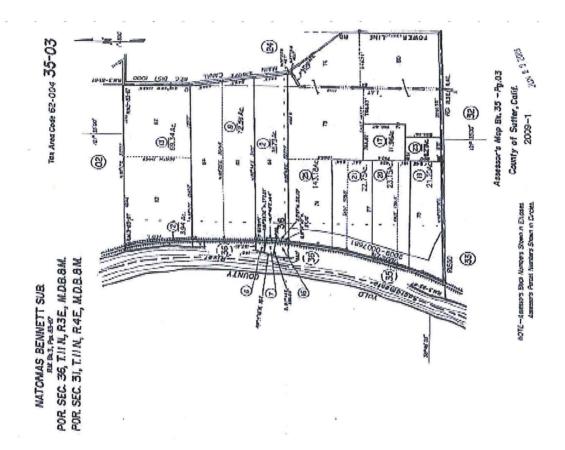
Not in Fault Zone Hazard Not in One Mile Industrial Commercial Zone In 100yr. FEMA Flood Zono In Dam Inundation Hazard Not in Wildliged Fire Hezerd Not in Bovare Fire Hezard

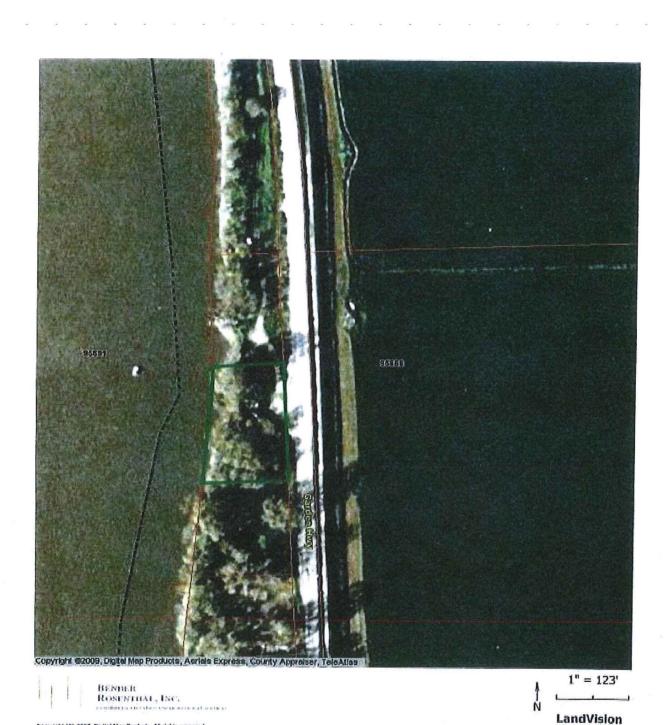
http://maps.digitalmapcentral.com/production/LandVision/v07\_01\_062/index.html

9/17/2009

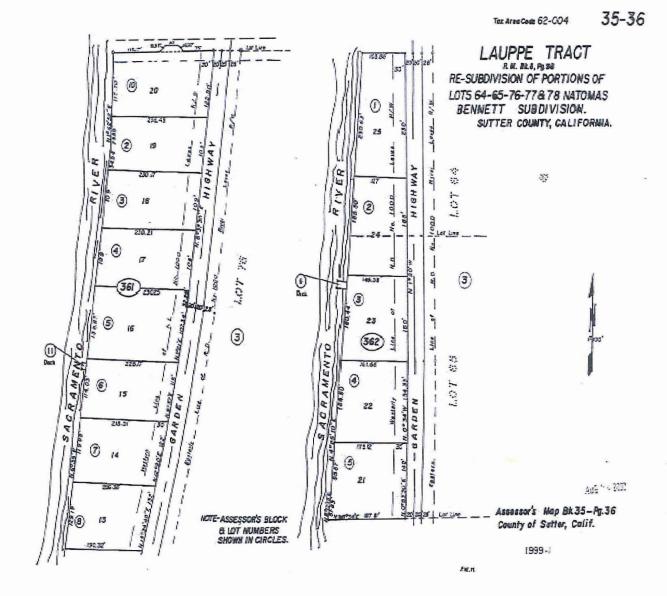








26





#### MEMORANDUM

To: Mark Boedtker, PE, Sacramento District of the Corps of Engineers

co: Thomas W. Smith, PE, GE

From: Anthony Alvarado, PE

Date. January 19, 2008

Relocation Design Memorandum for the Pump Structure at Sacramento River Mile (SAC RM) 77.2L as part of Contract 3 of the 2008 Erosion Sites of the Sacramento River Bank Protection Project. Contract # W91238-07-D-0038 Task Order 0002.

#### **EXISTING CONDITIONS**

The erosion site at SAC RM 77.2L is located on the left bank of the Sacramento River less than 2 miles south of Verona and the confluence with the Feather River. Figure 1 shows the project location of the erosion site. Figure 2 shows the pump structure in the middle of the site near the largest erosion pocket. The site at SAC RM 77.2L is similar to a previously repaired erosion site at SAC RM 78.0L. There is no existing revertment apart from sporadic concrete rubble dumped within the project limits, but there is rock revertment upstream of the site. The site was added in 2000 to the erosion inventory because of the erosion pocket at the structure. There are numerous tree popouts and leaning trees.

Figure 3 shows the existing cross section at the location of the pump structure.

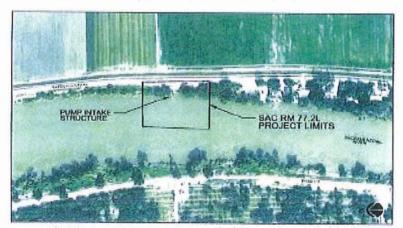


Figure 1. Plan view of the erosion site at SAC RM 77.2L.

Engineers/Scientists/Surveyors 2150 River Plaza Dr. Suite 330, Sacramento, CA 95833 (916) 563-7700, FAX (916) 563-6972

SAC-77M.DOC 32-1312.04 Page 1 of 4

#### Memorandum (continued)



Figure 2. View from river of pump structure at SAC RM 77.2L.

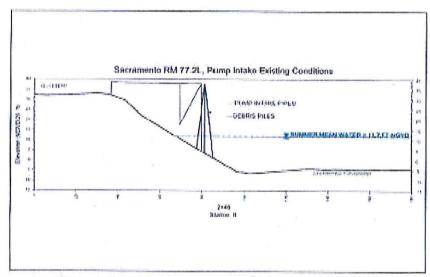


Figure 3. Existing conditions cross section at SAC RM 77.2L at the pump structure.

#### Memorandum (continued)

#### **DESIGN CONDITIONS**

In order to protect the site from further bank erosion and to stabilize the slope, bank protection has been designed for the site incorporating a mix of quarry stone, soil-filled quarry stone, and environmental features.

Figure 4 shows the design cross section along with where the pipe inlet is relative to the design. The design has a 2:1 sloped quarry stone lower surface along with roughly a 12 ft bench for planting, environmental features, and vegetation. The upper slope is designed to be 3 ft thick and also at a 2:1 slope,

As currently designed, the pipe structure inlet would be significantly buried by quarry stone due to the amount of quarry stone needed to adequately protect the slope from further erosion and slope failure.

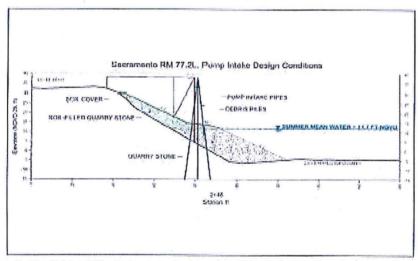


Figure 4. Design conditions cross section at SAC RM 77.2L at the pump structure location.

#### RECOMMENDATIONS

Ayres has analyzed 2 alternatives for the relocation of the pump structure to coordinate with the bank protection design. The bank protection design cannot be altered and must be maintained in this area otherwise the integrity of the erosion protection will be compromised. Therefore, 2 alternatives are proposed.

Ayres Associates Inc Engineers/Scientists/Surveyors 2160 River Plaza Driva, Sulta 330, Sacramento, CA 95933 (916) 563-7700, FAX (916) 563-6972

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#### Memorandum (continued)

Alternative #1 is to build the bank protection around the existing structure after removing the pump inlet. Then the platform could be extended further out past the bank protection and a new pump inlet installed. This may be feasible but the risk is the potential damage to the existing structure during the construction of the bank protection. It will also be difficult to build a new feeting on top of the quarry stone.

Alternative #2 is to remove the pump structure entirely. The designed bank protection would then be constructed. After construction, a new pump structure would be installed using new pilings or concrete footings past the toe of the quarry stone and a new structure footing at the berm with a new platform and pipe intake. Alternative #2 is shown in Figure 5.

Ayres recommends Alternative #2. In Alternative #1, there is too much risk of damage to the existing structure during construction and also other structural instability issues. Alternative #2 is significantly more expensive but is necessary.

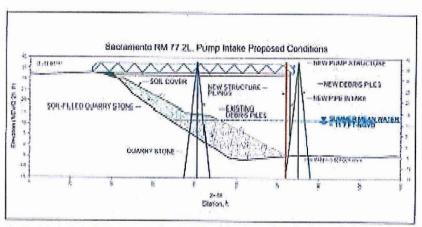


Figure 5. Proposed conditions cross section at SAC RM 77.2L at the pump structure location.

#### **ESTIMATED RELOCATION COSTS**

The cost to remove and replace the pump structure is estimated to be \$391,435 and the cost for a temporary pump during construction is estimated to be about \$10,000. Cost information was developed with assistance from Rain for Flent (temporary set-up) and West Coast Docks, Inc, in Walnut Grove, CA, and is summarized in **Table 1** below.

Table 1. Cost Summary.	
Temporary Pumping Setup (3 Months)	\$ 10,000
Pipe Removal and Re-Installation	\$391,435
Total	\$401,435

# **Recorded Deeds**

BRI Site No.:

Not assigned

(APN 35-030-008 and 35-362-001)

Site Description:

Sacramento River, RM 77.2L (377 feet)

**Reclamation District:** 

RD No. 1000

County:

Sutter

Rights Acquired by SSJDD:

\_X\_ Easement

\_\_ Fee

DWR Deed No.:

2062

10623

13205

Deed Recording Date:

08-02-56

01-08-74

01-15-98

Book and Page:

3131 OR 148\*

821 OR 92

2-1044, 6/15

Instr. # 199800548

Tracing No.:

2-1114, Sht. 31 of 36

Rights Acquired by RD 1000:

\_X\_ Easement

\_\_ Fee

RD 1000 Deeds:

Deed Recording Date:

4-12-1913\*

5-19-1913

9:06-1917

7-29-1992

Book and Page:

371/395

50/387

59/277

1488/300

<sup>\*</sup> Recorded in Sacramento County

#### **EXHIBIT D**

#### SITE SPECIFIC REAL ESTATE INVENTORY CHECK LIST

The following topics will be updated and the information provide to the PDT when sites are identified and selected prior to construction. The numbering references the categories listed in the Table of Contents to this Real Estate Plan.

- 4. DESCRIPTION OF LEERD'S
- 5. LERRD'S OWNED BY THE NFS AND CREDITING
- 11. ANTICIPAED INCREASE FLOODING AND IMPACTS
- 12. BASELINE COST ESTIMATE
- 13. RELOCATION ASSISTANCE BENEFITS
- 17. ACQUISTION SCHEDULE
- 18. DESCRIPTION OF FACILITY AND UTILITY RELOCATIONS
- 19. HAZARDOUS, TOXIC, AND RADIOLOGICAL WASTE (HTRW)
- 20. ATTITUDE OF LAND OWNERS AND COMMUNITY

## **EXHIBIT E**

# AUTHORIZATION FOR ENTRY FOR CONSTRUCTION

I, (name of accountable offic	ial), (title) for	(name of non-Federal sponsor), do
hereby certify that the	(name of non-Federal s	ponsor) _ has acquired the real property
interests required by the Department of the Army, and construction of(project name,		
specifically identified project features, etc.). Further, I hereby authorize the Department of the Army, its		
agents, employees and contractors,	to enter upon(ident	tify tracts)_ to construct
(project name, specifical	y identified project features, e	etc)as set forth in the plans and
specifications held in the U.S. Arm	y Corps of Engineers'	District Office,City
and State		
WITNESS my signature as(title)for (name of non-Federal sponsor) this, 20  BY:  ATTORNEY'S CERTIFICATE OF AUTHORITY		
I,(name),(title of leg	gal officer)for(name of r	non-Federal sponsor), certify that (name
of non-Federal sponsor) has authority to grant the above Authorization for Entry; that said Authorization for Entry		
is executed by the proper duly authorized officer; and that the Authorization for Entry is in sufficient form to grant		
the authorization therein stated.		
WITNESS my signature as (title)	for (name of non-Federal spo	onsor) thisday of
, 20		
	BY:	