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1.0 GRANT EXPENDITURE AREA AND SUMMARY

On July 14, 1992, the Inglewood City Council approved Letter Agreement No. ING/RSI/1991/92-1 with the Los Angeles Department of Airports (LADOA) to implement a Residential Sound Insulation Pilot Program.

A total of \$1 million was authorized pursuant to Board of Airport Commissioners (BOAC) Resolution Nos. 18062 and 18085 to implement the pilot program. These funds matched a portion of Federal Aviation Administration (FAA) Grant Agreement No. AIP 3-06-0139-N6, in the total sum of \$3,000,000, dated September 26, 1989. LAND Recycling

The City contracted Wyle Laboratories of El Segundo, California to assist with the design and implementation of the pilot program. This program selected participants on a voluntary basis rather than selecting participants within the 100% Stage III (quieter aircraft fleet) 65 dB Community Noise Equivalent Level (CNEL) noise contour and are most disturbed by the aircraft noise. The intent of the program was to maximize the mix of structural types that are available within the city of Inglewood so that houses could be selected to represent major categories, such as those with stucco walls, wood siding, roofs with no attics, etc.

Figure 1 on the following page depicts the location of the 38 properties sound insulated wholly or partially with this grant. Also shown on Figure 1 are the CNEL noise contours for 65 dB, 70 dB and 75 dB levels prevailing in calendar year 1992. These contours are identical to those provided to the State of California for the 12-month period ending in the 4th quarter of 1992 and are used herein for definition of the Aircraft Noise Mitigation Program (ANMP).

A breakdown by CNEL zone of the 38 single family properties sound insulated and the area in which they reside is shown below on Table 1.

The total cost of this pilot program was \$1,400,174. A breakdown of cost by Administrative, Architectural/Engineering, and Sound Insulation (construction) is shown in Table 2. Proceeds from the sale of land acquired through previous grants amounting to \$307,161 and interest earnings amounting to \$93,013 provided the additional funding needed to complete this project. A chronological account of this funding is provided in Appendix A.

2.0 SOUND INSULATION DWELLING PROJECT PROCEDURES

2.1 Implementation

In September 1992 an article identifying the pilot sound insulation program was placed in the Inglewood Views, a local publication distributed to each home in the city of Inglewood. All residents within the designated noise contours were invited to express interest in participating in the program through a voluntary process.

During a 30-day period between September 14 and October 14, 1992, the City received requests from 534 homeowners who wanted to participate in the pilot sound insulation program. Of that, 250 were deemed to be eligible by the fact that they lived within the ANMP 65 dB CNEL noise contour. The program selected participants on a voluntary basis so that houses could represent major dwelling categories, such as those with stucco walls, wood siding, roofs with no attics. The area circumscribed by the ANMP noise contour was subdivided into six survey areas to establish an equitable distribution of the incompatible homes to be insulated. The areas from Century Blvd. to 104th Street were planned for recycling and under terms of the grant were deemed to be ineligible because they were in areas that were not consistent with the General Plan.

Table 1

Counts of Dwellings and Land Area Made Compatible with LADOA
Grant Resolution 18062 and 18085

Land Use	CNEL Zone						Total	
	65-70		70-75		75+		units	acres
	units	acres	units	acres	units	acres		
<u>Mitigated Residential</u> Single Family	20	2.91	18	2.11	0	0.00	38	5.02
Grand Total	20	2.91	18	2.11	0	0.00	38	5.02

Table 2

Distribution of Grant Expenditures
(Grant Resolution 18062 and 18085)

Mitigation Method	Single Family	Total
GIP Preparation	\$0	\$0
Administrative	\$200,424	\$200,424
Arch./Eng.	\$120,000	\$120,000
Sound Insulation (construction)	\$1,079,750	\$1,079,750
Total	\$1,400,174	\$1,400,174

The distribution by dwelling type is as follows: 32 - one story/stucco/vented attic, nine - 1 story/stucco/flat roof, seven - 1 story/wood siding/vented attic, and two - 2 story/vented attic. The distribution is representative of the city's percentage of the total number of single family homes. A team comprised of city staff and staff from Wyle Laboratories conducted field inspections to verify the selected dwellings by address and category type. Of the 50 homes initially selected, 4 withdrew from the program. On April 13, 1993, the Inglewood City Council approved the selection of the remaining 46 incompatible homes to be sound insulated. Table 3 shows the number of participating single family dwelling units break-down by Invited, Completed, Dropped Out and Declined.

Table 3

Participation in Sound Insulation with LADOA
Grant Resolution 18062 and 18085

Type	Number of Participating Dwelling Units			
	Invited	Completed	Dropped Out	Declined
Single Family	50	38	9	3
Total	50	38	9	3

The 46 homes selected for participation in this pilot program were reduced to 41 after 5 homeowners decided to withdraw from the program. The remaining 41 homes were divided into two groups. Two separate sets of construction bidding documents and specifications were prepared and released for contractor bid during February 1994.

Bids were accepted from each group separately. Advertisements were placed in the Los Angeles Times, La Opinion, Inglewood News, the Green Sheet, and several other publications with local circulation. City staff also contacted the Chamber of Commerce to identify all local construction contractors so that they be informed of the bids for the pilot program. A bidder's conference was held on March 15, 1994. FTR International, Inc. was the lowest responsible bidder for both groups. On August 2, 1994, contracts were awarded to FTR International, Inc. in the amount of \$545,000 for Group I and \$534,700 for Group II. After the contracts were awarded, 3 other homeowners decided to withdraw from participation. Following is a flowchart identifying the procedures followed during the implementation of the program.

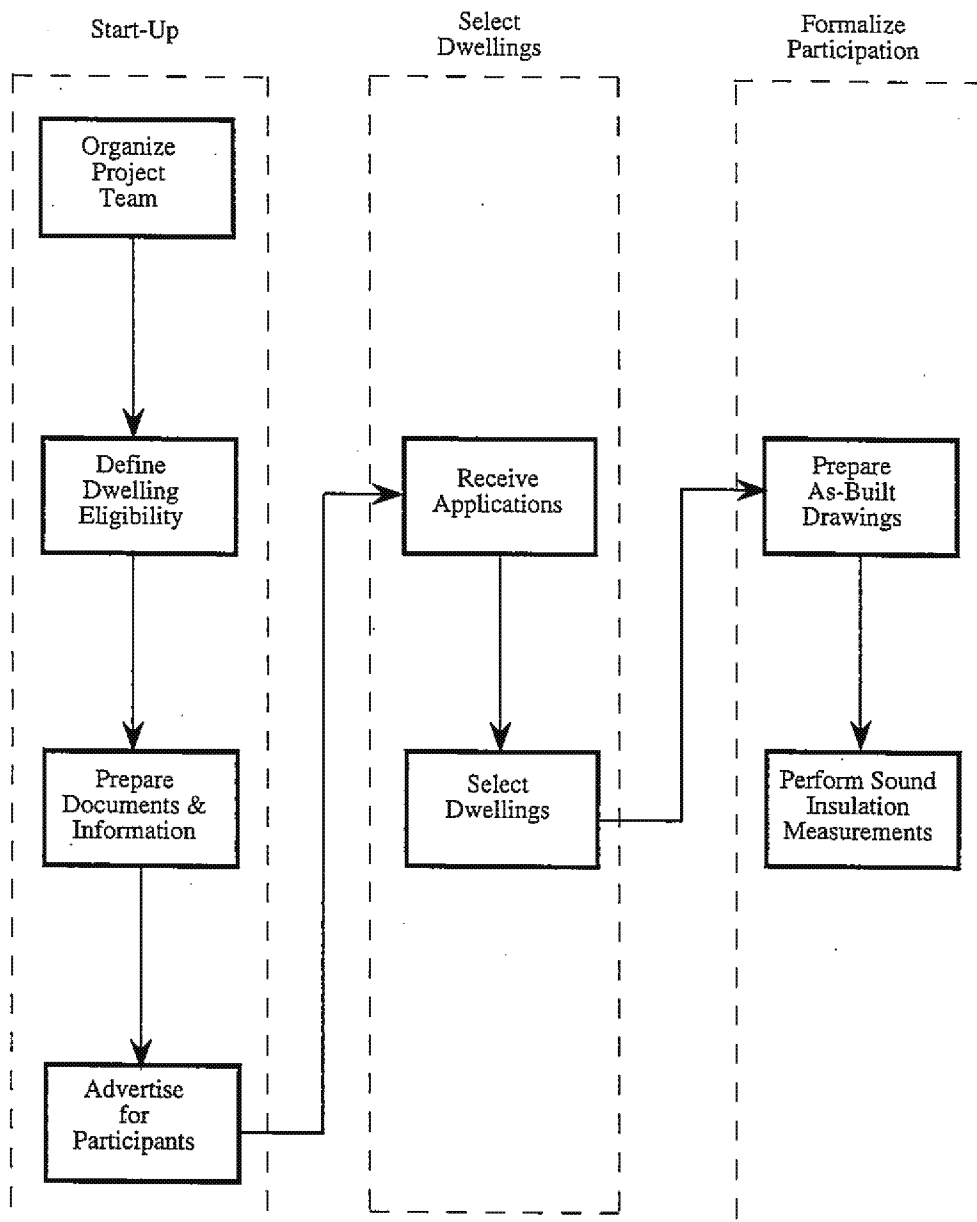
2.2 Acoustical Testing

The objective of the acoustic measurements was to obtain an estimate of the exterior-to-interior noise reduction characteristics of the dwellings before and after their sound insulation. The noise reduction value is dependent upon many factors, including the surface areas and types of walls, windows, doors and roofing, the orientation of each surface relative to the aircraft noise propagation path, and the sound absorptive characteristics of interior furnishings. Thus a different noise reduction value is obtained for each room in a dwelling.

The procedures employed to evaluate these noise reduction values include simultaneous measurement of aircraft noise levels at the exterior of the surveyed dwelling and at the interior of each room. The latter requires at least two measurement positions within each room to provide an average interior noise level. These simultaneous exterior and interior noise level measurements are obtained over a succession of aircraft noise events, usually more than five events, to provide an average value of the room noise reduction.

The noise level measurements are obtained by use of special measuring instrumentation. In this project, the instrumentation comprised a total of 14 Larson-Davis Models 700 and 820 Integrating Sound Level Meters. These meters are precision calibrated prior to their use in the project and are further calibrated during field use by application of an acoustic calibrator to each microphone. The units are programmed to measure A-Weighted Sound Levels which occur above preset threshold level and digitally store the Single Event Noise Exposure Level (SENEL) resulting from the noise event. These SENEL values are stored together with the date and time of day of their respective occurrences.

The resulting exterior and interior values of SENEL for each aircraft noise event are subsequently processed to provide Noise Reduction values for each room. These values are shown in Appendix A of Wyle Research Report No. WR 96-7 and in Table 4 of this Grant Report.



Grant Implementation Program Procedure

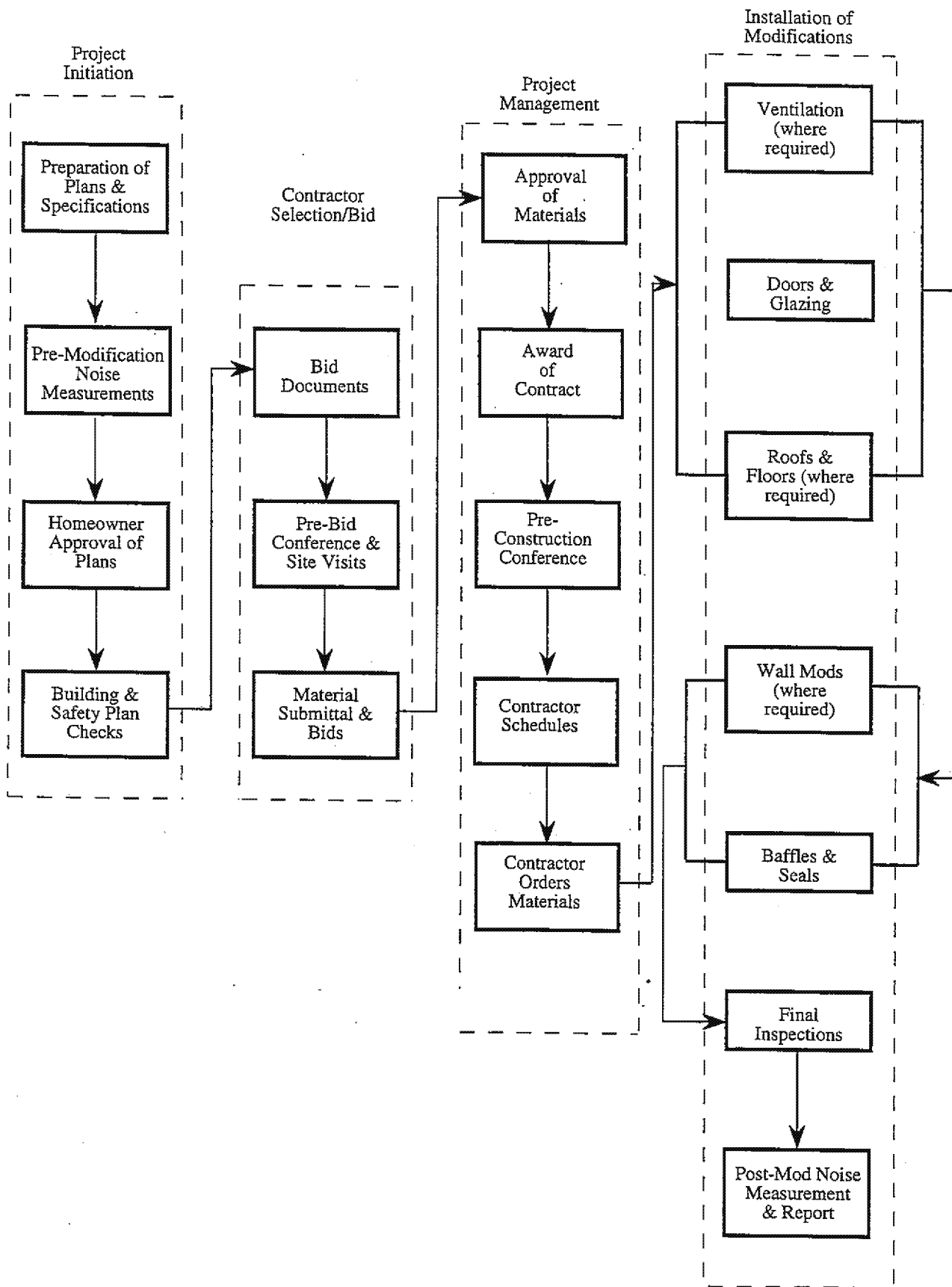


Table 4

Expenditure Profile for Sound Insulation of Properties with LADOA Grant Resolution 18062 and 18085

Parcel Number	SI Cost Single Family	Acoustic Results			Funding Sources						
		pre-SI NR (dB)	post-SI NR (dB)	Avg. Interior CNEL (dB)	LADOA			Other*		Other**	
					Resolution #	\$	%	\$	%	\$	%
4022-006-019	\$36,847	26.2	38.7	31.3	18062 & 18085	\$26,316	71%	\$8,083	22%	\$2,448	7%
4022-015-011	\$36,847	29.4	40.7	29.3	18062 & 18085	\$26,316	71%	\$8,083	22%	\$2,448	7%
4022-003-021	\$36,847	28.4	38.8	36.2	18062 & 18085	\$26,316	71%	\$8,083	22%	\$2,448	7%
4022-012-004	\$36,847	28.4	37.3	37.7	18062 & 18085	\$26,316	71%	\$8,083	22%	\$2,448	7%
4022-003-011	\$36,847	33.2	35.4	39.6	18062 & 18085	\$26,316	71%	\$8,083	22%	\$2,448	7%
4018-025-046	\$36,847	23.7	33.2	41.8	18062 & 18085	\$26,316	71%	\$8,083	22%	\$2,448	7%
4022-011-005	\$36,847	26.9	36.8	38.2	18062 & 18085	\$26,316	71%	\$8,083	22%	\$2,448	7%
4022-009-009	\$36,847	25.0	33.9	36.1	18062 & 18085	\$26,316	71%	\$8,083	22%	\$2,448	7%
4022-006-010	\$36,847	28.3	36.9	33.1	18062 & 18085	\$26,316	71%	\$8,083	22%	\$2,448	7%
4022-011-009	\$36,847	30.8	36.9	38.1	18062 & 18085	\$26,316	71%	\$8,083	22%	\$2,448	7%
4022-001-027	\$36,847	24.3	36.7	38.3	18062 & 18085	\$26,316	71%	\$8,083	22%	\$2,448	7%
4022-009-008	\$36,847	28.7	40.2	34.8	18062 & 18085	\$26,316	71%	\$8,083	22%	\$2,448	7%
4030-017-028	\$36,847	26.3	37.5	37.5	18062 & 18085	\$26,316	71%	\$8,083	22%	\$2,448	7%
4022-017-004	\$36,847	28.6	35.6	39.5	18062 & 18085	\$26,316	71%	\$8,083	22%	\$2,448	7%
4020-015-021	\$36,847	27.9	31.7	38.3	18062 & 18085	\$26,316	71%	\$8,083	22%	\$2,448	7%
4022-020-004	\$36,847	29.3	40.7	34.3	18062 & 18085	\$26,316	71%	\$8,083	22%	\$2,448	7%
4021-030-012	\$36,847	25.1	32.3	42.7	18062 & 18085	\$26,316	71%	\$8,083	22%	\$2,448	7%
4022-014-009	\$36,847	29.5	36.6	33.4	18062 & 18085	\$26,316	71%	\$8,083	22%	\$2,448	7%
4022-001-014	\$36,847	26.6	A	A	18062 & 18085	\$26,316	71%	\$8,083	22%	\$2,448	7%
4030-016-018	\$36,847	27.7	C	C	18062 & 18085	\$26,316	71%	\$8,083	22%	\$2,448	7%
4030-015-014	\$36,847	28.1	C	C	18062 & 18085	\$26,316	71%	\$8,083	22%	\$2,448	7%
4030-017-011	\$36,847	D	38.6	D	18062 & 18085	\$26,316	71%	\$8,083	22%	\$2,448	7%
4022-009-012	\$36,847	26.4	35.4	39.6	18062 & 18085	\$26,316	71%	\$8,083	22%	\$2,448	7%
4022-013-024	\$36,847	25.8	32.3	37.7	18062 & 18085	\$26,316	71%	\$8,083	22%	\$2,448	7%
4022-015-010	\$36,847	29.6	B	B	18062 & 18085	\$26,316	71%	\$8,083	22%	\$2,448	7%
4030-018-015	\$36,847	28.6	38.6	31.4	18062 & 18085	\$26,316	71%	\$8,083	22%	\$2,448	7%
4030-017-026	\$36,847	30.9	35.0	35.0	18062 & 18085	\$26,316	71%	\$8,083	22%	\$2,448	7%
4022-010-027	\$36,847	30.2	35.4	39.6	18062 & 18085	\$26,316	71%	\$8,083	22%	\$2,448	7%
4030-012-099	\$36,847	D	37.1	D	18062 & 18085	\$26,316	71%	\$8,083	22%	\$2,448	7%
4030-017-010	\$36,847	D	36.4	D	18062 & 18085	\$26,316	71%	\$8,083	22%	\$2,448	7%
4030-017-014	\$36,847	29.8	33.7	41.3	18062 & 18085	\$26,316	71%	\$8,083	22%	\$2,448	7%
4030-017-022	\$36,847	24.8	30.9	44.1	18062 & 18085	\$26,316	71%	\$8,083	22%	\$2,448	7%
4030-011-019	\$36,847	26.3	36.0	39.0	18062 & 18085	\$26,316	71%	\$8,083	22%	\$2,448	7%
4030-011-024	\$36,847	26.2	C	C	18062 & 18085	\$26,316	71%	\$8,083	22%	\$2,448	7%
4030-010-015	\$36,847	27.4	34.8	40.2	18062 & 18085	\$26,316	71%	\$8,083	22%	\$2,448	7%
4030-021-009	\$36,847	30.9	37.4	32.6	18062 & 18085	\$26,316	71%	\$8,083	22%	\$2,448	7%
4030-011-002	\$36,847	28.2	35.6	32.6	18062 & 18085	\$26,316	71%	\$8,083	22%	\$2,448	7%
4030-012-011	\$36,847	30.3	33.7	41.3	18062 & 18085	\$26,316	71%	\$8,083	22%	\$2,448	7%
TOTAL	\$1,400,174	N/A	N/A	N/A	N/A	\$1,000,000	71%	\$307,161	22%	\$93,013	7%

Notes:

Due to the fact a finite cost couldn't be established for each home, the total program amount is divided by the number of homes to get the cost per home.

- * Proceeds from the sale of land acquired through previous grants
- ** Interest earnings from initial \$1 million grant
- A. Homeowner was at home and caused noises that interfered with the data collection.
- B. Homeowner sold the property immediately after construction was completed and new owner could not be contacted.
- C. Homeowners post-modification schedule did not allow access during normal working hours for post-mod noise measurement.
- D. Pre-modification noise data was not obtained.

Other measurement methods, involving more detailed evaluations, are also used to examine the frequency dependent characteristics of dwelling noise reduction. These are diagnostic tools and are not reported herein.

Other measurement methods, involving more detailed evaluations, are also used to examine the frequency dependent characteristics of dwelling noise reduction. These are diagnostic tools and are not reported herein.

All dwellings were acoustically surveyed during March through September of 1993 and most of them were surveyed again in March and April of 1995 after completion of sound insulation modifications.

2.3 Actual Costs

Table 4 also provides an expenditure profile for the properties that were acoustically treated with LADOA Grants Resolution Nos. 18062 and 18085. The assessor's parcel number, the total cost of sound insulation of the property, the acoustical results, and funding sources are listed for each of the grant properties. A finite amount could not be obtained for the total cost of sound insulation of each property. An estimation of the cost per dwelling is therefore given as the total program cost divided by the number of homes.

Table 5 shows the actual cost to sound insulate the properties completed in this program broken-down by the three CNEL zones. Table 6 redisplayes the number of homes that completed the pilot sound insulation program broken-down by CNEL zones as did Table 1. And for the purposes of developing historical data on costs to insulate individual dwellings within the three CNEL zones, the average cost to sound insulate single family dwelling is presented below in Table 7.

Table 5
Total Costs to Sound Insulate Dwellings with LADOA
Grant Resolution 18062 and 18085

	CNEL Zone, dB			Total
	65-70	70-75	75+	
Single Family	\$568,289	\$511,461	\$0	\$1,079,750
Sub-Total	\$568,289	\$511,461	\$0	\$1,079,750
GIP Rep.	\$0	\$0	\$0	\$0
Administrative	\$105,486	\$94,938	\$0	\$200,424
Arch./Eng.	\$63,158	\$56,842	\$0	\$120,000
Total	\$736,934	\$663,240	\$0	\$1,400,174

Table 6

Sound Insulated Dwellings Within the ANIA CNEL Zones Via
LADOA Grant Resolution 18062 and 18085

Land Use	CNEL Zone, dB			Total
	65-70	70-75	75+	
Single Family	20	18	0	38
Two-Family	0	0	0	0
Multi-Family	0	0	0	0
Total	20	18	0	38

Table 7

Actual Average Costs per Dwelling to Sound Insulate

Land Use	CNEL Zone, dB		
	65-70	70-75	75+
Single Family	\$36,847	\$36,847	\$0

3.0 PROPERTY ACQUISITION PROJECTS

The City did not pursue any acquisition and recycling of properties in this pilot program. Using tables and figures numbering convention from the Guidelines for Preparation of the Grant Report provided by the LADOA, Tables 8 through 11 are consequently excluded from this grant report.

4.0 EASEMENTS/CERTIFICATES OF COMPATIBILITY

Letter Agreement No. ING/RSI-1991/92-1, Section 4., provided that Certificates of Land Use Compatibility as specified in BOAC Resolution No. 18062 be prepared in a form acceptable to the Los Angeles City Attorney's Office. A standardized form was to have been prepared by the Los Angeles City Attorney's Office and forwarded to the City of Inglewood. At this writing, the form has not been received. Upon receipt of the Certificate, it will be completed and recorded as required. Table 12 list the properties noise mitigated with LADOA Grant No. 18062 and 18085. The date which the certificate is recorded in the City Clerk's office, and the date submitted to LADOA will be added to this Table 12 record, when known.

Table 12

List of Properties Noise Mitigated with LADOA
Grant Resolution 18062 and 18085

Parcel Number	Owner's Surname	Address	Certificate Date	Date Submitted to LADOA
4022-006-019	CHRISTOS	520 W. BUCKTHORNE ST.		
4022-015-011	NAVARRO	436 W. BUCKTHORNE ST.		
4022-003-021	RIVERA	604 W. SPRUCE AVE.		
4022-012-004	TAURE	424 W. ELM AVE.		
4022-003-011	KERR	635 MAGNOLIA AVE.		
4018-025-046	GOOSBY	708 W. COVELLE AVE.		
4022-011-005	STOUFFER	430 W. HILLCREST BLVD.		
4022-009-009	EVANS	508 W. BUCKTHORNE ST.		
4022-006-010	NICHOLS	504 W. BUCKTHORNE ST.		
4022-011-009	QUELFO	440 W. HILLCREST BLVD.		
4022-001-027	JAMES	649 W. ELM AVE.		
4022-009-008	GORIA	514 W. ELM AVE.		
4030-017-028	WILSON	2516 W. 102ND ST.		
4022-017-004	SMITH	331 W. BUCKTHORNE ST.		
4020-015-021	ELLERBE	416 S. EUCALYPTUS AVE.		
4022-020-004	EUDAVE	312 W. HILLCREST BLVD.		
4021-030-012	GUERRO	717 LA BREA DRIVE		
4022-014-009	GONZALEZ	428 MAGNOLIA AVE.		
4022-001-014	GUERRERRO	625 W. ELM AVE.		
4030-016-018	MORRIS	10224 S. 6TH AVE.		
4030-015-014	PLAINE	2708 W. 102ND ST.		
4030-017-011	HARRIS	2508 W. 102ND ST.		
4022-009-012	GOODEN	530 ELM AVE.		
4022-013-024	MEYER	421 MAGNOLIA AVE.		
4022-015-010	BAHN	432 W. BUCKTHORNE ST.		
4030-018-015	TAYLOR	10216 S. 3RD AVE.		
4030-017-026	BROWN	10229 S. 4TH AVE.		
4022-010-027	LAMAR	501 ELM AVE.		
4030-012-099	TAYLOR	2625 W. 102ND ST.		
4030-017-010	BRYAN	2504 W. 102ND ST.		
4030-017-014	POLITE	10232 S. 4TH AVE.		
4030-017-022	WADE	10245 S. 4TH AVE.		
4030-011-019	LULL	2420 W. 101ST ST.		
4030-011-024	FULLER	2504 W. 101ST ST.		
4030-010-015	METOYER	2509 W. 101ST ST.		
4030-021-009	WEST	10221 S. VAN NESS		
4030-011-002	WALKER	2405 W. 102ND ST.		
4030-012-011	WATSON	2617 W. 102ND ST.		

APPENDIX A

Date: 12 22 95 - 10:36 AM

PREPARED BY: *JAP*

REVIEWED BY:

CITY OF INGLEWOOD
DOA Resident Grant + DOA 94/95 Redevelopment
REVENUES & EXPENDITURES PER BOOKS
AT JUNE 30, 1995

PER BOOKS

	Balance	Cash Receipts	Expenditures	Balance	Interest	Adjust Balance	YTD Interest	Weighted Average %
1st Quarter 92/93	0.00	1,000,000.00	0.00	1,000,000.00	11,250.00	1,011,250.00		
2nd Quarter 92/93	1,011,250.00	0.00	0.00	1,011,250.00	11,376.56	1,022,626.56		
3rd Quarter 92/93	1,022,626.56	0.00	0.00	1,022,626.56	11,504.55	1,034,131.11		
4th Quarter 92/93	1,034,131.11	0.00	28,672.25	1,005,458.86	11,312.41	1,016,771.27	45,443.52	4.500%
1st Quarter 93/94	1,016,771.27	0.00	90,725.14	926,046.13	9,553.17	935,599.30		
2nd Quarter 93/94	935,599.30	0.00	77,218.60	858,380.70	8,855.20	867,235.90		
3rd Quarter 93/94	867,235.90	0.00	36,232.13	831,003.77	8,572.80	839,576.57		
4th Quarter 93/94	839,576.57	0.00	44,802.47	794,774.10	8,199.09	802,973.19	35,180.26	4.126%
1st Quarter 94/95	802,973.19			802,973.19	9,631.66	812,604.86	9,631.66	4.798%
2nd Quarter 94/95	812,604.86		603,663.45	208,941.41	2,758.03	211,699.44	2,758.03	5.280%
3rd Quarter 94/95	211,699.44		401,852.69	(190,153.25)	0.00	(190,153.25)		
4th Quarter 94/95	(190,153.25)		117,007.28	(307,160.53)	0.00	(307,160.53)	12,389.69	
LTD Totals	0.00	1,000,000.00	1,400,174.01		93,013.48	(307,160.53)		
DOA (94/95) Redevelopment/Land Proceeds		307,160.53				307,160.53		
Project Total	0.00	1,307,160.53	1,400,174.01		93,013.48	0.00		
Outstanding Encumbrances			145.89					
Unencumbered balance			0.00					

- 1- Revenue received on Sept. 30, 1992.
- 2- Expenditures are recorded in 220-030-3053-XXXX = 1,400,174.01
- 3- DOA Grant 94/95 has not yet been received @ 11/30/95

Report Run: F130 - 11/28/95