

DRAFT REPORT

Drainage Impact Fee Report

Prepared for:

City of Lafayette

December 2008

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I. Introduction

This report presents the facts and reasoning supporting the 2008 update to the City of Lafayette's Drainage Impact Fee (Drainage Fee). The Drainage Fee will allow the City to provide drainage facilities and infrastructure to meet the demand generated by new residential development.

The report builds upon the City's existing Drainage Fee, established in 1985. This report presents updates to the existing Drainage Fee, including the establishment of a new nexus for the Drainage Fee. The updated Drainage Fee, a development impact fee, will support the provision of needed drainage for the City's public drainage system. The updated fee would be adopted under the authority allowed by AB 1600, the "Mitigation Fee Act."

A. Report Organization

This report presents the background supporting the update to the City's Drainage Fee. It also summarizes the purpose of the fee, describes the methodology for how the fee is calculated, presents the proposed fee amounts, and discusses how the fee will be updated in the future. Following the introductory chapter of this report, the remaining chapters and appendices of this report are organized as follows:

- Chapter II discusses the proposed update to the Drainage Fee, including background information, the determination of the relationship (or nexus) between new development and the need for providing drainage and the calculation of the fee
- Chapter III provides an explanation of the administrative costs included in the Drainage Fee.
- Chapter IV summarizes the total Drainage Fee, including the administrative costs.
- Chapter V discusses the methodology for annual updates to the Drainage Fee.
- Appendix A details the current drainage projects included in the Drainage Fee program.
- Appendix B provides the indices used for the annual update of the Drainage Fee.

B. Overview of Legislative Requirements

Lafayette is considering an update to the Drainage Fee, a development impact fee, which the city may charge under the authority of the Government Code and pursuant to its police power. Sections 66000 et seq. of the Government Code establishes procedures for development impact Fee. This legislation (enacted as AB 1600) requires a local agency that establishes, increases, or imposes a development impact fee as a condition of development after January 1, 1989 to do the following:

1. Identify the purpose of each impact fee;
2. Describe the use or improvements for which the fee will be used; and

3. Demonstrate a reasonable relationship (or nexus) between:
 - The need for the public improvements and the type of new development which will benefit from them, and
 - The amount of the fee, which reflects the proportional cost of the public improvement and facility attributable to the new development on which the fee is imposed.

C. Caveats

The data and analysis presented in this report has been gathered from the most reliable sources available to the City and Seifel Consulting Inc. (Seifel). This information has been assembled for the sole purpose of establishing a reasonable estimate of the Drainage Fee. Some of the numbers presented in tables within this report may not exactly calculate due to rounding.

II. Update of the Drainage Fee

A. Background and Purpose of the Drainage Fee

Lafayette's Drainage Fee was established in 1985 for the purpose of funding a Drainage Master Plan, a citywide drainage study that would identify the drainage facilities needed to support existing and future new development in Lafayette. Currently, the Drainage Fee is charged to new development at a rate of \$0.10/SF for any increase in the total impervious surface area attributable to new residential and commercial development, including expansions to existing development.¹

The Drainage Master Plan, completed in 1998, identified and documented a list of proposed projects and their estimated costs needed to support existing and future development in Lafayette. Subsequent analyses by City staff have refined the list of proposed storm drainage projects and costs. The most current list, the Master CIP Storm Drain Priority Report (Storm Drain Priority Report), was updated in April 2007.

The purpose of updating the Lafayette's Drainage Fee is twofold. Firstly, the City intends to continue its efforts to update the Drainage Master Plan in order to better support the storm drainage needs of existing and new development. Secondly, based on the improvements identified in the Storm Drain Priority Report, the updated Drainage Fee would establish a new nexus between the construction and provision of new drainage facilities and expansions to existing facilities to allow for more intense usage of the Lafayette's citywide drainage system by future residents and employees.

The updated Drainage Fee would more accurately reflect the cost to the City to provide drainage facilities to the City, and help ensure that the City maintain a comprehensive system of drainage infrastructure and facilities to meet the additional demand created by new development. The fee will also ensure that existing drainage infrastructure will not become overburdened, and future development will bear its fair-share responsibility for the drainage system.

B. Relationship between the Drainage Fee, Land Use Data and Drainage Master Plan

Lafayette's Drainage Master Plan, and associated Storm Drain Priority Report, documents the relationship, or nexus, between new development and the provision of new drainage facilities. The rationale for the nexus is that increases in impervious surface to land area attributable to new development in Lafayette create a corresponding increase in the demand for drainage facilities.

¹ New development is defined in Section 8-1702 of Lafayette's Municipal Code as the "construction of or an addition to a residential or commercial structure or facility, including a driveway, parking area, sports court or swimming pool, or any other construction, which may affect the area of impervious surface of the land."

Drainage infrastructure needed for storm drainage is a function of land area and the permeability of land. When stormwater falls to the ground, permeable surfaces have the capacity to absorb water while impervious surfaces do not allow water to infiltrate into the ground, creating greater amounts of runoff than permeable surfaces. The larger the impervious surface created, the greater the need for improvements to the drainage system to manage runoff.

Future development of impervious surface diminishes the capacity of the existing drainage system to serve existing users, unless the capacity of the drainage system is expanded. Therefore, the capacity of the system needs to be increased to maintain the level of service provided to existing development and to meet the demand created by new development. The capacity of the system can be expanded by the installation of new and/or the intensification of existing drainage facilities and infrastructure so that they can accommodate the impact borne by additional impervious surface created by new or intensified development.

Calculation of an updated Drainage Fee, which fairly allocates the fee between existing and new development, relies on land use data, identified drainage improvements and the costs to provide the identified drainage improvements.

1. Drainage Fee and Land Use Data

Land use data is essential to computing the updated Drainage Fee. As Section E describes in more detail, the total cost of the drainage impact fee program is allocated to existing and new development based on the typical amount of impervious surface area generated by each land use. Land use data from the City's General Plan provide information about the amount of developable land in the City, defined as the total land area that has been developed or will be developed in the future.

Furthermore, due to development standards, land use categories generally exhibit a typical proportion or ratio of impervious surface area to lot area, based on the particular land use. For example, residential land uses typically have a small ratio of impervious surface area to lot area, given setback and building footprint requirements. Commercial land uses, on the other hand, typically include parking and smaller setbacks that result in a larger ratio of impervious surface area to lot area. Understanding the relationship between the typical impervious surface coverage by land use and the total developable land area within the City is essential to calculating the updated Drainage Fee.

2. Drainage Fee and Storm Drain Infrastructure and Cost Data

The listed improvements and costs identified in the Storm Drain Priority Report are also required to fairly allocate the proposed Drainage Fee. As the Drainage Master Plan describes, the facilities identified in the Storm Drain Priority Report are intended to serve existing and future development. The identified drainage improvements and cost of the improvements from the Storm Drain Priority Report, combined with land use data, therefore, provide the foundation for the computation of the updated Drainage Fee.

C. Type of Development on Which Fee Are Imposed

Any new residential or commercial development that adds impervious surface would be charged the proposed updated Drainage Fee. Intensification of parcels that have already been developed would be charged based on the net new impervious surface area that is added.

The following section describes the calculation of the proposed updated Drainage Fee.

D. Calculation of Drainage Fee

The formula for calculating the Proposed Drainage Fee is as follows:

$$\text{Drainage Fee} = \frac{\text{Total square feet of developable land by land use} \times \text{Percent impervious surface by land use (Impervious Surface Ratio)}}{\text{Total Drainage Impact Fee Program Costs}}$$

The above formula allocates the total drainage impact fee program costs across all development, including existing development and new development that would occur through the City's buildout, anticipated to occur in 2030. This formula fairly allocates the proposed Drainage Fee between existing and future new development.

Total Square Feet of Developable Land	Total square feet of developable residential and commercial land
Impervious Surface Ratio	The typical percentage or ratio of impervious surface to total lot size by land use
Total Drainage Fee Program Cost	Cost for drainage infrastructure and facilities, as defined by the Storm Drain Priority Report and projected future drainage infrastructure costs

Each of these factors is discussed below.

1. Total Square Feet of Developable Land

The City's General Plan presents the total developable land in Lafayette by land use categories. The total developable land includes areas already developed as well as areas that will be developed and redeveloped in the future. Table II-1 summarizes the developable land by land use categories.

**Table II-1
Summary of Developable Land by Land Use**

Land Use Designation	Total Developable Land		Percent of Total
	(Acres)	(SF)	
Residential			
Rural Residential	1,629.2	70,967,952	21.2%
Low Density Single Family Residential	3,630.1	158,127,156	47.3%
Medium Density Single Family Residential	2,057.0	89,602,920	26.8%
Low Density Multifamily Residential	53.7	2,339,172	0.7%
High Density Multifamily Residential	58.7	2,556,972	0.8%
Subtotal Residential	7,428.7	323,594,172	96.8%
Commercial			
West End Commercial	38.8	1,690,128	0.5%
East End Commercial	82.3	3,584,988	1.1%
Downtown Core	79.3	3,454,308	1.0%
Subtotal Commercial	200.4	8,729,424	2.6%
Mixed Use			
Multifamily Residential/Office	43.4	1,890,504	0.6%
Subtotal Mixed Use	43.4	1,890,504	0.6%
Total	7,672.5	334,214,100	100.0%

Source: Contra Costa County Building Inspection Department, City of Lafayette General Plan, Seifel Consulting Inc.

The City's developable land represents the total area that would generate impervious surfaces and impact the City's drainage system.

2. Impervious Surface Ratio by Land Use

As discussed above, a fee based on new impervious surface area added provides a clear nexus between the proposed Drainage Fee and new development's impact on drainage infrastructure. The ratio of impervious surface area to lot area created by development is expected to vary across land uses, based on lot size, building setback, parking, and other zoning requirements. Understanding the typical amount of impervious surface generated by residential and commercial land use categories is needed in order to fairly allocate the cost of identified drainage improvements among land uses.

Table II-2 summarizes the ratio of impervious surface area to lot area by land use types, based on building permit records from 2005 through 2007 and recent development plans.

**Table II-2
Summary of Percent Impervious Surface from Building Permit and Development Plans^a**

	Number of Lots	Total Lot Area Reported	Total Impervious Surface Reported	Typical Lot Area	Typical Impervious Surface/ Unit ^a	Percent Impervious Surface of Typical Lot
Residential						
Single Family						
Rural Density	3	1,694,200	13,684	564,733	4,561	1%
Low Density	16	1,892,206	72,465	118,263	4,529	4%
Medium Density	56	1,318,451	186,124	23,544	3,324	14%
Multifamily						
Low Density ^b	27	120,797	70,388	4,474	2,607	58%
High Density ^c	74	129,586	81,801	1,751	1,105	63%
Commercial^d		70,123	63,044			90%
Mixed Use^e		25,700	23,114			90%

a. Based on building permit information from Contra Costa County for new single family residential units, second units and residential additions from 2005 through 2007, as well as building permit records/development plans for recently completed or proposed multifamily and commercial developments from 2002 to present.

b. Includes Lafayette Park Terrace, Meritage Oaks and 3607 Bickerstaff.

c. Includes Chestnut Street and Woodbury multifamily residential developments.

d. Includes the Plaza Point Building and Lafayette Mercantile and excludes Sinai Memorial Chapel.

e. Includes the Lafayette Mixed Use Project.

Source: Contra Costa County Building Inspection Department, City of Lafayette, Seifel Consulting Inc.

As shown in Table II-2, within residential land uses categories, lower density residential uses are less impervious than higher density residential uses. This is primarily due to the typical parcel size of residential lots. Compared with residential land uses, commercial and mixed uses, typically found in the City's downtown, exhibit a higher percentage of impervious surface.

a. Adjustments to Impervious Surface Development

In 1999, the California Regional Water Quality Control Board for the San Francisco Bay Region reissued waster discharge requirements under the National Pollutant Discharge Elimination System (NPDES). The new requirements require additional onsite treatment controls to limit stormwater pollutant discharges associated with certain new development and intensification of existing development in order to comply and implement the region's Stormwater Management Plan.

City staff estimate that the effect of this regulation would result in a ten percent reduction in the ratio of impervious surface area to lot area for all land uses. The adjusted ratio of impervious surface to lot area is shown in Table II-3.

**Table II-3
Adjusted Ratio of Impervious Surface Area to Lot Area**

	Percent Impervious Surface of Typical Lot ^a	Adjusted % Impervious Surface of Typical Lot ^b
Residential		
Single Family		
Rural Density	1%	1%
Low Density	4%	4%
Medium Density	14%	13%
Multifamily		
Low Density	58%	52%
High Density	63%	57%
Commercial	90%	81%
Mixed Use	90%	81%

a. See Table II-2.

b. Includes a 10 percent adjustment on the ratio of impervious surface area to lot area to account for revised standards for water discharge from the California Regional Water Quality Control Board. Rounded to the nearest percent.

Source: Contra Costa County Building Inspection Department, City of Lafayette, Seifel Consulting Inc.

Applying the adjusted ratio of impervious surface area to lot area to the total development land yields the total square feet of impervious surface by land use categories expected at the City's buildout, projected to occur in 2030. Table II-4 summarizes the total impervious surface expected to be developed through 2030, by residential and commercial land use categories.

**Table II-4
Summary of Percent Impervious Surface by Land Use through 2030**

Land Use Designation	Total Developable Land		% Impervious Surface of Typical Lot ^a	SF of Impervious Surface
	(Acres)	(SF)		
Residential				
Rural Residential	1,629.2	70,967,952	1%	638,712
Low Density Single Family Residential	3,630.1	158,127,156	4%	5,692,578
Medium Density Single Family Residential	2,057.0	89,602,920	13%	11,289,968
Low Density Multifamily Residential	53.7	2,339,172	52%	1,221,048
High Density Multifamily Residential	58.7	2,556,972	57%	1,449,803
Subtotal Residential	7,428.7	323,594,172		20,292,108
Commercial				
West End Commercial	38.8	1,690,128	81%	1,369,004
East End Commercial	82.3	3,584,988	81%	2,903,840
Downtown Core	79.3	3,454,308	81%	2,797,989
Subtotal Commercial	200.4	8,729,424		7,070,833
Mixed Use				
Multifamily Residential/Office	43.4	1,890,504	81%	1,531,308
Subtotal Mixed Use	43.4	1,890,504		1,531,308
Total	7,672.5	334,214,100		28,894,250

a. See Table II-3.

Source: Contra Costa County Building Inspection Department, City of Lafayette General Plan, Seifel Consulting Inc.

b. Data Considerations for Impervious Surface Ratio

Due to little recent development activity, only a few data points were available to calculate the percent impervious surface for some land uses. For instance, rural density and low density multifamily residential developments are calculated based on recent development of three parcels each. Commercial development and high density multifamily development is based on two developments each, and mixed used development is based solely on the Lafayette Mixed Use project, containing a self storage, retail and residential component.

While the availability of data is limited by development activity, City staff is confident that these data points represent the type of development and intensity of impervious surface area generated that the City will see in the future, and therefore the data used to determine the percentage of impervious surface area by land use is an adequate basis for the fee calculation for the proposed updated Drainage Fee.

3. Drainage Fee Program Costs

The Drainage Fee Program includes the total cost of infrastructure facilities that the City anticipates would be needed to meet the needs of existing and future users. It includes the cost for drainage facilities and infrastructure as identified in the City’s most current Storm Drain Priority Report and estimated future costs not yet contemplated by the Storm Drain Priority Report, including additional infrastructure and annual inspections. The Drainage Fee Program costs are summarized in Table II-5.

**Table II-5
Costs for Drainage Fee Program**

	Estimated Costs (in FY 06/07 Dollars)	Estimated Cost (in FY 08/09 Dollars)^a
Drainage Infrastructure and Facilities ^b	\$ 11,937,000	\$ 12,688,565
Future Drainage Infrastructure and Facilities ^c	\$ 2,240,000	\$ 2,381,033
Total	\$ 14,177,000	\$ 15,069,598

a. Escalated by 3.1 percent annually from FY 2006/07 dollars, based on the average annual growth rate from 1997 through 2007 calculated from the Engineering News-Record's Construction Cost Index (CCI) for the San Francisco Bay Area. See Appendix B-1.

b. Detailed in the April 2007 Storm Drain Priority Report in Appendix A.

c. Estimated at ten percent of \$18 million road reconstruction projects, plus \$440,000 for 22 annual video inspections from 2008 to buildout, in 2030.

Source: City of Lafayette, Seifel Consulting Inc.

E. Proposed FY 2008/09 Drainage Fee

As the Drainage Fee calculation methodology in Section II.D demonstrates, the proposed updated Drainage Fee is calculated based on the total cost of drainage facilities needed through 2030 divided by the total estimated development of impervious surface through 2030. This methodology allocates the cost of the City's drainage system fairly among existing and future development. Furthermore, the proposed Drainage Fee will be assessed only on net new impervious surface added, ensuring that the costs to be borne by future new development are fairly distributed.

Table II-6 shows the proposed FY 2008/09 Drainage Fee. The proposed fee would be levied on all new residential and commercial development.

**Table II-6
Proposed FY 2008/09 Drainage Fee
City of Lafayette**

Total Drainage Program Costs	\$ 15,069,598
Total Impervious Surface at Buildout (SF)	28,894,250
Drainage Fee/SF of Impervious Surface	\$ 0.52

Source: City of Lafayette, Seifel Consulting Inc.

III. Administrative Costs for the Drainage Fee Program

The administration of the Drainage Fee program will require a variety of activities that will involve additional costs to the program that must be accounted for in the total Fee. The type and amount of these costs are described below.

A. Types of Development Impact Fee Administrative Activity

Three types of administrative activity and costs are associated with the Drainage Fee Program.

- Project Specific
- General Administration
- Comprehensive Updates

Project Specific

Project specific activities relate to a development project in the city planning or building permit review process for which the applicant has requested an adjustment to their impact fee assessment. This request for fee adjustment can either be an informal or formal process for which the applicant pays all associated costs. This review process is cost recoverable and is not included in any Drainage Fee administrative cost calculations.

General Administration

Ongoing efforts necessary to administer the Drainage Fee program are considered relevant staff activities under the general administration category. These work efforts include annual reviews and adjustments, staff training, legislative reporting requirements, financial or program monitoring and analysis, and response to requests for and maintenance of information.

Comprehensive Updates

The comprehensive updates of the fee program are periodic reviews, which involve in-depth analysis necessary to fairly balance the burden of costs attributable to new and existing development. This detailed analysis and subsequent establishment of fee levels maintains equity in the Drainage Fee program. Activities related to the comprehensive updates include reviews of the methodology used to calculate the Drainage Fee, updates of project costs, amendments to the program, forecasts for land use and financial data, and reviews of space requirements.

B. Administrative Costs

Lafayette's administrative costs for the Drainage Fee program are estimated at approximately five percent of the base Drainage Fee. This amount will be assessed in addition to the base Drainage fee, to cover costs of administration. For a typical single family detached dwelling unit with 4,500 SF of new impervious surface added, the administrative cost portion of the Drainage Fee would be approximately \$117, comparable to the administrative cost the City collects on other development fees. As the actual cost of administration is determined through assessment of the program, this administrative assessment may be adjusted to better reflect the real cost of administration, should it differ significantly from the five percent estimate.

IV. Summary of Drainage Fee

Table IV-1 shows the total Drainage Fee, including the Drainage Fee and Administrative Costs for the Drainage Fee Program. The calculation of the total Drainage Fee adds five percent of the base fee to cover administrative costs of the fee program. The five percent administrative cost assessment is based on the City's estimated cost of administering the City's existing Fee. As the Drainage Fee is updated and assessed over time, this administrative assessment may be adjusted to reflect costs of administration of the fee program, should they differ from the one percent estimate. Components of the program administration cost are described in more detail in Appendix A. This fee is the final proposed Drainage Fee to be assessed on new development.

Table IV-1
Total Proposed FY 2008/2009 Drainage Fee
City of Lafayette

Drainage Fee/SF of Impervious Surface	\$ 0.52
Program Administration ^a	\$ 0.03
Total Drainage Fee/SF of Impervious Surface	\$ 0.55

a. Program administration estimated at five percent of Drainage Fee per new square foot of impervious surface added.

Source: City of Lafayette, Seifel Consulting Inc.

V. Methodology for Annual Updates to Drainage Fee

The Drainage Fee should be updated annually in order to keep pace with inflation of construction costs in the San Francisco Bay Area. To this end, the Drainage Fee would be indexed to changes in the prior year's Construction Cost Index (CCI), published for the Bay Area by Engineering News-Record. For example, the 2010 update to the Drainage Fee will increase the fee by the percent increase in the CCI between December 2008 and December 2009. As Appendix Table A-2 demonstrates, the average annual increase in the CCI over the past 10 years was 3.1 percent.

Appendix A:
Drainage Projects in the Drainage Fee Program

Master CIP Storm Drain Priority Report

Priority A-1

Scheduled/Completed	Project Name	Description Of Project	Need For Project	Comments	Number	Cost Est.
	Springhill Rd Drainage Improvements, Brown Ave. to Blackhawk Rd	Replace open ditch with closed pipe	Covering ditch will provide better shoulder support and pavement deterioration of pavement	Pipes: RP8ii, RP8jj3, RP8jj2, RP8ll, RP8mm, RP8nn	96-145	\$160,000
<i>Summary for Priority A-1 (1 project)</i>						
Sum						\$160,000
Percent						0.49%

Priority A-2

Scheduled/Completed	Project Name	Description Of Project	Need For Project	Comments	Number	Cost Est.
2002	Carlyle Terr. Drainage Improvements	Stabilize storm drain outfalls	Street runoff may be causing erosion and slope instability on private property.	Pipe #'s: TP27a1, TP27a2. TV'd, ok in 2005.	96-156	
2008	Estates Dr	Selective slope stabilization, shoulder widening, guardrails, and culvert replacement	Existing pavement is deteriorated; unstable shoulders cause pavement to deteriorate and may lead to unsafe driving conditions; edge of road needs better delineation	Pipe #'s: LP20y, LP20a, LP20b, LP20c, LP20d, LP20e, LP20f, LP20g	96- 33	\$500,000
	Miller Dr. Storm Drain	Replace 15" CMP pipes totalling 300 ft. in length with larger facility.	15" CMP pipes are under capacity and beginning to rust through.	Pipe #'s: TP46b, TP46c. Pipes ok 5/02.	98-104	\$60,000
<i>Summary for Priority A-2 (3 projects)</i>						
Sum						\$560,000
Percent						1.72%

Priority B-1

Scheduled/Completed	Project Name	Description Of Project	Need For Project	Comments	Number	Cost Est.
	Pleasant Hill Rd. 126" CMP Replacement	Additional Creek backwater analysis needed to determine replacement or lining of existing 500-ft. long 126" CMP.	Appears under capacity.	Pipe #'s: RC14L1, RC14L2, RC14M, RC14O1, RC14O2	98-101	\$600,000

Priority B-1

Scheduled/Completed	Project Name	Description Of Project	Need For Project	Comments	Number	Cost Est.
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Summary for Priority B-1 (1 project)

Sum

\$600,000

Percent

1.84%

Priority B-2

Scheduled/Completed	Project Name	Description Of Project	Need For Project	Comments	Number	Cost Est.
	Chestnut St/Walnut St Drainage	Install 500' of storm drain in each street, connect to the storm drain in Dewing Ave (Project 96-20)	Neighborhood lacks drainage facilities, causing flooding of private property and deterioration of pavement shoulder	Pipe #'s: LP42d, LP42h, LP42i, LP42g, LP42m2, LP4211	96-247	\$250,000
	Hastings Ct. Slide Repair	Reconstruct slope and/or install retaining wall	Unstable slope is causing street pavement to deteriorate, may impact private property below street		96- 44	\$100,000
	Lafayette Creek Stabilization, Village Center to 500' East	Spot creek bank stabilization	Bank erosion threatens adjoining private property and walkway along Mt. Diablo Blvd.	Culverts: LP35j2, LC35, LP35v, LP35u and d/s creek banks	96- 54	\$135,000
	Las Trampas Rd Storm Drain	Install storm drain from Relliez Station Rd to connect within existing culvert which discharges onto hillside below road	Runoff from road may be contributing to instability of hillside	Pipe #'s TP57n1, TP57w	96- 57	\$110,000
	Legion Ct Storm Drain	Install new 15" RCP in Legion connecting to Acalanes Rd; abandon 12" CMP at west end of street, extend new pipe south to Hidden Valley Rd	Existing 12" CMP is deteriorated due to age	Pipe #: LP10l, LP10k; ok 2005.	96-243	\$90,000
	Lindsey Ct. Storm Drain Replacement	Replacement of existing 150-ft. long 18" CMP	Flow line has lots of rust.	Pipe #: RP34a. Pipe ok in 02. Good liner project.	98-102	\$30,000
	Los Palos Dr Storm Drain, Glenside Dr (North) to Los Palos Cir.	Install storm drain to intercept existing 24" RCP which discharges onto creek across private property	Creek is unimproved and may be inadequate to handle flows from public street	Private ditch, no easements	96- 62	\$200,000
	Moraga Rd Drainage Improvements, Powell Dr to Via Granada	Install storm drain to intercept flows from culverts which discharge onto private property	Existing flows create flooding with unstable slope on private property below road	Pipe #'s: TP31b1, TP31b2, TP31k, TP31l, TP31m, TP31n, TP34a, TP32a2, TP32a1, TP32b	96- 83	\$150,000
	Moraga Rd Drainage Improvements, Tanglewood Dr to Powell Dr	Install storm drain to intercept flows from culverts discharging onto private property	Discharge from culverts creates flooding on private property	Pipe #'s: TP 37a (18" CMP), TP37b (24" CMP), TP39a (27" x 18" CMP)	96- 88	\$275,000

Priority B-2

Scheduled/Completed	Project Name	Description Of Project	Need For Project	Comments	Number	Cost Est.
	Mountain View Dr, Lafayette Creek Culvert Replacement	Replace existing 96" CMP with reinforced concrete box. Culvert ID# LC39	Existing CMP is undersized, causing flows to back-up and flow over road; pipe is also beginning to corrode	Need to be done in conjunction with downstream creek improvements. Condition ok 5/02.	96- 91	\$130,000
	Old Jonas Hill Rd Drainage Improvements	Install pipe, stabilize creek as needed	Existing culverts and ditch are hydraulically inadequate	Pipe #s: TP31i, TP31j, TP30a, TP34e, TP34f, TP34g, TP31p, TP31q, TP31d, TP31e, TP31f, TP3g	96-110	\$220,000
	Reliez Valley Rd culvert crossing	Replace 230-ft. long 40" CMP storm drain after considering impact on D/S County facilities. Coordinate with County.	Existing 40" CMP is under capacity and flooding has occurred in this vicinity in past.	Pipe #: RPU2a	98-107	\$92,000
	Silverado Dr. Storm Drain Replacement	Study backwater on existing 100 ft. long 90" CMP--need Creek modeling. Replace or line as warranted.	Under capacity.	SDM# GC15; ok 2002.	98-100	\$160,000
	Silverwood Dr Storm Drain	Extend storm drain from existing 36" RCP at #50 upstream to existing 12" CMP at #87	Existing drainage system discharges onto private property, with potential for flooding and/or bank instability	Pipes: LP11b, LP11a, LP11d, LP11c, LP11f, LP11g, LP11h, LP11i, (Abandoning LP11k1 & LP11k2)	96-244	\$90,000

Summary for Priority B-2 (14 projects)

Sum \$2,032,000
Percent 6.25%

Priority C-1

Scheduled/Completed	Project Name	Description Of Project	Need For Project	Comments	Number	Cost Est.
	Happy Valley Rd, Rose Ln to Palo Alto Dr	Extend storm drain westerly from Rose Ln to fill in open ditch; replace existing CMP culvert east of Franklin Ln	Existing open ditch is causing deterioration of pavement edge; existing culvert at Franklin Ln will ultimately require replacement due to age	Pipes: HP13a, HP13b, HP13d, HP13e, HP13f1; ok 6/98	96-224	\$50,000
	Reliez Creek Stabilization @ Stanley Blvd.	Replace existing 72" CMP culvert with reinforced concrete box	Existing pipe is beginning to corrode. Pipe lined in 2003.	Pipe: RC16q	96-130	\$100,000

Summary for Priority C-1 (2 projects)

Sum \$150,000
Percent 0.46%

Priority C-2

Scheduled/Completed	Project Name	Description Of Project	Need For Project	Comments	Number	Cost Est.
	Crest Dr Storm Drain	Extend 15"-18" RCP in Crest Dr 1200 ft. from Middle Rd to White Oak Dr	Existing driveway culverts are undersized; unimproved ditch is leading to collapse of pavement edge	Pipes #: LP4a, LP4f3 - all others are new	96-240	\$240,000
	Monroe Ave. Reconstruction, First St. to Moraga Blvd.	Reconstruct pavement, replace curb & gutter, improve drainage	Existing pavement is in poor condition, curb and gutter has deteriorated and no longer conveys flows		96-74	\$400,000

Summary for Priority C-2 (2 projects)

Sum \$640,000
Percent 1.97%

Priority D-1

Scheduled/Completed	Project Name	Description Of Project	Need For Project	Comments	Number	Cost Est.
	Blackwood Ln Storm Drain, Highway 24 to Mt Diablo Blvd	Replace existing 24" CMP with 42" RCP	Capacity ok, condition ok 10/98	Pipe #'s: TP45dd, TP45cc, TP45bb, TP45aa, TP45oo	96-257	\$150,000
	Happy Valley Highlands Drainage Study	Complete drainage study to determine best means of replacing existing CMP pipes and consolidate drainage courses on private property	Existing pipes will ultimately need replacement due to age; existing pipes discharge onto unimproved water courses on private property which may not be hydraulically adequate	Pipes: HP25a, HP25b, HP25c, HP25d, HP25e1, HP25e2, HP25f3, HP25f4, HP25f5	96-225	\$20,000
	Hidden Valley Culvert Replacement	Replace existing 72" CMP culvert with new 72" RCP, or line invert of pipe	Existing culvert will ultimately require replacement due to age	Pipe # LC5, already lined; good 5/02.	96-241	\$125,000
	Orchard Rd Storm Drain	Replace existing 12" CMP drain line from Orchard Rd along Ewarddale Ct and private property to Deer Hill Rd, ID#s: HP31e2, HP31e1. 24" RCP's plotted correctly for HP31f.g.h	Existing 12" CMP may be undersized and deteriorated due to age	No capacity problems, pipes ok 10/96	96-228	\$125,000
	Palo Alto Drive Culvert Replacement	Replace existing twin 72" CMP culvert (ID# HC9) with reinforced concrete culverts or box	Existing culverts OK now but will need replacement when CMP's are no longer structurally sound.	No capacity problems, pipe ok 5/02	96-220	\$135,000
	Reliez Station Rd Storm Drain @ Pleasant Hill Rd	Replace existing 22"x123" CMPA with 15" RCP	Existing pipe is probably deteriorated due to age	Pipe: RP38b; ok 2005	96-232	\$75,000

Priority D-1

Scheduled/Completed	Project Name	Description Of Project	Need For Project	Comments	Number	Cost Est.
	School St Storm Drain Replacement	Replace existing CMP drainage system with RCP	Existing system may be deteriorated due to age	Pipe #s: TP28a, TP28b, TP28c, TP28d, TP28g, TP41i, TP41k, TP41n, TP41m, TP42a, TP42b, TP42c	96-251	\$175,000
2009	Woodview Dr/Sweet Dr/Walnut Ln. Drainage Improvements	Replace existing CMP culverts; abandon culverts or ditches on private property where possible	Existing CMP is corroding; redesign of system may allow consolidation or better alignment of lows on private property	Pipe #s: TP15c, TP15d, TP15e, TP15f, TP15b3, TP17a, TP17b, TP17c, TP17d, TP17e, TP17f, TP17g, TP17m, TP17k, TP17l, TP17m2, TP18b, TP18c, TP18d, TP18e, TP18g, TP18h, TP18i	96-169	\$275,000
<i>Summary for Priority D-1 (8 projects)</i>						
	Sum					\$1,080,000
	Percent					3.32%

Priority D-2

Scheduled/Completed	Project Name	Description Of Project	Need For Project	Comments	Number	Cost Est.
	Acalanes Rd Storm Drain at Pidgeon Ct	Install 200' of 60" RCP to connect 60" cipp upstream with 60" RCP downstream	Existing 60" cipp discharges into open ditch on private property which may be hydraulically inadequate or unstable	Pipes #: LP14f, LP15i	96-242	\$100,000
	Blackhawk Dr Culvert Repair	Replace or line culvert, stabilize entrance and exit, Pipe #RP6c	Creekbank at lower end of culvert requires stabilization to prevent impact to adjoining private property and road	ok as of 6/98	96- 06	\$70,000
	Hawthorn Dr/Beechwood Dr Storm Drain, Phase II	Install new pipe in Hawthorn Dr from Beechwood Dr to Diablo Dr	Existing drainage ditch and driveway culverts are hydraulically inadequate	Pipe #s: TP54i, TP54m, TP54i, TP54h, TP54o, TP54p2, TP54g, TP54c, TP54e, TP54f, TP54d, TP54b, TP54a	96-46	\$220,000
	Helen Ave. Headwall and Storm Drain Repair	Reconstruct headwall, replace existing CMP under street	Existing headwall is collapsing, ok condition 9/98	Pipe #s: TP9j, TP9o1, TP9o2, TP9o3, TP9m1, TP9m2, TP9n, TP9j, TP9k1	96- 48	\$60,000
	Knox Dr Storm Drain, Chapel Dr to Hidden Valley Rd	Install 2000' of storm drain in Chapel Dr from 500' west of Knox Dr, and in Knox Dr downstream to Hidden Valley Rd; abandon existing pipes on private property	Existing CMP is probably deteriorated due to age, CMP appears to be located under buildings on church property; pipe downstream of Chapel Dr may be located on unstable bill	Pipe #s: LP12a1, LP12a2, LP12b1, LP12b2, LP12c, LP12d, LP12e; ok 10/96	96-245	\$200,000
	La Caminita Storm Drain Phase II	Replace exiting 36" CMP with 54" RCP; Pipe # RP11c	Existing pipe is deteriorated and hydraulically inadequate		96- 52	\$165,000

Priority D-2

Scheduled/ Completed	Project Name	Description Of Project	Need For Project	Comments	Number	Cost Est.
	Manzana Pl Storm Drain Replacement	Replace existing 8" CMP and open concrete ditch with 15" RCP	Existing 8" CMP appears to be undersized and is possibly deteriorated due to age	Pipe #: RP32e, ok 6/98	96-256	\$40,000
	Martino Rd Drainage Improvements	Install pipe in intercept discharge from street onto private property	Existing system across private property is inadequate and has led to flooding of private property and erosion of channels	Pipe #: RP8c, RP8b, RP8d, RP8f, RP8e, RP8x, RP8y, crossing at Greenbank is rusted thru	96- 68	\$315,000
2008	Michael Ln.	Install storm drain to replace open ditch from Glenside Dr to Murray Ln	Existing ditch is hydraulically inadequate and plugged with debris during storms, causing flooding of adjoining property	Pipe #s: TP20d, TP20e, TP20f, TP20m, TP20n	96- 73	\$125,000
	Mountain View Dr Storm Drain, Mariposa to Upland	Install storm drain, intercept runoff from culverts which discharge onto private property	Runoff may lead to erosion and instability of private property, and enters CMP culvert	Pipe #s: LP41f, LP41e, LP41d, LP41c, LP41b; ok 8/98	96- 93	\$80,000
	Mt. Diablo Blvd Storm Drain, Dolores Dr to 200' West	Extend 200' of storm drain from Dolores Dr to 200' west and abandon 18" CMP across private property	Existing 18" CMP is probably deteriorated due to age.	Pipe #s: LP39a, LP39b; ok 6/98. Lined in 2002, now low priority.	96-246	\$25,000
	Nordstorm Ln Storm Drain, Glen Rd to Creek	Replace existing 36" CMP with 36" RCP, Pipe #: HP20e2	Existing pipe may be deteriorated due to age	Depending on condition, may have a low priority. No Capacity problems.	96-227	\$60,000
	North Peardale Dr Culvert Replacement	Replace existing 48" CMP with 48" RCP; stabilize and improve creek channel north to Camino Vallecito	Existing 48" CMP is deteriorated due to age; creek channel is subject to erosion (pipe ok 6-98)	Pipe connects #LP28a 48" CMP w/ #LP29a1 between W Vallecito and North Peardale. Replace #LP28a - 48" CMP	96-236	\$100,000
	O'Connor Dr Storm Drain	Install storm drain, improve shoulder drainage	Existing flat slope of street pavement shoulder drainage	Pipe #s: TP41a2, TP41a1, TP41b, TP41c	96-113	\$60,000
2009	Old Tunnel Rd Storm Drain, Manzana Pl. to Linda Vista Ln.	Install 24" RCP; divert flows from parallel ditch on private property	Existing ditch is eroding and possibly hydraulically inadequate	Pipe #s: RP33f, RP33h, RP33g, RP33i, RP33n	96-108	\$160,000
	Paulson Ct Slow Drain Replacement	Replace existing 12" CMP pipe with 15" RCP	Existing pipes are probably deteriorated due to age	Pipes#: LP17h, LP17i, LP17j	96-239	\$30,000
	Ridge Rd Stabilization	Stabilize slope above road	Erosion and sloughing on slope dumps debris on street below	Has not been a problem in recent years.	96-134	\$60,000
	Ridge Road culvert	Replace existing CMP	Aging pipe	Pipe # TP50e, unclear if easement over ditch exists	96-45	\$50,000

Priority D-2

Scheduled/Completed	Project Name	Description Of Project	Need For Project	Comments	Number	Cost Est.
	Rohrer Dr Box Culvert Replacement @ Grizzly Creek, Segment(s) #GC11	Replace existing 72" CMP & 38" steel w/2-60" RCPs, each 50 ft. long; construct headwalls & transitions	Pipe is undersized to handle peak flows	Lined 72" CMP to increase capacity in 2002.	96-138	\$90,000
	Solana Ct/Solana Dr Storm Drain	Install storm drain in Solana Dr from Hamlin Rd to Solana Ct, and in Solana Ct to intercept existing 15" CMP across private property	Existing 15" CMP is probably deteriorated due to age	Pipe #s: TP35q, TP35r, TP35sl; TP40u; good 10/96	96-253	\$160,000
	Valley View Estates Storm Drain Improvements	Install new storm drain in Laurel Dr; abandon existing CMP culverts which discharge onto private property	Existing CMP is beginning to corrode; existing ditches on private property do not have adequate capacity, pipes ok 7/98	Pipe #s: HP30f, HP30e, HP30d, HP30g, HP30h, HP30a1, HP30a2, HP30a3, HP30c1, HP30c2, HP30c3	96-163	\$330,000

Summary for Priority D-2 (21 projects)

Sum \$2,500,000
Percent 7.69%

Priority E-1

Scheduled/Completed	Project Name	Description Of Project	Need For Project	Comments	Number	Cost Est.
	Grizzly Creek, Stabilization, Silverado Dr to Bradbury Dr	Stabilization creekbanks to reduce scour and downcutting	Existing creek banks are unstable and subject to scour and downcutting, impacting improvements along the creekbank	City owns about 25% of this section	96-222	\$1,000,000
	Happy Valley Creek Stabilization, Deer Hill Rd to Palo Alto Dr	Stabilize creekbanks to reduce erosion and bank sloughing	Existing creekbanks are unstable due to erosion by creek, impacting improvements along the creekbank	Private creek	96-221	\$1,000,000
	Lafayette Creek Culvert Replacement, 350' Upstream of Moraga Rd	Replace 90" CMP culvert with reinforced concrete box	Existing culvert appears to be undersized and may be deteriorated due to age	Pipe #: LC43ggg, private property	96-248	\$80,000
	Old Jonas Hill Creek Improvements, School St to Rosedale Ave	Repair deteriorated retaining walls and stabilize creek bank	Existing banks may collapse due to erosion and deteriorated retaining walls	Creek between culverts #TC411, TC41i; private creek	96-255	\$250,000

Summary for Priority E-1 (4 projects)

Sum \$2,330,000
Percent 7.16%

Priority E-2

Scheduled/Completed	Project Name	Description Of Project	Need For Project	Comments	Number	Cost Est.
	Beechwood Drive driveway culvert upgrade	Replace existing undersized driveway culverts	Residents flood due to undersized culverts	No project. Council's policy is not to improve private driveway culverts at City's expense.	97- 06	\$130,000
	Dawkins Dr Storm Drain	Extend storm drain from Helen Ave to top (north) end of st. to intercept runoff from hillside which flows onto private property	Reduces flooding of private property	Pipe #s: TP13d, TP13e, hillside is private property	96- 17	\$65,000
	Dolores Dr Culvert Replacement	Replace existing 2'x3' box(ID#:HP27p1,HP27p6) culvert and 36"CMP along private property on east side of Dolores Dr with a 36" RCP	Existing culvert has flooded in past due to poor capacity, and may be structurally unsound	Private system	96-229	\$100,000
	Flow metering at U. Happy Valley Rd near Los Arabis	Install metering device at pipe inlet to mitigate downstream flooding.	One resident floods from private creek and requests improvement.	No project. Requested by one resident; downstream system is private; drainage study done concluding that City should not be responsible.	97- 05	\$25,000
	Los Arabis Dr Culvert Replacement	Replace existing 36" CMP with 66" RCP	Existing culvert appears to be undersized and may be deteriorated due to age	Pipe # LP31a (10"CMP), LP13b (12"CMP) and LP30e (36"CMP); private pipe	96-238	\$100,000
	Old Jonas Hill Creek Improvements at Las Trampas Creek (Monroe Ave)	Replace existing 60" CMP culvert just upstream of confluence with 84" RCP; extend improvements upstream as needed to repair deteriorated retaining walls	Existing culvert is partially deteriorated; banks may collapse due to deteriorated retaining walls	Pipe #s: TP42e1, TP42e2, TC42g, condition ok 11/97	96-254	\$200,000
	Rancho Rd Storm Drain	Replace 42" CP with 60" RCP, extend upstream to divert flows from under residence		Pipe #s: LC22a (42"CP - enlarge to 60"RCP) joining existing #LC22b; all private; not a City project	96-119	\$40,000

Summary for Priority E-2 (7 projects)

Sum \$660,000
Percent 2.03%

Priority S-1

Scheduled/Completed	Project Name	Description Of Project	Need For Project	Comments	Number	Cost Est.
	Happy Valley Creek Culvert under Mt. Diablo Blvd.	Replace total of 350 ft. of 72" CP and 6'x8' RCB with larger facility as shown by further backwater study.	72" CP and 6'x8' RCB appear to have deficient capacity.	Pipe #s: HC24e1, HC24e2	98-105	\$520,000

Priority S-1

Scheduled/ Completed	Project Name	Description Of Project	Need For Project	Comments	Number	Cost Est.
	Lafayette Creek Study	Study backwater and current capacity of Lafayette Creek to determine if First St., Moraga Rd., Church parking lot, Hough Ave., Dewing Ave., Mt. Diablo Blvd., Pine Lane and Hidden Valley Creek culverts need to be replaced and in what order.	Several culverts along Lafayette Creek were found to cause flooding according to FEMA study.	Study would provide a basis for revising FEMA maps if improvements are implemented. May include EIR for recommended projects. (Cost Estimate does not include preparation of EIR.)	98-108	\$20,000
	Replace and Reconstruct Downtown Storm Drains in Coordination with Street Reconstruction Projects	Replace corrugated metal pipe with reinforced concrete	Existing pipes are corroded	Project requires further study to better define actual and cost locations. Project is too broad and is duplicate with other projects already programmed by Drainage Master Plan.	96-120	
2008	Rohrer Dr, Camino Colorados, Cordova Way Drainage Improvements (St. Mary's Orchard Development)	Replace existing CMP drainage system; consolidate lines on private property if possible	Existing CMP lines are corroded; redesign of system may allow pipes or private property to be abandoned	Pipe #'s: TP4a, TP4b, TP4c, TP4d, TP4e, TP4f, TP4f2, TP3a, TP3b, TP3c, TP5p1	96-136	\$345,000
	Second St. RCB Replacement	Study backwater on existing 100-ft. long 7x14 RCB--Need Creek modeling. May be done in conjunction with project 98-108.	Appears under capacity.	ID# LC44b	98-103	\$340,000

Summary for Priority S-1 (5 projects)

Sum \$1,225,000
Percent 3.77%

Priority ZA-1

Scheduled/ Completed	Project Name	Description Of Project	Need For Project	Comments	Number	Cost Est.
1995	Brook St. Pavement/Drainage, Moraga Rd to Mt. View Drive	Install storm drain, overlay street	Pavement project, replace ditch w/ pipes	Complete	96- 09	\$262,000
1999	Las Trampas Creek Repair - St. Mary's Rd @ Wallabi Ct.	Stabilize creek bank	Further collapse of creekbank may impact St. Mary's Rd	To be done as part of 96-148	96- 58	\$70,000
1999	Moraga Blvd. Reconstruction, First St. to Third St.; First St. Reconstruction	Reconstruct pavement, replace curb and gutter, install storm drain	Existing pavement has deteriorated; existing creek and gutter had deteriorated, existing drainage system is undersized	Moraga Blvd. Complete; First St. is scheduled for 2000 CIP.	96- 78a	\$1,150,000

Priority ZA-1

Scheduled/Completed	Project Name	Description Of Project	Need For Project	Comments	Number	Cost Est.
1998	Mt. Diablo Blvd. 36" CMP Replacement @ Golden Gate Way	Replace 36" CMP with 36" RCP	Existing CMP is badly corroded (portions have collapsed in the past)	Pipe #s: TP45ee1, TP45ee2	96-102	\$54,000
2003	Mt. Diablo Blvd. Storm Drain Replacement, Dolores Dr to Happy Valley Rd, Phase II	Line existing 36" CMP, ID #s:HP27q2, HP27q3, Hp27q4, HP27q5, HP27q6	Existing CMP is beginning to corrode		Z	\$50,000
1997	Mt. Diablo Blvd. Storm Drain, 700' East of Risa Rd and Bicycle Lane	Replace existing 24" CMP with 42" RCP	Existing pipe is badly corroded and undersized, causing flooding of road and adjoining private property	Complete; Combined with Project 96-100 (Bicycle Lane)	96-103	
1997	Mt. Diablo Blvd./Moraga Rd Storm Drain Replacement	Replace 140' of existing 36" CMP with 36" RCP	Existing pipe is beginning to corrode; has 2-3 years of life per condition assessment	Constructed 6/97	96- 95	\$ 184,000
2003	Reliez Valley Rd, Silverdell Rd to Gloria Terr.	Install storm drains, widen shoulders, install walkway	Existing drainage system discharges onto private property; lack of pedestrian facilities inhibits pedestrian circulation	Part of LTIP Strategic Plan \$270k; Pipes: RPT1b, RPT2a, RPU1b, RPU1f, RPU2b, RPU2a	96-127	\$ 1,000,000
1998	St. Mary's Rd Slide Repair, Storm Drain Replacement @ Driftwood Dr	Stabilize bank, replace 30" CMP culvert	Existing creek bank is badly scoured by creek action and may lead to road collapse; existing 30" CMP is rusted out	Pipe #s: TP1d, TP2c1, TP2c2	96-147	\$ 136,300

Summary for Priority ZA-1 (9 projects)

Sum \$2,906,300
 Percent 8.94%

Priority ZA-2

Scheduled/Completed	Project Name	Description Of Project	Need For Project	Comments	Number	Cost Est.
2000-01	Glen Rd/North Thompson Rd/Oak Hill Rd/Orchard Rd	Repair pavement, overlay streets and replace storm drains.	Existing pavement is in poor condition and storm drains are rusted.	Pipe ID#s: HP22b, HP22c, HP22d, HP22e, HP22f, HP22h Done as part of 2001 PMP.	96- 35	\$ 1,800,000
1998	Los Palos Dr Storm Drain and Overlay, Los Palos Circle to Glenside Drive (South)	Overlay pavement, install storm drain in ditch	Deteriorated pavement needs repair existing ditch creates hazardous driving situation	Pipe #s: TP21ff, TP21cc, TP21dd, TP21ee, TP23a	96- 63	\$87,500

Priority ZA-2

Scheduled/Completed	Project Name	Description Of Project	Need For Project	Comments	Number	Cost Est.
2000	Mountain View Dr Improvements, Mt. Diablo Blvd. to Brook St.	Install storm drain, overlay street (includes remainder of Brook St.)	Pavement is in poor condition; existing open ditches prohibit pedestrian circulation and are leading to deterioration of shoulder pavement. Done in conjunction with Dewing Ave.	Pipe #s: LP43dd, LC39, LP39i, LP42b, LP42f	96- 92	\$890,000
1999-2000	Solana Dr/Acampo Dr/Hamlin Rd Pavement/Drainage/Walkway Improvements	Overlay pavement, install storm drain, construct path (Acampo Dr)	Deteriorated pavement needs resurfacing, existing culverts discharge runoff onto private property. Walkway on Acampo Dr will provide better access from neighborhood to Lafayette Elementary School and Stanley Middle School	Drainage system s/b installed prior to construct. of upstream line in Sweet Dr (Proj 96-155) Pipe #s: TP40u, TP40v, TP40zl	96-143	\$1,040,000
1999	St. Mary's Rd Drainage and Walkways, S. Lucille Ln. to Driftwood Dr	Install storm drain, Community Park entrance to Driftwood Dr; install walkway, S. Lucille Ln to Community Park entrance (east side) install walkway, Rohrer Dr to Driftwood Dr (east side)	Existing ditch and culverts are undersized and cause flooding of adjoining properties; existing culvert @ Camino Colorados is deteriorated and partially collapsed	Part of 96-148.	96-146	

Summary for Priority ZA-2 (5 projects)

Sum \$3,817,500
Percent 11.74%

Priority ZB-1

Scheduled/Completed	Project Name	Description Of Project	Need For Project	Comments	Number	Cost Est.
1997	Mt. Diablo Blvd/Dyer Drive Storm Drain	Install 36" RCP in Dyer Dr, connect to existing 48" RCP crossing Mt.Diablo Blvd	Existing ditch which conveys flows from 48" RCP is hydraulically inadequate		96- 27	\$158,000
1998	Reliez Valley Rd Drainage Improvement, La Caminita to Silverdell Rd	Install pipe and/or larger culverts	Existing culverts are undersized, which has caused flooding of private property in the past	Paved ditch to stabilize and increase capacity, part of 96-129	96-132	
1998	Rohrer Dr Drainage Improvements @ Contessa Ct & Overlay	Replace CMP culvert with reinforced concrete pipe, modify inlet to accommodate upstream flows, overlay pavement	Deteriorated pavement requires resurfacing; existing culvert has washed out; existing ditch upstream of culvert is subject to flooding due to poor hydraulics	Pipe #s: TP5a, TP5b, TP5c1, TP5c2, TP5d, TP5i	96-137	\$450,000

Priority ZB-1

Scheduled/Completed	Project Name	Description Of Project	Need For Project	Comments	Number	Cost Est.
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Summary for Priority ZB-1 (3 projects)

Sum \$608,000
Percent 1.87%

Priority ZB-2

Scheduled/Completed	Project Name	Description Of Project	Need For Project	Comments	Number	Cost Est.
2002	Arbor Way Outlet Pipe	Replace 12" CMP rusted outlet pipe with 270 ft. of 15" RCP.	Outlet pipe is rusted out. Lined in 2002.	ID# LP6bb	98-106	\$25,000
	Brookdale Ct. Storm Drain/Las Trampas Creek Outfall	Install new 42" RCP storm drain	New outfall is needed to replace existing undersized and deteriorated 24" CMP outfall	Lining done 2004. Pipe #'s: TP27i, TP27j, TP27k, TP27m1, TP27m2, TP27l. Inspected 5/02, ok.	96- 10	\$30,000
2002	Doreen Way Drainage	Install 15" RCP between cul-de-sac and Sweet Dr; abandon existing 8" RCP drain	Existing 8" RCP is hydraulically and structurally inadequate. To be done as part of Sweet Dr project.	Pipe # TP35a. Existing 8" was pipeburst to 12" in existing alignment.	96- 22	
1996	Dyer Drive Storm Drain	Replace existing 12" CMP across private property between Dyer Dr and Las Trampas Creek with 42" RCP	Existing pipe is undersized and deteriorated	Completed	96- 26	\$150,400
2005	Eastview Dr Storm Drain	Install storm drain	Existing ditch and berm directs street runoff onto private property	Pipe #'s: TP40g, TP40h, TP40i, TP40k	96- 28	\$71,000
2001	El Curtola Blvd. St. Drain, Phase I	Install by-pass storm drain in parallel street	Existing drainage system directs street runoff into structurally deficient system on private property	Phase I; Pipe #'s: RPAa, RPBc, RPBd (outside city limit) CCC drain	96- 32	\$80,000
2005	El Curtola Blvd. Storm Drain Repair, Phase II	Install parallel pipe in street	Existing system directs street runoff onto inadequate systems on private property	Pipes: RPAc, RPAa, RPBa	96- 30	\$261,000
1995	Grizzley Creek Stabilization (Connects Park East entrance)			Complete	96- 38	\$390,000
2001	Happy Valley Rd Storm Drain, Upper happy Valley Rd to Cricket Hill Rd	Install storm drain, abandon existing 12" CMP cross-culvert east of Cricket Hill Rd which discharges onto private property	Existing drainage system across private property is structurally unsound and hydraulically inadequate	Pipe #'s: HP4a, HP4b, HP4c, HP4cl. Done as part of bigger HVR project.	96-223	

Priority ZB-2

Scheduled/ Completed	Project Name	Description Of Project	Need For Project	Comments	Number	Cost Est.
2004	Hope Ln. Storm Drain Replacement; St. Mary's Rd to Brookdale Ct.	Replace existing 15-18" CMP with 21-22" RCP	Existing pipe is hydraulically inadequate. Pipe is already RCP. Project was redesigned to avoid replacing Hope Lane pipes.	Pipe #'s: TP27d, TP27g2, TP27h, TP27o	96- 50	\$208,000
2007	Leland Dr Extension Storm Drain - Las Trampas Creek to Carolyn Ct.	Install closed pipe and/or improve existing ditch; abandon existing 24" CMP	Existing 34" CMP has collapsed, plugging pipe and creating sinkholes on private property	Pipe #'s: RP40b, RP40a, RP39n, RP39m, RP39o, RP39j, RP39k Meek to creek completed by developer. North of Meek to Leland by CIP.	96- 60	\$270,000
2001	Monticello Rd Drainage Improvements	Redirect drainage from culvert at southend of street to new pipe in street. Culvert ID #'s: HP19c & HP19b	Existing culvert and ditch below street have inadequate capacity to handle peak flows, causing flooding of private property	Done as part of 2001 PMP	96- 75	
1995	Mosswood Dr/Webb Ln.			Duplicate of 96-166	96- 90	
2001	North Thompson Rd Storm Drain and Overlay	Install 36" storm drain, abandon existing 36" CMP across private property; stabilize existing outfall into Happy Valley Creek	Existing CMP is corroded and possibly located under garage; existing outfall is eroded and may cause bank collapse. Done as part of 2001 PMP.	no capacity problem. Pipe ID#'s: HP22g1, HP22g2, HP22g3	96-105	
2002	Ortega St./Perales St./Palomares St./Acalanes Ave. Drainage Improvements	Install new drainage system, abandon ditch across private property	Existing ditch is hydraulically inadequate. Ditch south of Ortega enclosed in pipe. North of Ortega, residents confirms no problems.	Pipes: RP26c, RP27c, RP27s, RP27d	96-112	\$440,000
1999	Rahara Drive Storm Drain	Install storm drain Los Arabis Dr to Natasha Dr in Rahara Dr; intercept flows onto private property	Existing street runoff is directed onto private property	Intercept runoff and direct down to existing ditch at Rahara/Natasha.	96-170	\$80,000
1998	Rancho Canada del Hambre Drainage Improvements	Modify entrance to 48" RCP storm drain at McGraw Ln to improve hydraulic performance; clear and regrade ditch upstream of entrance; acquire drainage easement over existing pipe	Poor inlet design of 48" storm drain causes debris to block flows and flood adjacent residences	Private Street--project done by residents. Pipe: RP12b	96-233	
1998	Reliez Valley Rd from Pleasant Hill Rd to Silverdell Rd	Repair and overlay pavement; install storm drain from Green Valley Dr to Fairholm Ct	Existing pavement is in poor condition; existing storm drain discharges into hydraulically inadequate ditch on private property	Complete	96-129	\$670,000
2002	Sibert Ct./Tanglewood Dr Drainage Improvements	Install storm drain in Sibert Ct and Tanglewood Dr, divert flows from ditch across private property	Sibert Ct residence experiences surface and subsurface water problems	Pipe #'s: TP39c, TP39d, TP40c1, TP40a, TP40b	96-141	\$204,000

Priority ZB-2

Scheduled/ Completed	Project Name	Description Of Project	Need For Project	Comments	Number	Cost Est.
1999	South Peardale Dr Storm Drain	Replace existing 12" CMP with 15" RCP and extend to creek	Existing 12" CMP is probably deteriorated due to age	No creek extension; private, no easement. Pipe # LP30c - replace this 12" CMP crossing only	96-237	\$20,000
2006	St. Mary's Rd Storm Drain, Hope Ln. to Las Huertas Rd	Install pipe; abandon existing 30" pipe across private property near Las Huertas Rd	Existing 30" pipe is in questionable condition; placing ditch enclosed pipe will provide better support of unstable shoulder	Requires construction of Hope Ln Storm Drain (Proj 96-50). Pipe #'s: TP24q, TP27e, TP27d	96-150	\$122,000
2002	Sweet Ct. Drainage	Replace 12" CMP between cul-de-sac and creek	Undersized culverts cause flooding of adjacent private property	Unable to obtain easement, need condemnation. Pipe #'s: TP19Aa, TP19Ab, TP19Ac, TP19Ad, TP19Ae	96-154	\$40,000
2002	Sweet Dr Slide/Storm Drain	Install storm drain, stabilize slides	Existing drainage system discharges onto private property; unstable subgrade is causing pavement to deteriorate	Construction of Solana Dr storm drain (Project 96-143) must be completed to provide downstream connection for storm drain. Pipe #'s: TP27b, TP27c, TP40q, TP40r, TP40s, TP40t1, TP40u	96-155	\$1,200,000
1997	Upper Happy Valley Rd (#1174)	Install by-pass pipe to eliminate flooding of private property	Existing 36" culvert discharges onto private property	Complete; Pipes: LP25b, LP25d, to LP26a2 to LP26e - new pipe connects existing pieces; part of 96-158	96-159	
1997	Upper Happy Valley Rd By-pass Storm Drain, Hilldale to N. Peardale	Install by-pass pipe and/or improve downstream channel		Complete; Duplicate with Project 96-159	96-160	
	Vallecito Ct. Drainage Improvements	Replace existing CMP in cul-de-sac, reconstruct pavement. Already done. HDPE in place.	Existing CMP culvert is deteriorated, pavement is in poor condition	Pipe #: LP27a - 12" CMP	96-162	\$30,000
1996	Valley View Dr Culvert Replacement	Replace failed culvert	Existing culvert is undersized and corroded	Complete	96-164	\$116,000
1995	Webb Ln./Mosswood Dr Storm Drain Replacement	Replace pipe	Divert water from private property; part of 96-153	Complete	96-166	
<i>Summary for Priority ZB-2 (28 projects)</i>						
	Sum					\$4,407,400
	Percent					13.55%

Priority ZC-1

Scheduled/Completed	Project Name	Description Of Project	Need For Project	Comments	Number	Cost Est.
2001	Acalanes Rd from Hidden Valley Rd to Coralee Lane	Overlay/Minor Drainage Repairs	Deteriorated pavement needs repair; old culverts may need replacement	Cost included in 96-01: Pipe #'s: LP8e,b,k,l,LP9b2, LP10j, LP12n, LP8d, pipes ok as of 7/98. Done as part of 96-01.	96- 02	
2001	Acalanes Rd Improvements, Coralee Ln. to City Limits	Reconstruct pavement, stabilize subgrade, install drainage improvements, install walkway	Deteriorated pavement needs repair; unstable subgrade is causing pavement to deteriorate creating unsafe driving conditions; poor drainage is leading to subgrade movement. Done as part of 96-01.	Pipe #'s: LP8d, LP8e, LP8f, LP8g, LP8h, LP8i, LP8j	96- 03	
2001	Acalanes Rd Pavement/Drainage	Overlay/Drainage (Valente Ct)/Intersection Mod. (Hidden Valley Rd/Acalanes Rd)	Deteriorated pavement needs repair; confusing intersection geometrics; Valente Ct done 1997.	Cost includes 96-02; First year of two year project; Pipe #'s LP14f, LP15il	96- 01	\$1,035,000
	Bradberry Dr Culvert	Line floatline of existing 72" corrugated metal culvert; ID# GC5	Lining will prevent deterioration of corrugated metal, prolonging life of the culvert	Pipe already lined. ok 7/98	96-226	
2000	Dewing Ave./Mt. Diablo Blvd. to Brook St. Drainage Improvements, Pavement Repair	Install new pipe system, repair pavement	Deteriorated pavement needs repair, existing drainage system is undersized, deteriorated and discontinuous. Done as part of Mt. View project.	Pipe #'s: HC27q1, HC27q2, LP42j, LP42m, LP42O2, LP42O1, ok 7/98	96- 20	
1997	El Nido Ranch Rd from Mt. Diablo Blvd. to Hwy. 24 Ramps	Repair pavement, stabilize subgrade, improve drainage, install walkway	Existing pavement is in poor condition; existing pedestrian facilities are not continuous	Part of UHV, 96-158	96- 29	
1998	Glenside Dr from St. Mary's Rd to Relief Station Rd	Reconstruct and overlay pavement, install parallel pipe to replace existing 48" CMP on private property between Glenside Dr and Las Trampas Creek	Existing pavement is deteriorated; existing drainage system may be structurally inadequate (part of pipe is located under a garage)	Completed in conjunction with 96-137.	96- 36	\$550,000
1997	Hidden Valley Rd/Pavement Diablo Cir. Reconstruction; Middle Rd/Crest Rd	Replace culverts, reconstruct pavement	Deteriorated pavement needs repair, existing drainage system has deteriorated due to age	Complete	96- 49	\$371,000
1998	Moraga Blvd. from Victoria Ave. to Carol Ln.	Reconstruct pavement; install storm drain from Hawthorn Dr to Victoria Ave if funding allows	Existing pavement is in poor condition; poor slope along shoulders causes runoff to pond in travel lanes	Pipe #'s: TP50g, TP50f, TP54y2; completed as part of 96-78.	96- 79	
1998	Moraga Blvd. Reconstruction, 3rd St. to Victoria Ave.	Reconstruct pavement, curb and gutter, install storm drain	Existing pavement has deteriorated; creek and gutter is in poor condition and no longer functions	Completed as part of 96-78.	96- 81	

Priority ZC-1

Scheduled/ Completed	Project Name	Description Of Project	Need For Project	Comments	Number	Cost Est.
1999	Springhill Rd	Repair and resurface pavement; stabilize creek bank opposite Springhill School; complete minor drainage repairs	Deteriorated pavement requires resurfacing; unstable creek bank near Springhill School could fail and create slide under road, blocking access to Springhill Valley	Bd Measure funding appears inadequate to complete west section of Ln; Pipe # RP14K	96-144	\$250,000
1999	St. Mary's Rd from Driftwood Dr/Shire Oaks to City Limits	Repair and resurface pavement; replace existing culverts as needed	Deteriorated pavement needs resurfacing	Included in project 96-148. Pipe #'s: TAP1b, TAP1c, TAP1g	96-152	
1999	St. Mary's Rd from Florence Dr to Rohrer Dr	Repair and resurface pavement; (1) replace existing 60" CMP culvert at Community Center and/or replace 48" CMP culvert north of (2) S. Lucille Ln and/or install pipe between Rohrer Dr and Community Park (pipe covered under Project 96-146)	Deteriorated pavement needs resurfacing; existing may be cross-culverts corroded; existing culverts and ditch south of Community Park entrance are undersized; culvert across Camino Colorados is corroded and partially collapsed	Existing culverts require additional inspection to determine condition. Pipe #'s: TP10e, TP10d, TP13f, TP13g, TP13h1, TP13h2, TP13h3, TP13i. Combined with #96-148	96-148	\$900,000
1995	Sundale Dr/Mosswood Dr/Storm Drain Replacement, Phase II	Replace storm drain	Pavement, storm drain on Mosswood	Complete	96-153	\$240,000
1997	Upper Happy Valley Rd	Repair and resurface pavement; install storm drain	Deteriorated pavement needs resurfacing; replacement of ditch w/ closed pipe will support shoulders	Complete	96-158	\$1,144,000

Summary for Priority ZC-1 (15 projects)

Sum \$4,490,000
Percent 13.81%

Priority ZC-2

Scheduled/ Completed	Project Name	Description Of Project	Need For Project	Comments	Number	Cost Est.
1996	Dolores Dr Improvements, Mt. Diablo Blvd. to Via Roble	Reconstruct pavement, install walkway, replace drainage system	Pavement is deteriorated; existing drainage system conveys street runoff to private property; lack of sidewalk inhibits safe and comfortable pedestrian circulation	Completed	96-21	\$110,000
2001	Happy Valley Rd Storm Drain, Valley View Dr to Upper Happy Valley Rd	Install storm drain in road, abandon existing 12" CMP culvert at midpoint of project	Existing 12" CMP culvert discharges onto private property, and is undersized and partially collapsed; causing flooding of road and deterioration of subgrade. Done as part of bigger HVR project.	Pipe #'s: HP4d, HP6c, HP6a, HP6b	96-218	

Priority ZC-2

Scheduled/Completed	Project Name	Description Of Project	Need For Project	Comments	Number	Cost Est.
2007	Leland Dr Drainage Improvements	Replace existing 36 CMP with new RCP; install 24" RCP along existing open ditch	Existing ditch is hydraulically inadequate and subject to plugging; existing CMP is probably deteriorated due to age	Pipes #'s: RP39h, RP39p. Completed in conjunction with 96-60.	96- 59	\$0
1998	Moraga Blvd. Improvements, Victoria Ln. to Carol Ln.	Install storm drain	Existing poor slope of shoulders cause runoff to pond in travel lanes	Completed as part of 96-78	96- 82	
<i>Summary for Priority ZC-2 (4 projects)</i>						
	Sum					\$110,000
	Percent					0.34%

Priority ZD-1

Scheduled/Completed	Project Name	Description Of Project	Need For Project	Comments	Number	Cost Est.
2002	First St Storm Drain Replacement, Lafayette Creek to Mt Diablo Blvd	Replace existing CMP with 15"-18" RCP	Existing CMP is probably deteriorated due to age; pipes ok 7/98	Pipe #'s: LP44g, LP44i, LP44h, LP44i2, LP44j, LP44k, LP44m, LP44n, LP44o, LP44p, LP44q, LP44r	96-249	\$150,000
2004	Golden Gate Way Storm Drain	Extend storm drain from east end of Golden Gate Way (at outfall into Lafayette Creek) 300' west to existing 30" CMP cross-culvert; replace 30" CMP with abandon 24" pipe under apartment building to south. Includes 96-194. Resurface street.	Existing pipes are probably deteriorated due to age, ok 6/98	Facility # LP45e, LP45f, LP45g, LP45h	96-258	\$510,000
2001	Happy Valley Rd from Upper Happy Valley Rd to Deer Hill Rd	Overlay pavement; repair walkway; install drainage improvements as allowed by funding	Mostly pavement and ditch upgrades	includes other drainage and walkway improvements in one big project.	96- 43	\$1,800,000
2001	Happy Valley Rd from Valley View to HV School	Install storm drain in Happy Valley Rd from Valley View Drive to existing 42" RCP @ Happy Valley School. Extension of storm drain along roadway.	Existing culvert directs runoff from Happy Valley Rd into ditch along Valley View (private property)	Pipes #HP7b, HP7c, HP7c2. HVR roadside drainage done as part of bigger HVR project. Valley View system remains.	96- 40	
2001	Happy Valley Rd Storm Drain, Palo Alto Dr to Panorama Dr	Install storm drain in Happy Valley Rd from outfall into Happy Valley Creek @ Palo Alto Dr to Panorama Dr.; abandon 30" CMP across private property. Extension of storm drain along roadway and replacement of some CMP pipes	Existing open drainage ditch along road is causing shoulder pavement to deteriorate, 30" CMP will become structurally unsound over time.	Pipe #: HP11a2, HP11b, HP11c2, HP11d.	96- 41	\$90,000

Priority ZD-1

Scheduled/ Completed	Project Name	Description Of Project	Need For Project	Comments	Number	Cost Est.
2001	Happy Valley Rd/Soares Ln to City Limits	Repair pavement, stabilize slopes, install drainage	Existing pavement is deteriorated; unstable slopes are causing pavement to deteriorate and are leading to unsafe driving conditions, existing drainage system directs runoff onto private property. Done as part of bigger project.	Pipe #: HP2a	96-42	
1998	Moraga Blvd. Drainage Improvements, Hawthorn Dr to Victoria Ave.	Install storm drain, reconstruct and repave shoulders		Completed as part of 96-78.	96-80	
2002	Oak Hill Rd Storm Drain, Mt. Diablo Blvd to Hwy 24	Replace existing 24" CMP with 24" RCP, ID#: HP29i	Existing 24" CMP is probably deteriorated due to age	Condition of HP29i is good as of 10/11/98. This project is low priority. No Capacity problems. Lined in 2002.	96-230	\$31,000
2000	Pleasant Hill Rd Storm Drain, Rancho View Dr to Green Valley Dr	Install storm drain to divert flows at Rancho View Dr which currently discharge onto private property downstream to existing system at Rancho View Dr	Existing drainage course on private property is hydraulically inadequate	Done as part of bigger project.	96-231	
2005	Silver Springs Rd Culvert Replacement	Replace existing 48" CMP culvert with 60" RCP; extend pipe upstream or downstream as needed to prevent erosion	Existing culvert is probably deteriorated due to age	Pipe #: TC37. Pipe lined as part of Moraga Rd Measure C project.	96-250	\$60,000
2007	Stuart St Storm Drain Replacement	Replace existing 42" CMP with 42" RCP	Existing pipe is deteriorated due to age.	Pipe #'s: TP46i, TP46bb, TP46aa, TP46x, TP46z. Street paved in 2007. Further investigation found pipe to be RCP and in good condition.	96-234	\$0

Summary for Priority ZD-1 (11 projects)

Sum	\$2,641,000
Percent	8.12%

Priority ZD-2

Scheduled/ Completed	Project Name	Description Of Project	Need For Project	Comments	Number	Cost Est.
1997	Boyer Circle/Dewing Ave. Improvements	Reconstruct pavement, improve storm drain system	Deteriorated pavement needs repair, drainage improvements are needed to intercept runoff from street which currently runs onto private property	Complete	96-07	\$450,000

Priority ZD-2

Scheduled/ Completed	Project Name	Description Of Project	Need For Project	Comments	Number	Cost Est.
1999	Carol Lane Storm Drain	Extend storm drain from Janet Ln to Marlene Dr	Storm drain will allow abandonment of undersized and deteriorated CMP line on Berta Ln (private st.) will help stabilize shoulders, increasing pavement life. Done as part of 1999 PMP.	Pipe #'s : TP54Aa, TP54Ab, TP54Ac1, TP54Ac2, TP54Ae, TP52m	96- 12	
1998	Carolyn Ct. Storm Drain Replacement	Replace existing 12" CMP at cul-de-sac with 15" RCP	Existing pipe is hydraulically inadequate	Adjoining subdivision is conditioned to perform this work; Pipe # RP40b	96- 13	
2002	DeI Arroyo Ct Storm Drain Replacement	Replace 500' of existing 18" CMP with 15" RCP	Existing pipe is probably deteriorated due to age.	Pipe #: RP16f, RP16e, ok 1/97. Lined in 2002.	96-235	\$25,000
2001	Happy Valley Rd Storm Drain, Cricket Hill Rd to Soares Ln	Install storm drain, replace existing 30" CMP across private property between happy Valley Rd and Happy Valley Creek at Cricket Hill Ln, extend pipe to Soares Ln	Existing 30" CMP is probably deteriorated due to age; new pipe will allow numerous cross culverts west of Soares Ln which currently discharges onto private property to be intercepted by new pipe. Done as part of bigger HVR project.	Pipe#: HP2g, HP2h, good as of 11-96	96-219	
	Hawthorn Dr/Beechwood Dr Storm Drain, Phase III	Replace existing 15" CMP in Yorkshire Ct with new RCP.	Structural integrity of existing pipe is suspect due to age	Lined in 2003. Pipe #'s: TP54r, TP54s1, TP54s2, TP54u, TP54v	96-47	\$26,500
2004	Katherine Ln. Storm Drain Replacement	Install new pipe in Janet Ln; abandon existing pipe along private property; repave street	Existing CMP line is probably deteriorated and appears to be located under house	Pipe #'s: TP54Ak, TP54Aq, TP54A, TP54Ar, TP54As, ok as of 10/98	96- 51	\$360,000
2006	Lafayette Valley Estates Storm Drain Replacement (Incl. Florence Ave, Helen Ave, Betty Ln, etc.)	Replace existing CMP lines or open ditches with RCP	Existing CMP is probably deteriorated due to age; open ditches require heavy maintenance to keep clean	Pipe #'s: TP9k2, TP9k3, TP9k4, TP9k5, TP9b2, TP9c, TP9d, TP9e1, TP9e2, TP9f, TP13a, TP13b, TP13c, emps ok 10/96	96- 53	\$370,000
Completed	Marianne Dr Drainage Improvements	Install new pipes in street to intercept flows across private property; reconstruct pavement	Existing drainage problems cause flooding of private property; deteriorated pavement requires reconstruction to provide adequate structural section; cross slope and longitudinal drainage	Complete	96- 67	\$82,000
1996	Martino Rd Storm Drain, Scenic Dr to Southampton Pl.	Install storm drain	Complete	Complete	96- 72	\$62,000
1995	Old Tunnel Rd	Install storm drain connecting existing ditch to 24" RCP in street	Complete	Complete	96-109	\$5,000

Priority ZD-2

Scheduled/ Completed	Project Name	Description Of Project	Need For Project	Comments	Number	Cost Est.
1999	Pleasant Hill Circle Storm Drain	Install storm drain, intercept flows across private property	Existing culvert discharges into undersized ditch on private property	Very flat area; No evidence of heavy flows or potential damage. Could not get easement. Ditch grading thru aqueduct property seemed to work. Pipes RP27a, RP26d. Regraded ditch in 1998.	96-201	
2005	Risa Rd Improvements	Overlay street replace and upgrade drainage system	Deteriorated pavement needs resurfacing; existing 24" CMP culverts are beginning to rust out	Pipe #'s: LP35h, LP35n, LP35i; Pipes ok. Street resurfaced.	96-135	\$100,000
2005	Topper Ln/Birdhaven Ct Storm Drain	Extend storm drain in Topper Ln from School St to Birdhaven Ct, replacing existing 12" CMP between the streets and directing flows away from school property. 2/18/05-- School has a new system downstream to handle flows. No problems.	Existing system may be deteriorated due to age	Pipe #'s: TP28h, TP28i, TP28j, TP28k, TP28a, TP28b; ok 10/98. Replace xing in Topper. Downstream concrete ditch to Stanley School system ok, no flooding reported.	96-252	\$125,000
2001	Woodland Way Drainage Improvements @ Willow Way	Install pipe along Woodland Way, reconstruct outfall into Las Trampas Creek	Existing outfall creates bubble-up; appears badly needed, very inadequate drain inlet	Pipe #'s: TP48a, TP47l, TP47g4. Done as part of 2001 PMP.	96-168	

Summary for Priority ZD-2 (15 projects)

Sum	\$1,605,500
Percent	4.94%
Completed	(90 projects)
Grand Total	(158 projects)

Appendix B:
Index Used for Drainage Fee Update

**Appendix Table B-1
Construction Cost Index
1997 through 2007
San Francisco Bay Area**

Year	CCI	Annual Growth
1997	6,731.08	1.9%
1998	6,845.59	1.7%
1999	6,816.70	-0.4%
2000	7,447.99	9.3%
2001	7,675.93	3.1%
2002	7,642.71	-0.4%
2003	7,786.30	1.9%
2004	8,229.62	5.7%
2005	8,468.45	2.9%
2006	9,100.68	7.5%
2007	9,133.56	0.4%
Average Annual Growth (1997 - 2007)		3.1%

Source: Engineering News-Record.