CITY OF MORGAN HILL

PRELIMINARY

Holiday Lakes Sanitary Sewer Feasibility Study

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Introduction, Location & Purpose

The City of Morgan Hill is considering options for using land-secured financing for construction of additions to the sanitary sewer system in the Holiday Lakes area. This would allow parcels in this area to connect to City sanitary sewer system and eliminate septic tanks. This study determines which parcels are currently being served by septic tanks and what must be accomplished in order to connect these parcels to sewer systems. These improvements are proposed to be funded using Assessment District bond financing under authority of the Municipal Improvement Act of 1913 or Community Facilities District (CFD) bond financing under authority of the Mello-Roos Community Facilities Act of 1982.

This study is intended to show the property owners the approximate costs for improving their sewer system, including design engineering, financing and construction costs.

The study area is not within the City of Morgan Hills' limits. The area is adjacent to the City of Morgan Hills' northeastern City limits overlooking Anderson Lake. The area is within the jurisdiction of the County of Santa Clara and parcels within this area must be developed according to the County's standards. The County area is within the City of Morgan Hill's Urban Growth Boundary as shown in the City's General Plan. Morgan Hills' zoning for this area is Single Family Residential Low (1-3 dwelling units per acre). The developed parcels in the study area appear to conform to this designation as most of the parcels in this area have existing single-family dwellings. The undeveloped parcels are also considered a part of this study and would benefit from any improvements constructed.

The purpose of this Feasibility Study is to:

- Analyze the required additions to the existing sanitary sewer system such that all properties within the Holiday Lakes area have the ability to be served by the City sanitary sewer system. Estimate the costs of construction, as well as incidental and bond costs associated with establishing an Assessment District or CFD.
- Analyze and recommend an appropriate methodology for apportioning the costs.

Preliminary System Design Analysis

Many of the parcels within this area currently use septic tanks to process their sewer discharge. Septic tanks are generally no longer an acceptable sewage disposal method within City limits due to significant health concerns. Septic tanks often fail and become a source of contamination to underground water basins, lakes, streams and nearby water sources. In this particular case, Anderson Lakes' close proximity to the study area is of concern to local agencies. Some parcels within the study area are connected to an existing sanitary sewer system, which is pumped to the top of the hill and discharged into a gravity system that flows to the City's Waste Water Treatment Plant. This study determines the feasibility of installing City sewer mains in the study area. The sewer mains will be capable of serving both the parcels that are currently on septic tanks and those that are undeveloped. This would eliminate the use of septic tanks completely and replace them with a reliable sanitary sewer system that provides proper treatment and disposal of the sewer discharge.

Existing Data

The City of Morgan Hill supplied maps, aerial photos, contours and other data to facilitate this study. The proposed sanitary sewer design is based on existing information supplied. A precise field survey of the area was not performed but would be required prior to preparation of final design.

Existing System

The existing system discharges into low points and is lifted by pumps to the elevation necessary to flow by gravity to the existing City Sewer System. There are four other lift stations (Lift Stations A, B, C & D) in proximity to the study area within the City of Morgan Hills' City limits that also pump to reach the gravity flow system. The capacity of each of these lift stations and their current calculated flows are listed in Table 1.

Table 1
Calculation of Flow at Lift Stations

Assumptions:
3.5 Persons Per Parcel
90 gpcd (gallons per capita per day)
2.48 Peaking Factor from Master Plan

GPD : Gallons per Day
GPM : Gallons per Minute

Existing Lift Stations	Dwelling Units	Capita DU x 3.5	GPD Capita x 90	GPM GPD/24/60	Peak GPM GPM x 2.48
Lift Station A	104	364	32,760	23	56
Lift Station B	71	248.5	22,365	16	39
Lift Station C	157	549.5	49,455	34	85
Lift Station D	151	528.5	47,565	33	82
Proposed Lift Stations					
Lift for Manzanita	19	66.5	5,985	4	10
Lift for Hoot Owl	40	140	12,600	9	22
Total Discharge each Pump					
Lift Station A					56
Lift Station B (Lift A+Lift B+Manz.)					105
Lift Station C (Lift A+ B+ C+Manz.)					190
Lift Station D (Lift D+Hoot Owl)					104

Existing Pump Specs.

	GPM	hp	TDH
Lift A	175	23	150
Lift B	100	15	97
Lift C	150	23	165
Lift D	175	23	181

Proposed System Expansion

The expansion of the sewer system into the areas where none exists will require installation of two new lift stations (referred to as "Manzanita" and "Hoot Owl"). The addition of these areas will also require the use of lift stations within the City of Morgan Hill to pump the increased amount of discharge.

The first new lift station will be located on Manzanita Drive. This lift station will serve parcels located within proposed Sewer System I. Manzanita Lift Station will pump to existing Lift Station B, which pumps to existing Lift Station C which pumps over the hill where it discharges into the existing City gravity flow system.

The second new lift station will be on Hoot Owl Way. This lift station will serve parcels located within proposed Sewer System II. Hoot Owl Lift Station will pump to an intermediate point where it will then flow by gravity into Lift Station D, pump from Lift Station D to the top of the hill and ultimately discharge into the existing City gravity flow system.

Proposed Sewer Systems III, IV, & V will flow by gravity to Lift Station D, then be pumped from Lift Station D over the hill and discharge into the existing City gravity flow system.

The proposed expansions are broken up into five areas. Area I & II will be served by the proposed new lift stations. Areas III, IV & V will connect to new sanitary sewer mains that will tie into the existing City system. The extensions will require the installation of approximately 7,200 feet of new sanitary sewer line and approximately 1,200 feet of sanitary sewer force main. The preliminary opinion of probable cost for the proposed improvements is shown in Table 2, on the following page.

Table 2

Preliminary Opinion of Cost

ITEM NO	ITEM DESCRIPTION	UNITS	UNIT PRICE	QUANTITY	TOTAL
I (Manzanita Drive)					
1	Lift Station (Manzanita to B)	EA	$200,000	1	$200,000
2	3" force Main (Manzanita)	LF	$50	250	$12,500
3	8" PVC SDR 26 SS (Manzanita Drive)	LF	$120	1,350	$162,000
4	SSMH	EA	$3,500	6	$21,000
5	Upgrade Exisitng Lift Station B	EA	$50,000	1	$50,000
6	Upgrade Exisitng Lift Station C	EA	$50,000	1	$50,000
7	Land and Easement Acquisition	LS	$40,000	1	$40,000
				Sub Total	**$535,500**
II (Hoot Owl Way)					
1	Lift Station (Hoot Owl to D)	EA	$200,000	1	$200,000
2	3" force Main (Hoot Owl)	LF	$60	900	$54,000
3	8" PVC SDR 26 SS (Hoot Owl Way))	LF	$120	1,110	$133,200
4	8" PVC SDR 26 SS (Holiday Drive)	LF	$120	1,050	$126,000
5	8" PVC SDR 26 SS (Butterfly Lane)	LF	$120	300	$36,000
6	SSMH	EA	$3,500	12	$42,000
7	Land and Easement Acquisition	LS	$20,000	1	$20,000
				Sub Total	**$611,200**
III (Copper Hill Drive)					
1	8" PVC SDR 26 SS (Copper Hill Drive)	LF	$120	960	$115,200
2	SSMH	EA	$3,500	4	$14,000
				Sub Total	**$129,200**
IV (Park View Drive)					
1	8" PVC SDR 26 SS (Parkview Drive)	LF	$120	1,380	$165,600
2	SSMH	EA	$3,500	4	$14,000
				Sub Total	**$179,600**
V (Shady Lane Drive)					
1	8" PVC SDR 26 SS (Shady Lane Drive)	LF	$120	1,020	$122,400
2	SSMH	LF	$3,500	6	$21,000
				Sub Total	**$143,400**
	Upgrade Existing Lift Station D	EA	$50,000	**1**	**$50,000**
				Sub Total	**$1,648,900**
				20% Contingency	**$329,780**
				Grand Total Construction Costs	**$1,978,680**
				Rounded Grand Total Construction Costs	**$2,000,000**

Notes:

1) Each lot to pay City Sewer Connection Fee.
2) Each lot to pay for On Site Lateral and Equipment
3) On Site Work requires a Building Permit
4) Land Acquisition Costs vary with location and time. This cost can only be determined by a Licensed Appraiser when the district is formed

Financing Mechanism Review

Formation information and procedural requirements are outlined below for the two main land-secured funding mechanisms available for sanitary sewer improvements construction: a special assessment district or a special tax district.

A special assessment district proceeding would use the Municipal Improvement Act of 1913 (the "1913 Act") as the financing mechanism and a special tax district would use the Mello-Roos Community Facilities Act of 1982 (the "Mello-Roos Act"). Both of these mechanisms provide for the sale of bonds to construct public improvements.

The following table provides a summary of the differences between the two funding mechanisms.

Funding Mechanism	Rate Structure	Public Property Inclusion	Vote Required	Voter Pool	Length of Formal Formation Process
Special Assessment	Benefit	Yes	50% (weighted ballots)	Property Owners	~2 months
Special Tax	Reasonable	No	2/3	Registered Voters	4 - 8 Months

Municipal Improvement Act of 1913

Type of funding mechanism:.....Special Assessment District

Rate Structure Requirements:.....Special benefit nexus (per Proposition 218) ✓

Publicly Owned Property Inclusion: .....Yes, based on special benefit

Vote Requirement: .....50% (of returned ballots, weighted by proposed assessment amount) ✓ need much higher ~ 80-90%

Voter Pool: .....Property Owners

Length of formal formation proceeding: ....Approx. 2 months from Resolution of Intention

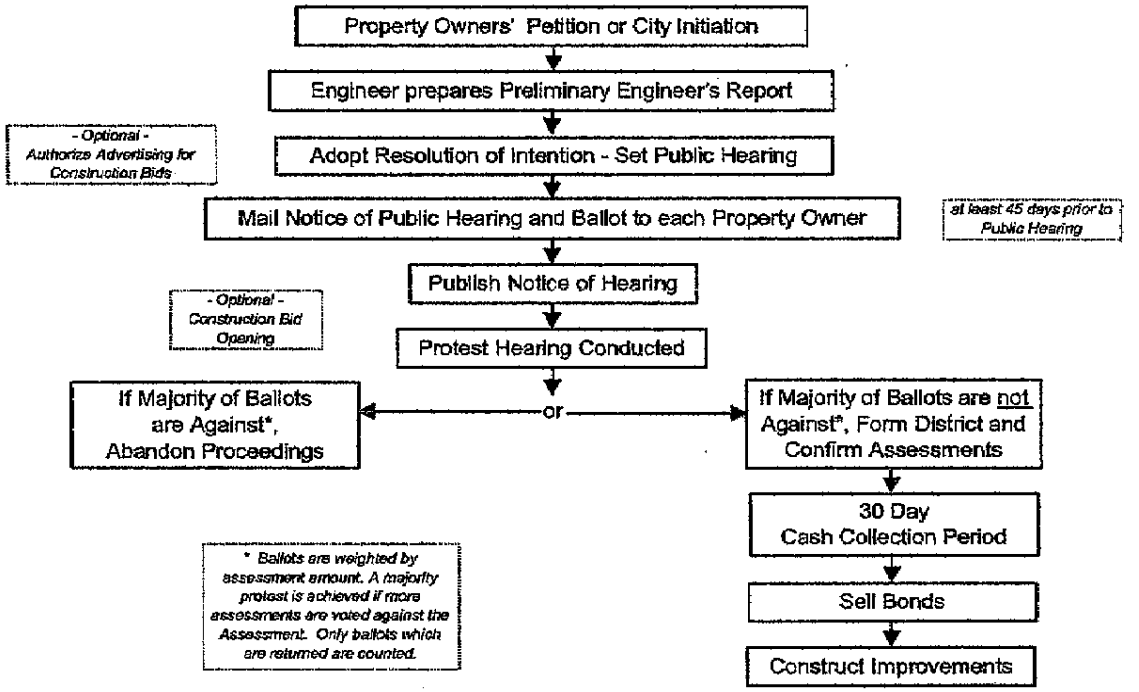
Comments: The assessment process requires only a simple majority approval (50% or more) of ballots returned, although some cities set policy requiring a higher approval percentage. This is a property owner ballot process, and the ballots are weighted by the proposed assessment amount for each parcel.

Regarding rate structure requirements, Proposition 218 requires that the assessment for each property be proportional to the special benefits it receives and that no general benefits are assessed; therefore, an analysis must be performed showing the benefit nexus for the proposed improvements.

Proposition 218 also requires that any public property that receives special benefits from the proposed improvements be assessed.

The following is a flowchart of the formation proceeding for a 1913 Act special assessment district.

1913 Act Special Assessment District
Flowchart of Proceedings



Mello-Roos Community Facilities Act of 1982

Type of funding mechanism:.....Special Tax District

Rate Structure Requirements:.....Reasonableness

Publicly Owned Property Inclusion: .....No

Vote Requirement: .....2/3 ✓

Voter Pool: .....Voting Registered Voters ✓ potential more than one vote per home site.

Length of formal formation proceeding: ....4 to 8 months from Resolution of Intention

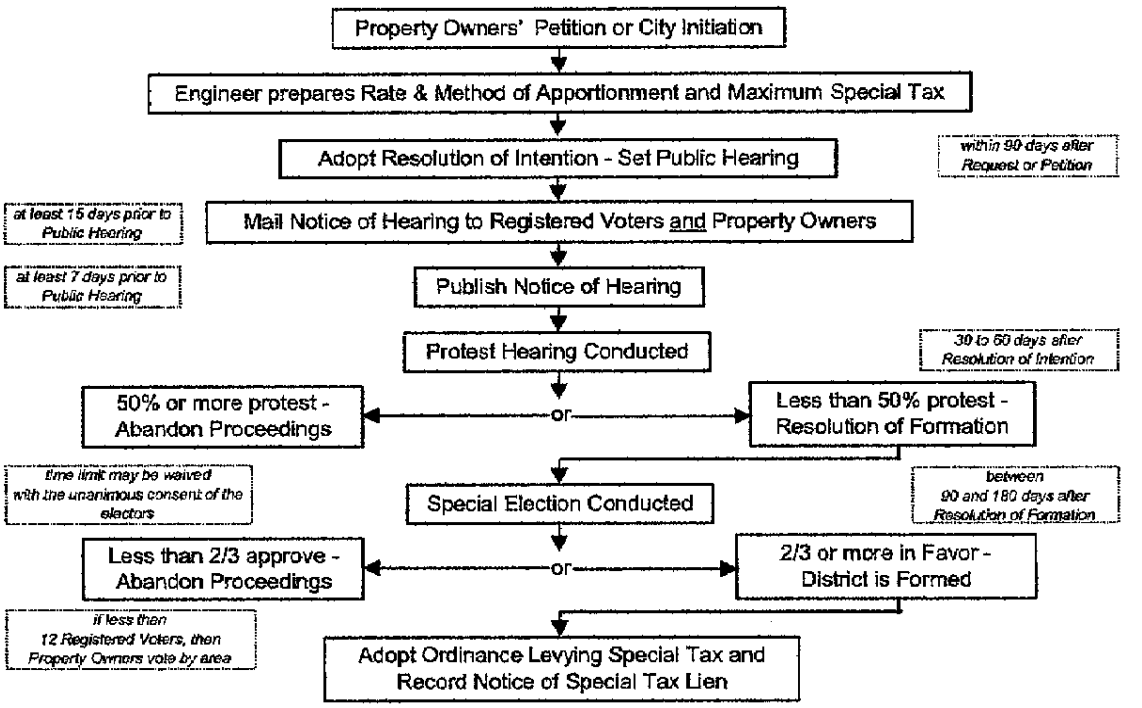
Comments: As a funding tool, special taxes are considered the most flexible funding mechanism, as there is no benefit nexus requirement for structuring the rates. For a Mello-Roos Act tax, the only requirement is that the structure be "reasonable" in nature.

Also, the Mello-Roos Act exempts public property from participating in the special tax, which could be either a positive or negative depending on whether a public property is perceived to benefit from the improvements.

The most challenging aspect of a special tax is obtaining a 2/3 super majority of the voting registered voters within the special tax area, which is difficult to obtain on even the most popular measures.

The following is a flowchart of the formation proceeding for a Mello-Roos Act special tax district.

Mello-Roos Act Special Tax District
Flowchart of Proceedings



Proposition 218

Whenever a special assessment district is considered as a funding mechanism, a review of the requirements of Proposition 218 is warranted.

In November 1996, the voters of California approved Proposition 218, which added Article XIIID to the California State Constitution. Article XIIID has a direct impact on an agency's ability to levy assessments.

Proposition 218 made three main changes to the methodology and procedures used for levying assessments: benefit-nexus requirement, requirements for publicly owned property and assessment balloting.

- **Benefit Nexus.** Proposition 218 reads, "only special benefits are assessable and an agency shall separate the general benefits from the special benefits…" general benefits if they exist now have to be quantified, and these general benefits may not be included in the assessment to the specially benefiting properties within the assessment district. This is a change from previous practice where all costs (even the costs of general benefit) could be levied within the assessment proceedings if some special benefit existed.

- **Public Property.** Proposition 218 also reads, " Parcels within a district that are owned or used by any (public) agency… shall not be exempt from the assessment unless the agency can demonstrate … that (the) parcels in fact receive no special benefit." There appears to be no public properties within this area proposed to be served.

- **Assessment Balloting Process.** There is now a requirement that a majority of the affected property owners agree to pay for the improvements by virtue of casting a ballot (with the ballot weighted by assessment amount).

Preliminary Financing District Cost Estimates

Table 3 below provides a preliminary cost estimate for the proposed improvements, based on the preliminary estimate of probable construction costs provided in Table 2.

In addition to the costs of constructing the proposed sewer improvements, additional expenses need to be included for the entire funding process, as shown below under Incidental Expenses and Financing Costs.

Table 3 – Preliminary Bond Financing Cost Estimate

		Estimated Costs Preliminary
CONSTRUCTION COSTS		
Line I (Manzanita)		$535,500
Contigency		$114,024
	Subtotal:	**$649,524**
Line II (Hoot Owl)		$611,200
Contigency		$130,143
	Subtotal:	**$741,343**
Line III (Copper Hill Drive)		$129,200
Contigency		$27,511
	Subtotal:	**$156,711**
Line IV (Park View)		$179,600
Contigency		$38,242
	Subtotal:	**$217,842**
Line V (Shady Lane Drive)		$143,400
Contigency		$30,534
	Subtotal:	**$173,934**
Lift Station D Improvements		$50,000
Contigency		$10,646
	Subtotal:	**$60,646**
	Total Construction Costs:	**$2,000,000**
INCIDENTAL EXPENSES		
Assessment Engineering		$40,000
Design and Constuction Management (15%)		$300,000
City Plan Check and Inspection		$100,000
Financial Advisor		$15,000
Bond Counsel		$35,000
Disclosure Counsel		$20,000
Paying Agent		$3,000
Filing Fees and Other Formation Costs		$25,000
Financial Printing, Registration and Servicing		$25,000
Incidental Contingencies		$61,000
	Total Incidental Expenses:	**$624,000**
FINANCING COSTS		
Underwriter's Discount	2.50%	$81,000
Bond Reserve	10.00%	$324,000
Funded Interest @ 12 months @	6.50%	$211,000
	Total Financing Costs:	**$616,000**
	Total Incidental Expenses and Financing Costs:	**$1,240,000**
	DISTRICT FORMATION AMOUNT TO ASSESSMENT:	**$3,240,000**