Appendix M-1
Sewer Area Study

SEWER AREA STUDY

WILEY CANYON

APNs: 2825-012-007, -010, -011, -901
Santa Clarita, CA

SAS20-00003

Prepared For:
SHERIDAN-EBBERT DEVELOPMENT/
ROYAL CLARK DEVELOPMENT COMPANY
13120 Telfair Avenue
Sylmar, CA 91342
(818) 364-7505

Prepared By:
Alliance Land Planning & Engineering, Inc.
2248 Faraday Ave.
Carlsbad, CA 92008
(760) 431-9896

AUGUST 10, 2020

Prepared Under the Direction of:

Craig M. Whitteker R.C.E. No. 51929 9/10/20 Date

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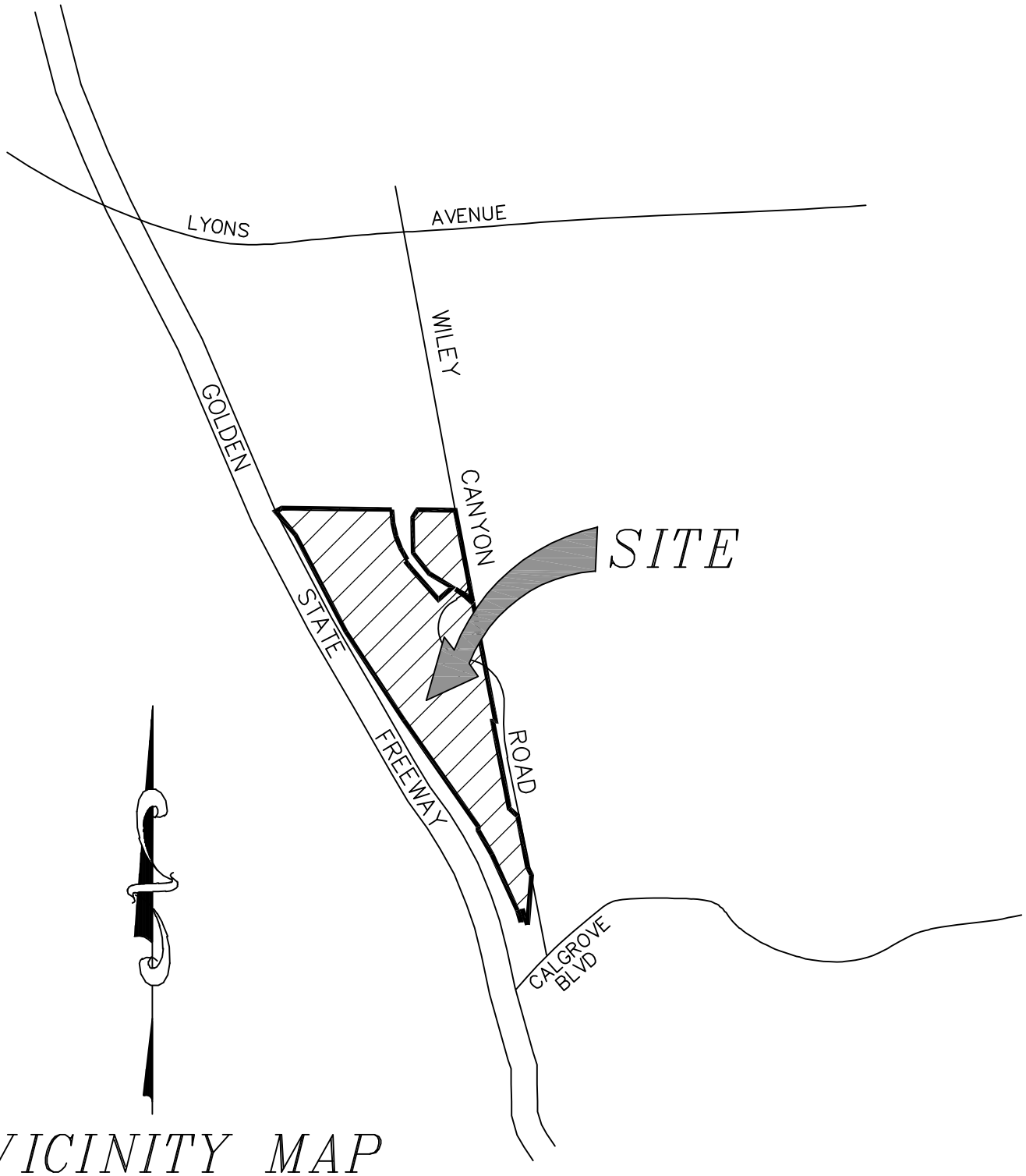
APPENDICES

EXHIBITS



VICINITY MAP

NOT TO SCALE

INTRODUCTION

The proposed project site lies within the jurisdiction of the City of Santa Clarita. This Sewer Area Study has been prepared by Alliance Land Planning & Engineering, Inc. for Sheridan-Ebbert Development/Royal Clark Development Company located at 13120 Telfair Avenue, Sylmar, CA 91342. This study is being prepared at the request of the City of Santa Clarita Engineering Department to evaluate the capacity of the existing sewer systems that will serve this proposed development. The purpose of this study is to evaluate the capacity of the existing off-site downstream sewer sections from our development to the Los Angeles County Sanitation District maintained trunk sewer and determine if the existing sewer facilities can adequately serve the proposed development.

References used in the preparation of this study: LA County Sewer Maintenance Division Maps, LA County Department of Public Works As-builts, Sanitary Sewer Drawings (PC 7549, PC 7599 and PC 8132), City of Santa Clarita Zoning Maps, City of Santa Clarita standards, approved off-site Sewer Area Study for TTM No. 43896 and sewer flow test data performed in June 2020.

This study evaluates the downstream off-site facilities and includes all tributary flows to the existing sewer system from the existing, proposed and future developments within the overall tributary areas. This study will show and determine the potential impacts of our proposed development.

SITE AND PROJECT DESCRIPTION

The Wiley Canyon project encompasses 31.8 acres and the proposed project is mixed use with a combination of commercial and residential land uses.

AREA ID	LAND USE	AREA OR NO. UNITS
1	Commercial	7.0 AC
2	Multi-family Residential	145 Units
3	Multi-family Residential	230 Units

The development lies halfway between Wabuska Street and Calgrove Avenue directly adjacent to the east side of Golden State Freeway 5 in Santa Clarita. The property information is APN's 2825-012-007, -010, -011 and -901. C.S.M.D. Index No. N-1258, N-1259, N-1297 and N-1298. Thomas Guide 4640 D1-D2, E-E2, F1-F3, 4550 E7, F7 and G7. See Exhibit 1 for project location and surrounding areas.

The following area study has been prepared to show that the capacity is adequate for the existing downstream sewer segments from the proposed development site to the Los Angeles County Sanitation District (LACSD) trunk sewer (24" line within diversion structure) located at approximately 225 feet south of Wiley Canyon Road and Orchard Village Road intersection at manhole #781.

The developed areas of Wiley Canyon flows into an existing manhole #49 with an existing 10"-15" downstream sewer lines (PC 7599), existing 12"-18" sewer lines (PC 7549) and then to existing 24" La County Sanitary District trunk sewer line (within diversion structure at manhole #781); see the Sewer Area Study Exhibit (Exhibit 1, Appendix G) within the pocket of this report for the layout of the existing and proposed sewer systems.

DESCRIPTION OF EXISTING SEWER SYSTEM

The existing downstream sewer system consists of approximately 9,600 linear feet of gravity sewer pipe ranging in size from 10" to 18" before connecting to the 24" Sanitation District trunk line (within diversion structure at manhole #781).

Analysis of the existing sewer system begins at MH #49, located in Wiley Canyon Road approximately 840 feet south of Wiley Canyon Road and Wabuska Street intersection and terminates at the Sanitation District trunk line located at approximately 240 feet south of Wiley Canyon Road and Orchard Village Road intersection at manhole #781.

SEWER CAPACITY ANALYSIS

The sewer capacity analysis performed for this project includes calculating the proposed flow due to The Wiley Canyon development. See Table 1 for capacity calculations for each Planning Area. See Appendix A for Kutter Formula Calculations for each capacity and pipe size. See Sewer Area Study Map in the pocket of this report for sewer layout and capacity calculations.

The analysis also includes the percentage full of the pipes within the system. For the basis of this study all proposed sewer lines are calculated using a 1.0% slope. The percentage full for each pipe segment is shown on the Sewer Area Study Map in the pocket of this report.

The total flowrate generated by Wiley Canyon project is 0.480 cfs and enters the existing 10” sewer (PC 7599) at manhole #49, this pipe segment from MH #49 to #48 will be at 29.1% full (see Appendix A for calculation and flow capacity table within exhibit 1, Appendix G).

Only one segment (segment 41) of the existing 18” sewer line is over 75% full (84.4%) based on theoretical flow calculations. A flow test was performed at three locations, upstream MH 28, upstream MH 780 and existing 18” trunk line manhole northeast of MH 781, see flow test results within Appendix D of this report. Due to the very low flowrate at the existing 18” trunk line manhole, further investigation was performed and found that there is a diversion structure at MH 781 which directed all upstream flow to an existing 24” CDS trunk line. Based on the flow test data (actual flowrate of 2.500 cfs) at the upstream MH 28 and accumulated flow from upstream tributary areas, total Q for segment 41 is now 6.107 cfs which is currently 39.9% full for this segment before entering the diversion structure.

CONCLUSION

The Wiley Canyon project generates a total flowrate of 0.480 cfs which enters the existing 10"-15” sewer lines (PC 7599), existing 12”-18” sewer lines (PC 7549) and then to existing 24" LA County Sanitary District trunk sewer line (diversion structure). The pipe sizing shown on the Sewer Area Study Map is adequate to meet the City of Santa Clarita standards for a maximum of 50% full for the existing 10” to 12” downstream pipe segments and meet standards for a maximum of 75% full for the existing 15” to 18” downstream pipe segments. Therefore, it can be concluded that the existing downstream sewer system is of adequate size and capacity to accept the proposed flow from this project.

LAND USE/ SEWER GENERATION TABLE

AREA I.D.	LAND USE	AREA OR NO. UNITS	PEAK Q COEF.	PEAK Q
1	COMMERCIAL	7.0 AC	0.015 cfs/AC	0.105 cfs
2	MULTI-FAMILY RESIDENTIAL	145 UNITS	0.001 cfs/AC	0.145 cfs
3	MULTI-FAMILY RESIDENTIAL	230 UNITS	0.001 cfs/AC	0.230 cfs

FLOW CAPACITY FOR PROPOSED DEVELOPMENT

BASIN ID	PROPOSED PIPE SIZE (in)	SLOPE (%)	FLOWRATE, Q* (cfs)	CAPACITY, Q* (cfs)	Q/Q* (% FULL) 12" ≤ PIPE	Q/Q* (% FULL) 15" ≥ PIPE
1	8	1.00	0.105	1.212	8.7	N/A
2	8	1.00	0.145	1.212	12.0	N/A
3	8	1.00	0.230	1.212	19.0	N/A
P1	8	1.00	0.480	1.212	36.9	N/A

(EXISTING, PROPOSED AND FUTURE DEVELOPMENT)
FLOW CAPACITY FOR ONSITE / DOWNSTREAM SEWERS
WILEY CANYON ROAD TO EXISTING 24" DIVERSION TRUNK SEWER AT MH #781

SEGMENT	MH TO MH	EXISTING PIPE SIZE (in)	SLOPE (%)	FLOWRATE, Q (cfs)	CAPACITY, Q* (cfs)	Q/Q* (% FULL) 12" < PIPE	Q/Q* (% FULL) 15" > PIPE	TRIBUTARY AREA	CALCULATED FLOW (cfs)	EXIST. PIPE ADEQUATE	NOTES
(1)	49–48	10	1.80	0.876	3.012	29.1	N/A	A1–A3, ONSITE P1	0.876	YES	
(2)	48–47	10	6.32	0.878	5.649	15.5	N/A	A3	0.002	YES	
(3)	47–43	10	1.00	0.881	2.243	39.3	N/A	A3	0.003	YES	
(4)	43–42	12	0.40	0.884	2.341	37.8	N/A	A3	0.004	YES	
(5)	42–36	12	0.40	0.889	2.341	38.0	N/A	A3	0.005	YES	
(6)	36–35	15	0.40	0.978	4.321	N/A	22.6	A3–A4	0.089	YES	
(7)	35–34	15	0.40	0.982	4.321	N/A	22.7	A3	0.004	YES	
(8)	34–33	15	0.40	0.983	4.321	N/A	22.7	A6	0.001	YES	
(9)	33–32	15	0.40	1.083	4.321	N/A	25.1	A5–A6	0.100	YES	
(10)	32–428	15	0.40	1.088	4.321	N/A	25.2	A6	0.005	YES	
(11)	428–427	12	2.56	1.092	5.946	18.4	N/A	A6	0.004	YES	
(12)	427–426	15	0.56	1.891	5.118	N/A	36.9	A7–A12	0.799	YES	
(13)	426–425	15	1.24	1.891	7.628	N/A	24.8			YES	
(14)	425–424	15	0.56	1.891	5.118	N/A	36.9			YES	
(15)	424–423	15	0.72	2.100	5.807	N/A	36.2	A13–A15	0.209	YES	
(16)	423–362	18	0.60	2.100	8.720	N/A	24.1			YES	
(17)	362–363	15	0.60	2.254	5.299	N/A	42.5	A17–A18	0.154	YES	
(18)	363–380	15	0.60	2.273	5.299	N/A	42.9	A18	0.019	YES	
(19)	380–381	15	0.60	2.277	5.299	N/A	43.0	A18	0.004	YES	
(20)	381–392	15	0.60	2.281	5.299	N/A	43.0	A18	0.004	YES	
(21)	393–394	12	2.00	2.286	5.255	43.5	N/A	A18	0.005	YES	
(22)	394–398	18	0.24	2.588	5.495	N/A	47.1	A18–A21	0.302	YES	
(23)	398–389	18	0.24	2.593	5.495	N/A	47.2	A21	0.005	YES	
(24)	389–387	18	0.24	2.621	5.495	N/A	47.7	A21	0.028	YES	
(25)	387–374	18	0.24	2.665	5.495	N/A	48.5	A21	0.044	YES	
(26)	374–372	18	0.24	2.726	5.495	N/A	49.6	A21	0.061	YES	
(27)	372–344	18	0.24	2.786	5.495	N/A	50.7	A21	0.060	YES	
(28)	344–345	18	0.76	2.845	9.819	N/A	29.0	A21	0.059	YES	
(29)	345–346	18	0.68	2.847	9.286	N/A	30.7	A21	0.002	YES	
(30)	346–349	18	0.40	2.862	7.111	N/A	40.2	A21	0.015	YES	
(31)	349–310	18	0.64	2.944	9.007	N/A	32.7	A22–A23	0.082	YES	
(32)	310–312	15	1.04	2.996	6.984	N/A	42.9	A23–A24	0.052	YES	
(33)	312–319	18	0.60	3.027	8.720	N/A	34.7	A24	0.031	YES	
(34)	319–320	18	0.64	3.054	9.007	N/A	33.9	A24	0.027	YES	
(35)	320–326	18	0.40	3.200	7.111	N/A	45.0	A24–A27	0.146	YES	
(36)	326–327	18	0.40	3.225	7.111	N/A	45.4	A24	0.025	YES	
(37)	327–328	18	0.40	3.227	7.111	N/A	45.4	A24	0.002	YES	
(38)	328–784	18	1.12	3.584	11.927	N/A	30.0	A28–A32	0.357	YES	
(39)	784–783	18	0.60	3.584	8.720	N/A	41.1			YES	
(40)	783–782	18	0.60	3.584	8.720	N/A	41.1			YES	
(41)	782–781 DIV. STRUC.	18	1.84	12.902 6.107**	15.295	N/A	84.4 39.9**	A33–A34	9.318 2.523**	NO YES**	ACTUAL FLOWRATE OF 2.500 cfs AT UPSTREAM MH #28 PER FLOW TEST PERFROMED IN JUNE 2020

* NOTE: MAXIMUM % FULL TO BE 50% FOR 12" PIPE OR SMALLER AND 75% FOR 15" PIPE OR LARGER.
** NOTE: ACUTAL FLOWREATE OF 2.500 cfs AT UPSTREAM MH #28 PER FLOW TEST PERFORMED IN JUNE 2020.

“WILL SERVE”

SANITATION DISTRICTS OF LOS ANGELES COUNTY

Converting Waste Into Resources

Robert C. Ferrante
Chief Engineer and General Manager
1955 Workman Mill Road, Whittier, CA 90601-1400
Mailing Address: P.O. Box 4998, Whittier, CA 90607-4998
(562) 699-7411 • www.lacsd.org

October 28, 2019

Ref. DOC 5335146

Ms. Ashley Holland, Project Coordinator
Alliance Land Planning & Engineering
2248 Faraday Avenue
Carlsbad, CA 92008

Dear Ms. Holland:

Will Serve Letter for Wiley Canyon Project

The Santa Clarita Valley Sanitation District (District) received your will serve letter request for the subject project on September 26, 2019. We offer the following comments regarding sewerage service:

1. The project area is outside the jurisdictional boundaries of the District and will require annexation into the District before sewerage service can be provided to the proposed development. For a copy of the District's Annexation Information and Processing Fee sheets, go to www.lacsd.org, Wastewater & Sewer Systems, Will Serve Program, and click on the appropriate link. For more specific information regarding the annexation procedure and fees, please contact Ms. Donna Curry at (562) 908-4288, extension 2708.

2. The wastewater flow originating from the proposed project will discharge to a local sewer line, which is not maintained by the District, for conveyance to either or both the District's Valencia Trunk Sewer, located in Orcharge Village Road east of Wiley Canyon Road, or the District No. 32 Main Trunk Sewer, located in a private right of way northeast of the intersection of Wiley Canyon Road and Orcharge Village Road. The District's 24–inch diameter Valencia Trunk Sewer has a capacity of 9.4 million gallons per day (mgd) and conveyed a peak flow of 1.9 mgd when last measured in 2018. The District's 18-inch diameter District No. 32 Main Trunk Sewer has a capacity of 3.3 mgd and conveyed a peak flow of 0.1 mgd when last measured in 2018.

3. The District operates two water reclamation plants (WRPs), the Saugus WRP and the Valencia WRP, which provide wastewater treatment in the Santa Clarita Valley. These facilities are interconnected to form a regional treatment system known as the Santa Clarita Valley Joint Sewerage System (SCVJSS). The SCVJSS has a capacity of 28.1 mgd and currently produces an average recycled water flow of 19.6 mgd.

4. The expected average wastewater flow from the project, described in the request as 150 assisted living units, 415 multi-family residential units, 10,000 square feet of commercial space and a 60,000 square-foot office building, is 100,105 gallons per day. For a copy of the District's average wastewater generation factors, go to www.lacsd.org, Wastewater & Sewer Systems, click on Will Serve Program, and click on the Table 1, Loadings for Each Class of Land Use link.

5. The District is empowered by the California Health and Safety Code to charge a fee for the privilege of connecting (directly or indirectly) to the District's Sewerage System for increasing the strength or quantity of wastewater discharged from connected facilities. This connection fee is a capital facilities fee that is imposed in an amount sufficient to construct an incremental expansion of the Sewerage System to accommodate the proposed project. Payment of a connection fee will be required before a permit to connect to the sewer is issued. For more information and a copy of the Connection Fee Information Sheet, go to www.lacsd.org, Wastewater & Sewer Systems, click on Will Serve Program, and search for the appropriate link. In determining the impact to the Sewerage System and applicable connection fees, the Districts' Chief Engineer and General Manager will determine the user category (e.g. Condominium, Single Family home, etc.) that best represents the actual or anticipated use of the parcel or facilities on the parcel. For more specific information regarding the connection fee application procedure and fees, please contact the Connection Fee Counter at (562) 908-4288, extension 2727.

6. In order for the District to conform to the requirements of the Federal Clean Air Act (CAA), the capacities of District wastewater treatment facilities are based on the regional growth forecast adopted by the Southern California Association of Governments (SCAG). Specific policies included in the development of the SCAG regional growth forecast are incorporated into clean air plans, which are prepared by the South Coast and Antelope Valley Air Quality Management Districts in order to improve air quality in the South Coast and Mojave Desert Air Basins as mandated by the CCA. All expansions of District facilities must be sized and service phased in a manner that will be consistent with the SCAG regional growth forecast for the counties of Los Angeles, Orange, San Bernardino, Riverside, Ventura, and Imperial. The available capacity of District treatment facilities will, therefore, be limited to levels associated with the approved growth identified by SCAG. As such, this letter does not constitute a guarantee of wastewater service, but is to advise you that the District intends to provide this service up to the levels that are legally permitted and to inform you of the currently existing capacity and any proposed expansion of District facilities.

If you have any questions, please contact the undersigned at (562) 908-4288, extension 2717.

Very truly yours,

Adriana Raza
Customer Service Specialist
Facilities Planning Department

AR:ar

cc: D. Curry
A. Schmidt
A. Howard

Appendix A

Flow Coefficients and Capacity Requirements

City of Santa Clarita
Engineering Services Division

SEWAGE FLOW COEFFICIENTS

ZONING		DESCRIPTION	COEFFICIENT
			(cfs/gross acreage)
Residential	RE	Residential Estate – large custom single family homes on uniquely configured lots	0.00075
	RVL	Residential Very Low Density - 1 DU/AC	0.001
	RL	Residential Low Density – 2.2 DU/AC	0.0015
	RS	Residential Suburban - 5 DU/AC	0.005
	RM	Residential Moderate – 11 DU/AC	0.012
	RMH	Residential Medium High – 20 DU/AC	0.015
	RH	Residential High – 28 DU/AC	0.023
The above coefficients shall be used for undeveloped land, land that is not entitled, and apartment complexes. For developed land, and for entitled residential developments (except apartment complexes), a value of 0.001 cfs/dwelling unit shall be used in lieu of the above coefficients.			
Agricultural	A	Agricultural - 1 single family home/ legal lot	0.0002
Mixed-Use	MU	existing zone + 16 dwelling units per acre	existing zone coefficient + 0.016
Open Space	OS	Open Space - Natural / Unimproved	0
		Open Space - Parks	0.0002
		Community Rooms	0.0005
		Community Pool Facilities	0.001
Commercial	CTC	Commercial Town Center	0.015
	CC	Community Commercial	
	CN	Commercial Neighborhood	
	CO	Commercial Office	
Industrial	VSR	Visitor Serving/Resort	0.021
	BP	Business Park	
	IC	Industrial Commercial	
	I	Industrial	
SP 3: Newhall Specific Plan	UG1	Urban General 1	0.005
	UG2	Urban General 2	0.012
	UC	Urban Center	0.015
	COR	Corridor	0.021
	CD	Creative District	0.021
	OS	Open Space	0
			(gal/student)
Schools		Elementary & Junior High Schools	25
		High School	37.5
		University & College	50
		College with dormitories	212.5

Estimated Average Daily Sewage Flows for Various Occupancies

Occupancy	Abbreviation	*Average daily flow	
Apartment Buildings:			
Bachelor or Single dwelling units	Apt	100	gal/D.U. → 150
1 bedroom dwelling units	Apt	150	gal/D.U. → 200
2 bedroom dwelling units	Apt	200	gal/D.U. → 250
3 bedroom or more dwelling units	Apt	250	gal/D.U. → use 300 GPD per SMD
Auditoriums, churches, etc.	Aud	5	gal/seat
Automobile parking	P	25	gal/1000 sq ft gross floor area
Bars, cocktails lounges, etc.	Bar	20	gal/seat
Commercial Shops & Stores	CS	100	gal/1000 sq ft gross floor area
Hospitals (surgical)	HS	500	gal/bed
Hospitals (convalescent)	HC	85	gal/bed
Hotels	H	150	gal/room
Medical Buildings	MB	300	gal/1000 sq ft gross floor area
Motels	M	150	gal/unit
Office Buildings	Off	200	gal/1000 sq ft gross floor area
Restaurants, cafeterias, etc.	R	50	gal/seat
Schools:			
Elementary or Jr. High	S	10	gal/student
High Schools	HS	15	gal/student
Universities or Colleges	U	20	gal/student
College Dormitories	CD	85	gal/student

*Multiply the average daily flow by 2.5 to obtain the peak flow

Zoning Coefficients

Zone	Coefficient (cfs/Acre)
Agriculture	0.001
Residential+:	
R-1	0.004
R-2	0.008
R-3	0.012
R-4	0.016*
Commercial:	
C-1 through C-4	0.015*
Heavy Industrial:	
M1 through M-4	0.021*

*Individual building, commercial or industrial plant capacities shall be the determining factor when they exceed the coefficients shown

+ Use 0.001 (cfs/unit) for condominiums only

Appendix B

Zoning and Land Use Data

City of Santa Clarita Zoning Descriptions

Chapter 17.31
ZONING DESIGNATION PURPOSE

Sections:

17.31.010 Purpose.

The non-urban, urban residential, commercial, industrial, mixed use, open space, public/institutional, specific plan, and corridor plan zones are established to achieve the following purposes:

A. To reserve appropriate areas for the continuation of existing farms and ranches, residential living at a broad range of dwelling unit densities; for office uses, retail stores, service establishments, and wholesale businesses, offering commodities and services required by residents of the City and its surrounding market area; for industrial uses and the protection of these areas from intrusion by dwellings and other inharmonious uses consistent with the Santa Clarita General Plan and with sound standards to preserve public health, safety and welfare.

B. To minimize traffic congestion and to avoid the overloading of public services and utilities by preventing the construction of buildings of excessive bulk or number in relation to the land area around them.

C. To facilitate the provision of utility services and other public facilities commensurate with anticipated population, dwelling unit densities and service requirements.

D. To promote high standards for site planning, architecture and landscape design for development within the City while preserving the City's historical and natural resources such as oak trees, river areas and ridgelines.

E. To protect residential and commercial uses from noise, odor, dust, smoke, light intrusion, truck traffic and other objectionable influences and to prevent fire, explosion, radiation, and other hazards incidental to certain industrial activities.

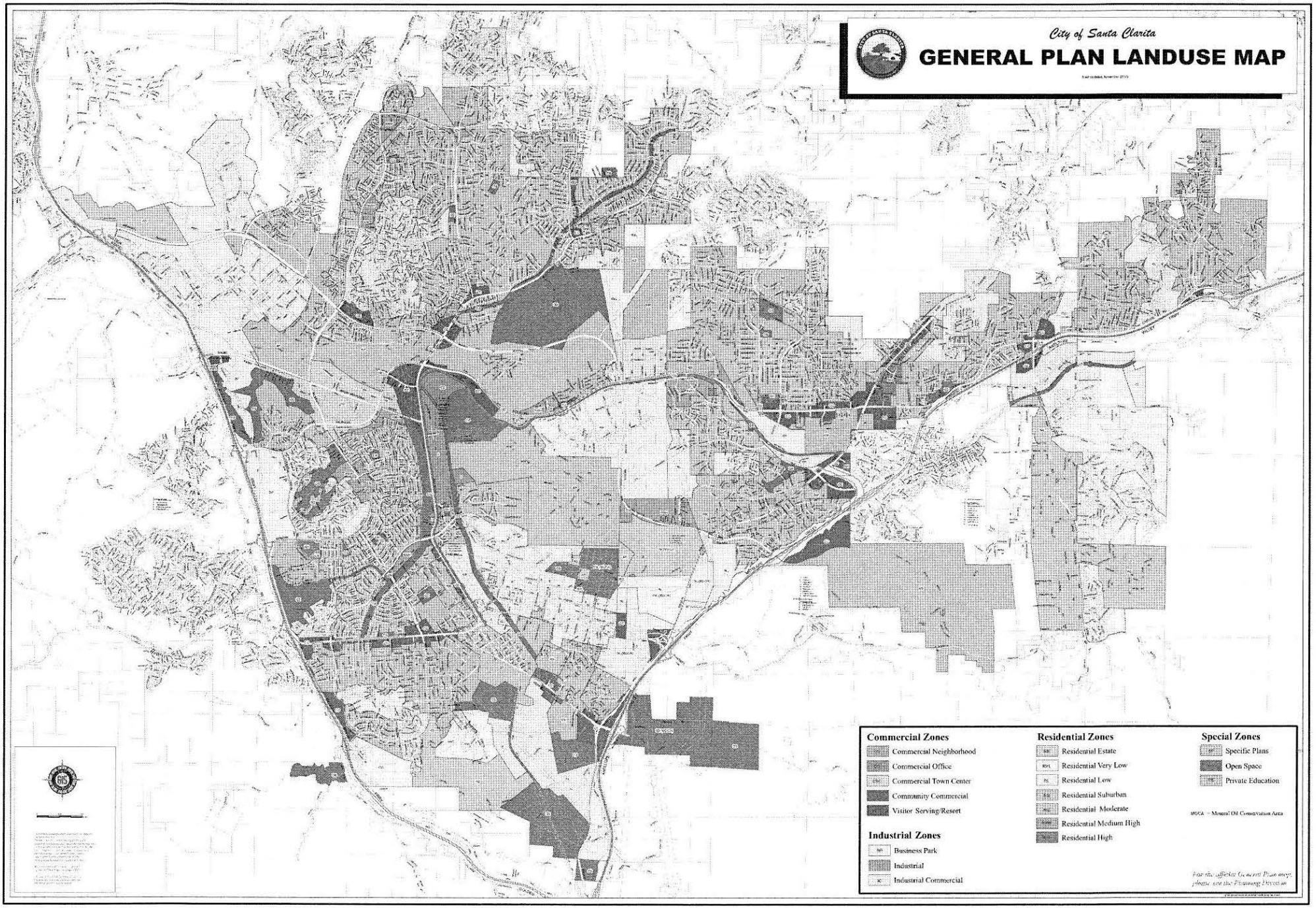
F. To ensure adequate light, air, privacy and open space for each dwelling and to provide sufficient open space around commercial and industrial structures to protect them from hazard and to minimize the impact of commercial and industrial operations on nearby residential zones.

G. To encourage commercial and industrial uses to concentrate for the convenience of the public and for a more mutually beneficial relationship. (Ord. 13-8 § 4 (Exh. A), 6/11/13)

17.31.020 Consistency with the Zoning Map.

The zoning designations contained within this code shall correspond and be consistent with the zoning map as approved by Council ordinance. (Ord. 13-8 § 4 (Exh. A), 6/11/13)


City of Santa Clarita
Zoning Map
Last Update: September 2015
Urban Residential
UR1 - 2.0 du/a
UR2 - 5.0 du/a
UR3 - 11.0 du/a
UR4 - 18.0 du/a
UR5 - min. 18 du/a - max. 30.0 du/a
Non-Urban Residential
NUR1 - 0.05 du/a
NUR2 - 0.1 du/a
NUR3 - 0.2 du/a
NUR4 - 0.5 du/a
NUR5 - 1.0 du/a
Commercial
CC - Community Commercial
CN - Neighborhood Commercial
CR - Regional Commercial
Open Space
OS-NF - Open Space—National Forest
OS-A - Open Space—Agriculture
OS - Open Space
OS-SLM - Open Space—Bureau of Land Management
Mixed Use
CP - Corridor Plan
MX-C - Mixed Use - Corridor
MX-N - Mixed Use - Neighborhood
Industrial
BP - Business Park
I - Industrial
Other
PI - Public/Institutional
Specific Plan
SP
Boundaries
City Boundary
Zoning Boundary


City of Santa Clarita
GENERAL PLAN LANDUSE MAP
Commercial Zones
Commercial Neighborhood
Commercial Office
Commercial Town Center
Community Commercial
Visitor Serving/Resort
Industrial Zones
Business Park
Industrial
Industrial Commercial
Residential Zones
Residential Estate
Residential Very Low
Residential Low
Residential Suburban
Residential Moderate
Residential Medium High
Residential High
Special Zones
Specific Plans
Open Space
Private Education
MOCA = Mineral Oil Conservation Area
For the official General Plan map, please see the Planning Division

Appendix C

SMD Maps

SEE SHT. NO. N-1257

A-42
A-47

SEE SHT. NO. 1219

SEE SHT. NO. N-1297

SEE SHT. NO. N-1259

N 4.249.000

E 4.107.000

AUTOMATED GRAPHICS

METERS
0 50 100 200 250
0 200 400 600 800
FEET

LEGEND

- CLAY SEWERS MAINTAINED BY SMD, 8" UNLESS OTHERWISE NOTED
- PLASTIC SEWERS
- CONCRETE SEWERS
- CLAY SEWERS, LINED
- CEMENT SEWERS, LINED
- FORCE MAINS
- SEWERS NOT MAINTAINED BY SMD
- TRUNK SEWERS
- CITY BOUNDARY
- STANDARD MANHOLE
- DROP MANHOLE
- SHALLOW MANHOLE
- TRAP MANHOLE
- WEIR MANHOLE
- C.O. CLEANOUT
- L.H. LAMP HOLE
- PUMP STATION

TOTAL MH'S THIS MAP: 649

MAP REV
11-09-06

DATA BASE REV
05-16-88

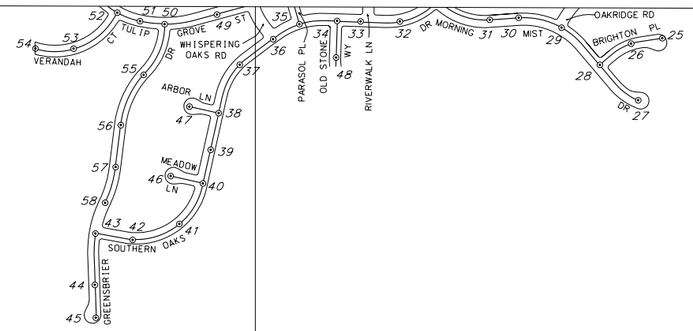
CONSOLIDATED S.M.D.

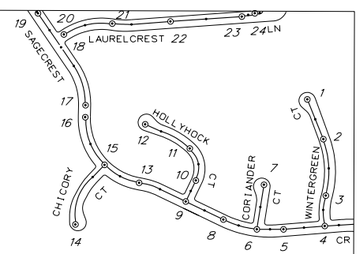
N-1258

T: 4550 C-7

2307.2409.1258

SEE SHT. NO. N-1258





A-25
A-42

THIS MAP IS INTENDED FOR USE ONLY AS OPERATIONS MAP BY LOS ANGELES COUNTY SEWER MAINTENANCE DISTRICTS. LOS ANGELES COUNTY EXPRESSLY DISCLAIMS ANY LIABILITY FOR ANY INACCURACIES WHICH MAY BE PRESENT IN THIS MAP.

LOS *ANGELES* *COUNTY*

SEE SHT. NO. N-1298

AUTOMATED GRAPHICS

METERS
0 50 100 200 250
0 200 400 600 800
FEET

LEGEND

- CLAY SEWERS MAINTAINED BY SMD, 8" UNLESS OTHERWISE NOTED
- PLASTIC SEWERS
- CONCRETE SEWERS
- CLAY SEWERS, LINED
- CEMENT SEWERS, LINED
- FORCE MAINS
- SEWERS NOT MAINTAINED BY SMD
- TRUNK SEWERS
- CITY BOUNDARY
- STANDARD MANHOLE
- DROP MANHOLE
- SHALLOW MANHOLE
- TRAP MANHOLE
- WEIR MANHOLE
- C.O. CLEANOUT
- L.H. LAMP HOLE
- PUMP STATION

TOTAL MH'S THIS MAP: 58

CITY OF SANTA CLARITA

1220

E 4,107,000

N 4,241,500

1220

MAP REV
01-18-06

DATA BASE REV
08-01-88

CONSOLIDATED S.M.D.

N-1259

T: 4640 E-3

2307.2309.1259

N-1259

SEE SHT. NO. N-1296

A-41
A-42
A-47
A-48
X-48

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SEE SHT. NO. N-1258

SEE SHT. NO. N-1336

SEE SHT. NO. N-1298

N 4,249,000

E 4,117,000

AUTOMATED GRAPHICS

METERS
0 50 100 200 250
0 200 400 600 800
FEET

LEGEND

- CLAY SEWERS MAINTAINED BY SMD, 8" UNLESS OTHERWISE NOTED
- PLASTIC SEWERS
- CONCRETE SEWERS
- CLAY SEWERS, LINED
- CEMENT SEWERS, LINED
- FORCE MAINS
- SEWERS NOT MAINTAINED BY SMD
- TRUNK SEWERS
- CITY BOUNDARY
- STANDARD MANHOLE
- DROP MANHOLE
- SHALLOW MANHOLE
- TRAP MANHOLE
- WEIR MANHOLE
- C.O. CLEANOUT
- L.H. LAMP HOLE
- PUMP STATION

TOTAL MH'S THIS MAP: 920

MAP REV
09-12-07

DATA BASE REV
06-02-88

CONSOLIDATED S.M.D.

N-1297

T: 4550 F-7

2311-2411.1297

SEE SHT. NO. N-1297

A-25
A-26
A-41
A-42

THIS MAP IS INTENDED FOR USE ONLY AS OPERATIONS MAP BY LOS ANGELES COUNTY SEWER MAINTENANCE DISTRICTS. LOS ANGELES COUNTY EXPRESSLY DISCLAIMS ANY LIABILITY FOR ANY INACCURACIES WHICH MAY BE PRESENT IN THIS MAP.

SEE SHT. NO. N-1259

SEE SHT. NO. N-1337

CITY OF LOS ANGELES

CITY OF SANTA CLARITA

SANTA CLARITA

COUNTY

T3N R16W

SEC 4

SEC 10

THE OLD RD

SAGASSO CT
DOGWOOD CT
FOXTAIL CT
SAGECREST
GOLDEN STATE FRWY
DENISE PL
HAWKBERRY
MARKEL DR
WILEY CANYON ELEM
LISA KELTON PL
KELTON
CHERYL
JENNIFER
KERRY ROBIN DR
POWELL
WABUSKA
CYN
ROUND
SANTA CLARA
FOURL
DE WOLFE
ATWOOD
EVERETT
VERMONT
WHEELER
HIGHSPRING
GREENMILL AV
PARCHMAN AV
LAWNSIDE DR
NEARGATE
AIRVILLE AV
OAKRUN
ARLEN DR
HEATHER KNOLLS PL
LLOYD HOUGHTON PL
HIGHLAND GLEN DR
APPLE
PEACHLAND
ROSEPARK CT
LAURA
ADAMS
8TH ST
HERITAGE LN
MAPLE VALLEY BV
CROSSWINDS PL
COLWYN AV
CROSS
DAVEY AV
WILDWOOD DEBRIS BASIN
WILDWOOD RD
OAKBRIDGE LN
ACORN CT
BURR CT
VISTA
TRESURE
DERIAN DR
CEDARTOWN
MARKET
ELLIOTT LN
LANEL
TIMON LN
SHADELAND
MIDDLE BANK
LOGDELL AV
PARKVIEW DR
SCCC
ALAMOS LN
CHAMPAGNE LN
AGRAMONTE
HASKELL VISTA
WINDCREST PL
STILLWATER DR
THISTLE
CREST VIEW
SAGEBRUSH
CLOVERDALE CT
GLENRIDGE
THORNEWOOD
MENTRY
BELLA CT
CARY CT
DARCY LN
CREEKSIDE DR
CLEARBANK LN
BRIARDALE WY
FAMBROUGH
DARBUN DR
CARLAND DR
HARBY DR
CANERWELL DR
ADAMSBORO
JENA
LITTLE OAK LN
DAISETTA
CANYON RD
KALMAR
VALLEY OAK CT
CALGROVE
LA SALLE CANYON
WHITE OAK
HERITAGE OAK CT
EBELDEN
WILEY CANYON RD
SOUTH FORK
TOWSLEY CANYON RD
FRWY

AUTOMATED GRAPHICS

METERS
0 50 100 200 250
0 200 400 600 800
FEET

LEGEND

- CLAY SEWERS MAINTAINED BY SMD, 8" UNLESS OTHERWISE NOTED
- PLASTIC SEWERS
- CONCRETE SEWERS
- CLAY SEWERS, LINED
- CEMENT SEWERS, LINED
- FORCE MAINS
- SEWERS NOT MAINTAINED BY SMD
- TRUNK SEWERS
- CITY BOUNDARY
- STANDARD MANHOLE
- DROP MANHOLE
- SHALLOW MANHOLE
- TRAP MANHOLE
- WEIR MANHOLE
- C.O. CLEANOUT
- L.H. LAMP HOLE
- PUMP STATION

TOTAL MH'S THIS MAP: 416

E 4,117,000
N 4,241,500

1299

MAP REV
05-07-07

DATA BASE REV
05-20-93

CONSOLIDATED S.M.D.

N-1298

T: 4640 G-3

2311-2311.1298

SEE SHT. NO. N-1257

LOS ANGELES COUNTY

CITY OF SANTA CLARITA

SEE SHT. NO. N-1298

CONSOLIDATED S.M.D.

N-1259

SEE SHT. NO. N-1296

CITY OF SANTA CLARITA

LOS ANGELES COUNTY

CONSOLIDATED S.M.D.

N-1298

Appendix D

Sewer Capacity Calculations

Worksheet for ONSITE 8" PIPE P1

Project Description

Friction Method	Kutter Formula
Solve For	Discharge

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.01000	ft/ft
Normal Depth	0.620	ft
Diameter	0.667	ft

Results

Discharge	1.212	ft^3/s
Flow Area	0.34	ft^2
Wetted Perimeter	1.74	ft
Hydraulic Radius	0.195	ft
Top Width	0.34	ft
Critical Depth	0.521	ft
Percent Full	93.0	%
Critical Slope	0.01259	ft/ft
Velocity	3.58	ft/s
Velocity Head	0.20	ft
Specific Energy	0.82	ft
Froude Number	0.63	
Maximum Discharge	1.21	ft^3/s
Discharge Full	1.11	ft^3/s
Slope Full	0.01194	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.000	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.000	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	92.954	%
Downstream Velocity	Infinity	ft/s

Worksheet for ONSITE 8" PIPE P1

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	0.620	ft
Critical Depth	0.521	ft
Channel Slope	0.01000	ft/ft
Critical Slope	0.01259	ft/ft

Worksheet for SEGMENT 1

Project Description

Friction Method	Kutter Formula
Solve For	Discharge

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.01800	ft/ft
Normal Depth	0.775	ft
Diameter	0.833	ft

Results

Discharge	3.012	ft^3/s
Flow Area	0.53	ft^2
Wetted Perimeter	2.17	ft
Hydraulic Radius	0.243	ft
Top Width	0.42	ft
Critical Depth	0.752	ft
Percent Full	93.0	%
Critical Slope	0.01821	ft/ft
Velocity	5.70	ft/s
Velocity Head	0.51	ft
Specific Energy	1.28	ft
Froude Number	0.90	
Maximum Discharge	3.01	ft^3/s
Discharge Full	2.76	ft^3/s
Slope Full	0.02145	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.000	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.000	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	93.037	%
Downstream Velocity	Infinity	ft/s

Worksheet for SEGMENT 1

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	0.775	ft
Critical Depth	0.752	ft
Channel Slope	0.01800	ft/ft
Critical Slope	0.01821	ft/ft

Worksheet for SEGMENT 2

Project Description

Friction Method	Kutter Formula
Solve For	Discharge

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.06320	ft/ft
Normal Depth	0.775	ft
Diameter	0.833	ft

Results

Discharge	5.649	ft^3/s
Flow Area	0.53	ft^2
Wetted Perimeter	2.17	ft
Hydraulic Radius	0.243	ft
Top Width	0.42	ft
Critical Depth	0.825	ft
Percent Full	93.0	%
Critical Slope	0.06855	ft/ft
Velocity	10.69	ft/s
Velocity Head	1.78	ft
Specific Energy	2.55	ft
Froude Number	1.69	
Maximum Discharge	5.65	ft^3/s
Discharge Full	5.17	ft^3/s
Slope Full	0.07545	ft/ft
Flow Type	SuperCritical	

GVF Input Data

Downstream Depth	0.000	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.000	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	93.037	%
Downstream Velocity	Infinity	ft/s

Worksheet for SEGMENT 2

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	0.775	ft
Critical Depth	0.825	ft
Channel Slope	0.06320	ft/ft
Critical Slope	0.06855	ft/ft

Worksheet for SEGMENT 3

Project Description

Friction Method	Kutter Formula
Solve For	Discharge

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.01000	ft/ft
Normal Depth	0.775	ft
Diameter	0.833	ft

Results

Discharge	2.243	ft^3/s
Flow Area	0.53	ft^2
Wetted Perimeter	2.17	ft
Hydraulic Radius	0.243	ft
Top Width	0.42	ft
Critical Depth	0.669	ft
Percent Full	93.0	%
Critical Slope	0.01187	ft/ft
Velocity	4.25	ft/s
Velocity Head	0.28	ft
Specific Energy	1.06	ft
Froude Number	0.67	
Maximum Discharge	2.24	ft^3/s
Discharge Full	2.05	ft^3/s
Slope Full	0.01190	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.000	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.000	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	93.037	%
Downstream Velocity	Infinity	ft/s

Worksheet for SEGMENT 3

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	0.775	ft
Critical Depth	0.669	ft
Channel Slope	0.01000	ft/ft
Critical Slope	0.01187	ft/ft

Worksheet for SEGMENTS 4-5

Project Description

Friction Method	Kutter Formula
Solve For	Discharge

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.00400	ft/ft
Normal Depth	0.930	ft
Diameter	1.000	ft

Results

Discharge	2.341	ft^3/s
Flow Area	0.76	ft^2
Wetted Perimeter	2.61	ft
Hydraulic Radius	0.292	ft
Top Width	0.51	ft
Critical Depth	0.655	ft
Percent Full	93.0	%
Critical Slope	0.00789	ft/ft
Velocity	3.08	ft/s
Velocity Head	0.15	ft
Specific Energy	1.08	ft
Froude Number	0.44	
Maximum Discharge	2.34	ft^3/s
Discharge Full	2.15	ft^3/s
Slope Full	0.00475	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.000	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.000	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	93.000	%
Downstream Velocity	Infinity	ft/s

Worksheet for SEGMENTS 4-5

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	0.930	ft
Critical Depth	0.655	ft
Channel Slope	0.00400	ft/ft
Critical Slope	0.00789	ft/ft

Worksheet for SEGMENTS 6-10

Project Description

Friction Method	Kutter Formula
Solve For	Discharge

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.00400	ft/ft
Normal Depth	1.163	ft
Diameter	1.250	ft

Results

Discharge	4.321	ft^3/s
Flow Area	1.19	ft^2
Wetted Perimeter	3.26	ft
Hydraulic Radius	0.365	ft
Top Width	0.64	ft
Critical Depth	0.842	ft
Percent Full	93.0	%
Critical Slope	0.00729	ft/ft
Velocity	3.63	ft/s
Velocity Head	0.20	ft
Specific Energy	1.37	ft
Froude Number	0.47	
Maximum Discharge	4.32	ft^3/s
Discharge Full	3.97	ft^3/s
Slope Full	0.00473	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.000	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.000	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	93.040	%
Downstream Velocity	Infinity	ft/s

Worksheet for SEGMENTS 6-10

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	1.163	ft
Critical Depth	0.842	ft
Channel Slope	0.00400	ft/ft
Critical Slope	0.00729	ft/ft

Worksheet for SEGMENT 11

Project Description

Friction Method	Kutter Formula
Solve For	Discharge

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.02560	ft/ft
Normal Depth	0.930	ft
Diameter	1.000	ft

Results

Discharge	5.946	ft^3/s
Flow Area	0.76	ft^2
Wetted Perimeter	2.61	ft
Hydraulic Radius	0.292	ft
Top Width	0.51	ft
Critical Depth	0.954	ft
Percent Full	93.0	%
Critical Slope	0.02581	ft/ft
Velocity	7.81	ft/s
Velocity Head	0.95	ft
Specific Energy	1.88	ft
Froude Number	1.13	
Maximum Discharge	5.95	ft^3/s
Discharge Full	5.45	ft^3/s
Slope Full	0.03034	ft/ft
Flow Type	SuperCritical	

GVF Input Data

Downstream Depth	0.000	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.000	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	93.000	%
Downstream Velocity	Infinity	ft/s

Worksheet for SEGMENT 11

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	0.930	ft
Critical Depth	0.954	ft
Channel Slope	0.02560	ft/ft
Critical Slope	0.02581	ft/ft

Worksheet for SEGMENTS 12, 14

Project Description

Friction Method	Kutter Formula
Solve For	Discharge

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.00560	ft/ft
Normal Depth	1.163	ft
Diameter	1.250	ft

Results

Discharge	5.118	ft^3/s
Flow Area	1.19	ft^2
Wetted Perimeter	3.26	ft
Hydraulic Radius	0.365	ft
Top Width	0.64	ft
Critical Depth	0.917	ft
Percent Full	93.0	%
Critical Slope	0.00815	ft/ft
Velocity	4.30	ft/s
Velocity Head	0.29	ft
Specific Energy	1.45	ft
Froude Number	0.55	
Maximum Discharge	5.12	ft^3/s
Discharge Full	4.70	ft^3/s
Slope Full	0.00662	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.000	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.000	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	93.040	%
Downstream Velocity	Infinity	ft/s

Worksheet for SEGMENTS 12, 14

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	1.163	ft
Critical Depth	0.917	ft
Channel Slope	0.00560	ft/ft
Critical Slope	0.00815	ft/ft

Worksheet for SEGMENT 13

Project Description

Friction Method	Kutter Formula
Solve For	Discharge

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.01240	ft/ft
Normal Depth	1.163	ft
Diameter	1.250	ft

Results

Discharge	7.628	ft^3/s
Flow Area	1.19	ft^2
Wetted Perimeter	3.26	ft
Hydraulic Radius	0.365	ft
Top Width	0.64	ft
Critical Depth	1.096	ft
Percent Full	93.0	%
Critical Slope	0.01289	ft/ft
Velocity	6.41	ft/s
Velocity Head	0.64	ft
Specific Energy	1.80	ft
Froude Number	0.83	
Maximum Discharge	7.63	ft^3/s
Discharge Full	7.01	ft^3/s
Slope Full	0.01466	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.000	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.000	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	93.040	%
Downstream Velocity	Infinity	ft/s

Worksheet for SEGMENT 13

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	1.163	ft
Critical Depth	1.096	ft
Channel Slope	0.01240	ft/ft
Critical Slope	0.01289	ft/ft

Worksheet for SEGMENT 15

Project Description

Friction Method	Kutter Formula
Solve For	Discharge

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.00720	ft/ft
Normal Depth	1.163	ft
Diameter	1.250	ft

Results

Discharge	5.807	ft^3/s
Flow Area	1.19	ft^2
Wetted Perimeter	3.26	ft
Hydraulic Radius	0.365	ft
Top Width	0.64	ft
Critical Depth	0.975	ft
Percent Full	93.0	%
Critical Slope	0.00911	ft/ft
Velocity	4.88	ft/s
Velocity Head	0.37	ft
Specific Energy	1.53	ft
Froude Number	0.63	
Maximum Discharge	5.81	ft^3/s
Discharge Full	5.34	ft^3/s
Slope Full	0.00851	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.000	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.000	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	93.040	%
Downstream Velocity	Infinity	ft/s

Worksheet for SEGMENT 15

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	1.163	ft
Critical Depth	0.975	ft
Channel Slope	0.00720	ft/ft
Critical Slope	0.00911	ft/ft

Worksheet for SEGMENTS 16, 33, 39-40

Project Description

Friction Method	Kutter Formula
Solve For	Discharge

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.00600	ft/ft
Normal Depth	1.395	ft
Diameter	1.500	ft

Results

Discharge	8.720	ft^3/s
Flow Area	1.71	ft^2
Wetted Perimeter	3.91	ft
Hydraulic Radius	0.438	ft
Top Width	0.77	ft
Critical Depth	1.143	ft
Percent Full	93.0	%
Critical Slope	0.00800	ft/ft
Velocity	5.09	ft/s
Velocity Head	0.40	ft
Specific Energy	1.80	ft
Froude Number	0.60	
Maximum Discharge	8.72	ft^3/s
Discharge Full	8.03	ft^3/s
Slope Full	0.00707	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.000	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.000	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	93.000	%
Downstream Velocity	Infinity	ft/s

Worksheet for SEGMENTS 16, 33, 39-40

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	1.395	ft
Critical Depth	1.143	ft
Channel Slope	0.00600	ft/ft
Critical Slope	0.00800	ft/ft

Worksheet for SEGMENTS 17-20

Project Description

Friction Method	Kutter Formula
Solve For	Discharge

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.00600	ft/ft
Normal Depth	1.163	ft
Diameter	1.250	ft

Results

Discharge	5.299	ft^3/s
Flow Area	1.19	ft^2
Wetted Perimeter	3.26	ft
Hydraulic Radius	0.365	ft
Top Width	0.64	ft
Critical Depth	0.933	ft
Percent Full	93.0	%
Critical Slope	0.00838	ft/ft
Velocity	4.45	ft/s
Velocity Head	0.31	ft
Specific Energy	1.47	ft
Froude Number	0.57	
Maximum Discharge	5.30	ft^3/s
Discharge Full	4.87	ft^3/s
Slope Full	0.00710	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.000	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.000	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	93.040	%
Downstream Velocity	Infinity	ft/s

Worksheet for SEGMENTS 17-20

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	1.163	ft
Critical Depth	0.933	ft
Channel Slope	0.00600	ft/ft
Critical Slope	0.00838	ft/ft

Worksheet for SEGMENT 21

Project Description

Friction Method	Kutter Formula
Solve For	Discharge

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.02000	ft/ft
Normal Depth	0.930	ft
Diameter	1.000	ft

Results

Discharge	5.255	ft^3/s
Flow Area	0.76	ft^2
Wetted Perimeter	2.61	ft
Hydraulic Radius	0.292	ft
Top Width	0.51	ft
Critical Depth	0.929	ft
Percent Full	93.0	%
Critical Slope	0.02002	ft/ft
Velocity	6.90	ft/s
Velocity Head	0.74	ft
Specific Energy	1.67	ft
Froude Number	1.00	
Maximum Discharge	5.25	ft^3/s
Discharge Full	4.82	ft^3/s
Slope Full	0.02381	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.000	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.000	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	93.000	%
Downstream Velocity	Infinity	ft/s

Worksheet for SEGMENT 21

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	0.930	ft
Critical Depth	0.929	ft
Channel Slope	0.02000	ft/ft
Critical Slope	0.02002	ft/ft

Worksheet for SEGMENTS 22-27

Project Description

Friction Method	Kutter Formula
Solve For	Discharge

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.00240	ft/ft
Normal Depth	1.395	ft
Diameter	1.500	ft

Results

Discharge	5.495	ft^3/s
Flow Area	1.71	ft^2
Wetted Perimeter	3.91	ft
Hydraulic Radius	0.438	ft
Top Width	0.77	ft
Critical Depth	0.904	ft
Percent Full	93.0	%
Critical Slope	0.00606	ft/ft
Velocity	3.21	ft/s
Velocity Head	0.16	ft
Specific Energy	1.55	ft
Froude Number	0.38	
Maximum Discharge	5.49	ft^3/s
Discharge Full	5.06	ft^3/s
Slope Full	0.00282	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.000	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.000	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	93.000	%
Downstream Velocity	Infinity	ft/s

Worksheet for SEGMENTS 22-27

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	1.395	ft
Critical Depth	0.904	ft
Channel Slope	0.00240	ft/ft
Critical Slope	0.00606	ft/ft

Worksheet for SEGMENT 28

Project Description

Friction Method	Kutter Formula
Solve For	Discharge

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.00760	ft/ft
Normal Depth	1.395	ft
Diameter	1.500	ft

Results

Discharge	9.819	ft^3/s
Flow Area	1.71	ft^2
Wetted Perimeter	3.91	ft
Hydraulic Radius	0.438	ft
Top Width	0.77	ft
Critical Depth	1.209	ft
Percent Full	93.0	%
Critical Slope	0.00902	ft/ft
Velocity	5.73	ft/s
Velocity Head	0.51	ft
Specific Energy	1.91	ft
Froude Number	0.68	
Maximum Discharge	9.82	ft^3/s
Discharge Full	9.04	ft^3/s
Slope Full	0.00896	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.000	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.000	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	93.000	%
Downstream Velocity	Infinity	ft/s

Worksheet for SEGMENT 28

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	1.395	ft
Critical Depth	1.209	ft
Channel Slope	0.00760	ft/ft
Critical Slope	0.00902	ft/ft

Worksheet for SEGMENT 29

Project Description

Friction Method	Kutter Formula
Solve For	Discharge

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.00680	ft/ft
Normal Depth	1.395	ft
Diameter	1.500	ft

Results

Discharge	9.286	ft^3/s
Flow Area	1.71	ft^2
Wetted Perimeter	3.91	ft
Hydraulic Radius	0.438	ft
Top Width	0.77	ft
Critical Depth	1.178	ft
Percent Full	93.0	%
Critical Slope	0.00849	ft/ft
Velocity	5.42	ft/s
Velocity Head	0.46	ft
Specific Energy	1.85	ft
Froude Number	0.64	
Maximum Discharge	9.29	ft^3/s
Discharge Full	8.55	ft^3/s
Slope Full	0.00801	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.000	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.000	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	93.000	%
Downstream Velocity	Infinity	ft/s

Worksheet for SEGMENT 29

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	1.395	ft
Critical Depth	1.178	ft
Channel Slope	0.00680	ft/ft
Critical Slope	0.00849	ft/ft

Worksheet for SEGMENTS 30, 35-37

Project Description

Friction Method	Kutter Formula
Solve For	Discharge

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.00400	ft/ft
Normal Depth	1.395	ft
Diameter	1.500	ft

Results

Discharge	7.111	ft^3/s
Flow Area	1.71	ft^2
Wetted Perimeter	3.91	ft
Hydraulic Radius	0.438	ft
Top Width	0.77	ft
Critical Depth	1.033	ft
Percent Full	93.0	%
Critical Slope	0.00687	ft/ft
Velocity	4.15	ft/s
Velocity Head	0.27	ft
Specific Energy	1.66	ft
Froude Number	0.49	
Maximum Discharge	7.11	ft^3/s
Discharge Full	6.55	ft^3/s
Slope Full	0.00471	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.000	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.000	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	93.000	%
Downstream Velocity	Infinity	ft/s

Worksheet for SEGMENTS 30, 35-37

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	1.395	ft
Critical Depth	1.033	ft
Channel Slope	0.00400	ft/ft
Critical Slope	0.00687	ft/ft

Worksheet for SEGMENTS 31, 34

Project Description

Friction Method	Kutter Formula
Solve For	Discharge

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.00640	ft/ft
Normal Depth	1.395	ft
Diameter	1.500	ft

Results

Discharge	9.007	ft^3/s
Flow Area	1.71	ft^2
Wetted Perimeter	3.91	ft
Hydraulic Radius	0.438	ft
Top Width	0.77	ft
Critical Depth	1.161	ft
Percent Full	93.0	%
Critical Slope	0.00824	ft/ft
Velocity	5.26	ft/s
Velocity Head	0.43	ft
Specific Energy	1.82	ft
Froude Number	0.62	
Maximum Discharge	9.01	ft^3/s
Discharge Full	8.29	ft^3/s
Slope Full	0.00754	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.000	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.000	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	93.000	%
Downstream Velocity	Infinity	ft/s

Worksheet for SEGMENTS 31, 34

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	1.395	ft
Critical Depth	1.161	ft
Channel Slope	0.00640	ft/ft
Critical Slope	0.00824	ft/ft

Worksheet for SEGMENT 32

Project Description

Friction Method	Kutter Formula
Solve For	Discharge

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.01040	ft/ft
Normal Depth	1.163	ft
Diameter	1.250	ft

Results

Discharge	6.984	ft^3/s
Flow Area	1.19	ft^2
Wetted Perimeter	3.26	ft
Hydraulic Radius	0.365	ft
Top Width	0.64	ft
Critical Depth	1.059	ft
Percent Full	93.0	%
Critical Slope	0.01132	ft/ft
Velocity	5.87	ft/s
Velocity Head	0.54	ft
Specific Energy	1.70	ft
Froude Number	0.76	
Maximum Discharge	6.98	ft^3/s
Discharge Full	6.42	ft^3/s
Slope Full	0.01231	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.000	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.000	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	93.040	%
Downstream Velocity	Infinity	ft/s

Worksheet for SEGMENT 32

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	1.163	ft
Critical Depth	1.059	ft
Channel Slope	0.01040	ft/ft
Critical Slope	0.01132	ft/ft

Worksheet for SEGMENT 38

Project Description

Friction Method	Kutter Formula
Solve For	Discharge

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.01120	ft/ft
Normal Depth	1.395	ft
Diameter	1.500	ft

Results

Discharge	11.927	ft^3/s
Flow Area	1.71	ft^2
Wetted Perimeter	3.91	ft
Hydraulic Radius	0.438	ft
Top Width	0.77	ft
Critical Depth	1.311	ft
Percent Full	93.0	%
Critical Slope	0.01170	ft/ft
Velocity	6.96	ft/s
Velocity Head	0.75	ft
Specific Energy	2.15	ft
Froude Number	0.82	
Maximum Discharge	11.93	ft^3/s
Discharge Full	10.98	ft^3/s
Slope Full	0.01320	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.000	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.000	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	93.000	%
Downstream Velocity	Infinity	ft/s

Worksheet for SEGMENT 38

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	1.395	ft
Critical Depth	1.311	ft
Channel Slope	0.01120	ft/ft
Critical Slope	0.01170	ft/ft

Worksheet for SEGMENT 41

Project Description

Friction Method	Kutter Formula
Solve For	Discharge

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.01840	ft/ft
Normal Depth	1.395	ft
Diameter	1.500	ft

Results

Discharge	15.295	ft^3/s
Flow Area	1.71	ft^2
Wetted Perimeter	3.91	ft
Hydraulic Radius	0.438	ft
Top Width	0.77	ft
Critical Depth	1.412	ft
Percent Full	93.0	%
Critical Slope	0.01841	ft/ft
Velocity	8.93	ft/s
Velocity Head	1.24	ft
Specific Energy	2.63	ft
Froude Number	1.05	
Maximum Discharge	15.30	ft^3/s
Discharge Full	14.09	ft^3/s
Slope Full	0.02169	ft/ft
Flow Type	SuperCritical	

GVF Input Data

Downstream Depth	0.000	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.000	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	93.000	%
Downstream Velocity	Infinity	ft/s

Worksheet for SEGMENT 41

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	1.395	ft
Critical Depth	1.412	ft
Channel Slope	0.01840	ft/ft
Critical Slope	0.01841	ft/ft

Worksheet for MH 28 DISCHARGE

Project Description

Friction Method	Kutter Formula
Solve For	Discharge

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.00280	ft/ft
Normal Depth	0.917	ft
Diameter	1.500	ft

Results

Discharge	3.809	ft^3/s
Flow Area	1.13	ft^2
Wetted Perimeter	2.69	ft
Hydraulic Radius	0.420	ft
Top Width	1.46	ft
Critical Depth	0.746	ft
Percent Full	61.1	%
Critical Slope	0.00550	ft/ft
Velocity	3.36	ft/s
Velocity Head	0.18	ft
Specific Energy	1.09	ft
Froude Number	0.67	
Maximum Discharge	5.94	ft^3/s
Discharge Full	5.47	ft^3/s
Slope Full	0.00137	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.000	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.000	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	61.133	%
Downstream Velocity	Infinity	ft/s

Worksheet for MH 28 DISCHARGE

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	0.917	ft
Critical Depth	0.746	ft
Channel Slope	0.00280	ft/ft
Critical Slope	0.00550	ft/ft

Worksheet for MH 780 DISCHARGE

Project Description

Friction Method	Kutter Formula
Solve For	Discharge

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.00240	ft/ft
Normal Depth	1.098	ft
Diameter	1.500	ft

Results

Discharge	4.535	ft^3/s
Flow Area	1.39	ft^2
Wetted Perimeter	3.08	ft
Hydraulic Radius	0.450	ft
Top Width	1.33	ft
Critical Depth	0.818	ft
Percent Full	73.2	%
Critical Slope	0.00571	ft/ft
Velocity	3.27	ft/s
Velocity Head	0.17	ft
Specific Energy	1.26	ft
Froude Number	0.56	
Maximum Discharge	5.49	ft^3/s
Discharge Full	5.06	ft^3/s
Slope Full	0.00194	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.000	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.000	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	73.200	%
Downstream Velocity	Infinity	ft/s

Worksheet for MH 780 DISCHARGE

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	1.098	ft
Critical Depth	0.818	ft
Channel Slope	0.00240	ft/ft
Critical Slope	0.00571	ft/ft

Worksheet for 18" TRUNK LINE MH DISCHARGE

Project Description

Friction Method	Kutter Formula
Solve For	Discharge

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.00480	ft/ft
Normal Depth	0.088	ft
Diameter	1.500	ft

Results

Discharge	0.038	ft^3/s
Flow Area	0.04	ft^2
Wetted Perimeter	0.73	ft
Hydraulic Radius	0.057	ft
Top Width	0.70	ft
Critical Depth	0.071	ft
Percent Full	5.8	%
Critical Slope	0.01260	ft/ft
Velocity	0.91	ft/s
Velocity Head	0.01	ft
Specific Energy	0.10	ft
Froude Number	0.66	
Maximum Discharge	7.79	ft^3/s
Discharge Full	7.18	ft^3/s
Slope Full	0.00000	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.000	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.000	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	5.833	%
Downstream Velocity	Infinity	ft/s

Worksheet for 18" TRUNK LINE MH DISCHARGE

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	0.088	ft
Critical Depth	0.071	ft
Channel Slope	0.00480	ft/ft
Critical Slope	0.01260	ft/ft

Flow Test Results

Site Report 6/16/2020

Confidential Proprietary Information

Alliance

2020.06 Langston MH 28

MH at ~25457 Langston St

Santa Clarita, CA 91355

MH # 28

Access:

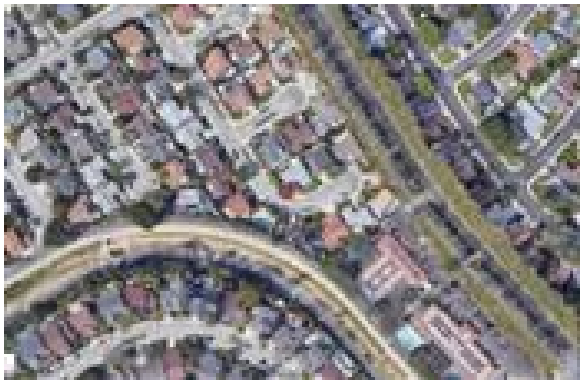
MH in northbound lane, north of address

System Type:

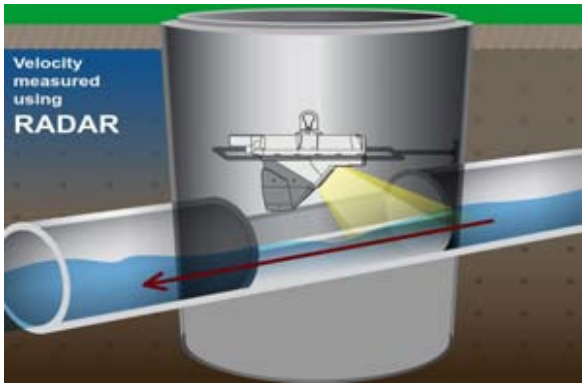
Sanitary [X] Storm [ ]

Install Date: 6/04/2020

Map



Technology



Sewer Plan

Flow Meter			
Meter Depth: 222"			
MH Coordinates: 34.390918, -118.549891			
Moderate open channel hydraulics; difficult to calibrate due to depth of MH			
Avg Velocity	Avg Measured Level		Multiplier
2.0 fps	8.66"		1.0
Gas			
O2	H2S	CO	LEL
20.9	0	0	0
Notes			
No laterals; monitored the upstream line as it generally provides the best hydraulics.			
Traffic Safety			
No formal TCP required; used cones & signs per site-specific CA MUTCD TC requirements.			
Land Use			
Residential	Commercial	Industrial	Trunk
X			

Manhole Depth	247"
Monitored Pipe Size	18"
Inner Pipe Size (In/Out)	18"/18"
Pipe Shape	Round
Pipe Condition	Good
Manhole Material	Concrete
Silt	None observed
Velocity Profile Data	*
Velocity Profile Taken	0.4 2-D
Sensor Offset	24.32"
Sensor Dist. to Crown	6.32"
Sensor Direction	Upstream
Flow Heading	East

Meter Site Document

2020.06 Langston MH 28

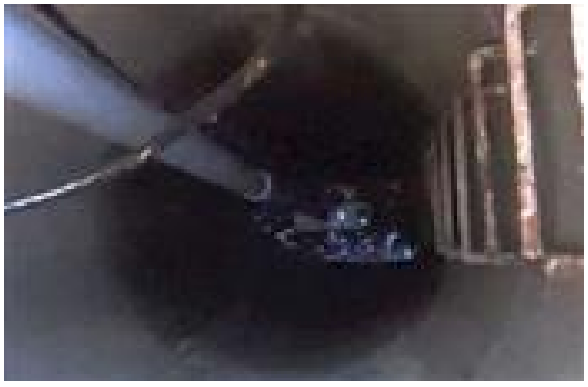
MH at ~25457 Langston St

Santa Clarita, CA 91355

Site

Manhole Before Install

Installation Process



Installed

Upstream

Downstream

Temporary Flow Study

Alliance

2020.06 Langston MH 28

Meter Start Date		From	6/4/2020
Meter Stop Date		To	6/12/2020
Velocity (fps)		Level (in)	Flow (mgd)
Average	1.935	8.732	1.123
Maximum	2.500	11.010	1.827
Minimum	0.940	5.070	0.278
Pipe Size		18.000	
Estimated Capacity (mgd)		Not Calculated	
Capacity Used		Not Calculated	
Sensor Type		Hach - Flodar	

Utility Systems, Science and Software

9314 Bond Av, Suite A
El Cajon, CA 92021

601 N. Parkcenter Dr, Suite 209
Santa Ana, CA 92705

Site Report 6/16/2020

Confidential Proprietary Information

Alliance

2020.06 Orchard Village MH 780

MH at ~25456 Orchard Village Rd

Santa Clarita, CA 91355

MH # 780

Access:

MH on sidewalk next to river trailhead, north of road

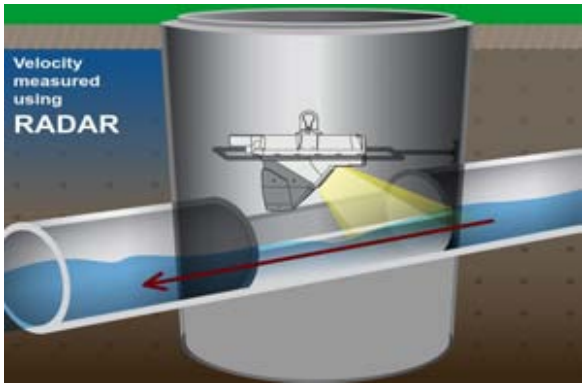
System Type:

Sanitary [X] Storm [ ]

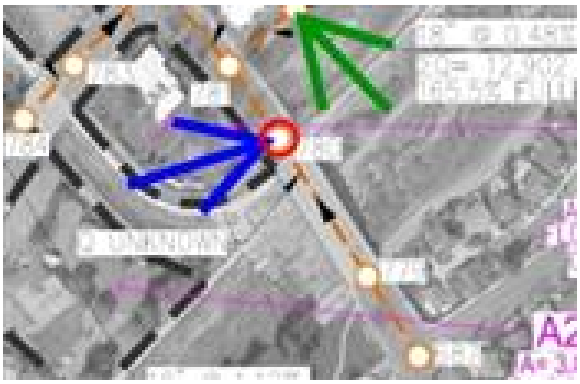
Install Date: 6/04/2020

Map

Technology



Sewer Plan



Flow Meter			
Meter Depth: 280"			
MH Coordinates: 34.389020, -118.546608			
Moderate open channel hydraulics; difficult to calibrate due to depth of MH			
Avg Velocity	Avg Measured Level		Multiplier
1.5 fps	10.75"		1.0
Gas			
O2	H2S	CO	LEL
20.9	0	0	0
Notes			
No laterals; monitored the upstream line as it generally provides the best hydraulics.			
Traffic Safety			
No formal TCP required; used cones & signs to designate work space for pedestrians.			
Land Use			
Residential	Commercial	Industrial	Trunk
X			

Manhole Depth	305"
Monitored Pipe Size	18"
Inner Pipe Size (In/Out)	18"/18"
Pipe Shape	Round
Pipe Condition	Good
Manhole Material	Concrete
Silt	1.5"
Velocity Profile Data	*
Velocity Profile Taken	0.4 2-D
Sensor Offset	25.11"
Sensor Dist. to Crown	7.11"
Sensor Direction	Upstream
Flow Heading	North

Meter Site Document

2020.06 Orchard Village MH 780

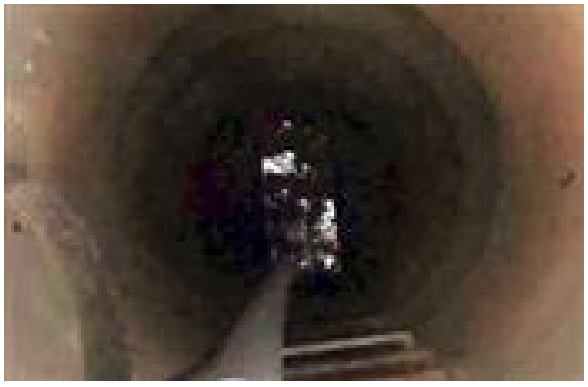
MH at ~25456 Orchard Village Rd

Santa Clarita, CA 91355

Site

Manhole Before Install

Installation Process



Installed

Upstream

Downstream

Temporary Flow Study

Alliance

2020.06 Orchard Village MH 780

Meter Start Date		From	6/4/2020
Meter Stop Date		To	6/12/2020
Velocity (fps)		Level (in)	Flow (mgd)
Average	1.506	10.838	1.050
Maximum	2.230	13.180	1.794
Minimum	0.510	8.410	0.250
Pipe Size		18.000	
Estimated Capacity (mgd)		Not Calculated	
Capacity Used		Not Calculated	
Sensor Type		Hach - Flodar	

Utility Systems, Science and Software

9314 Bond Av, Suite A
El Cajon, CA 92021

601 N. Parkcenter Dr, Suite 209
Santa Ana, CA 92705

Site Report 6/16/2020

Confidential Proprietary Information

Alliance

2020.06 Wiley Canyon MH

MH at ~23520 Wiley Canyon Rd
Santa Clarita, CA 91355
MH # unknown

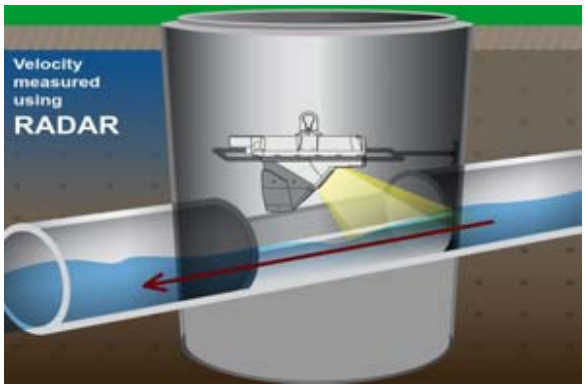
Access:
MH in open space, east of address

System Type:
Sanitary [X] Storm [ ]

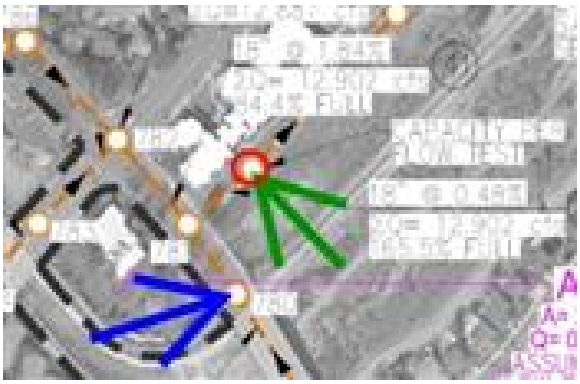
Install Date: 6/04/2020

Map

Technology



Sewer Plan



Flow Meter		
Meter Depth: 192"		
MH Coordinates: 34.389601, -118.546630		
Low to no flow; difficult to calibrate due to depth of MH & flow levels		
Avg Velocity	Avg Measured Level	Multiplier
0.5 fps	0.25"	1.0

Gas			
O2	H2S	CO	LEL
20.9	0	0	0

Notes
No laterals; monitored the upstream line as it generally provides the best hydraulics.

Traffic Safety
MH in open space, no traffic control required.

Land Use			
Residential	Commercial	Industrial	Trunk
X			X

Manhole Depth	226"
Monitored Pipe Size	18"
Inner Pipe Size (In/Out)	18"/18"
Pipe Shape	Round
Pipe Condition	Good
Manhole Material	Concrete
Silt	Intermittent
Velocity Profile Data	*
Velocity Profile Taken	0.4 2-D
Sensor Offset	34.28"
Sensor Dist. to Crown	16.28"
Sensor Direction	Upstream
Flow Heading	East

Meter Site Document

2020.06 Wiley Canyon MH

MH at ~23520 Wiley Canyon Rd

Santa Clarita, CA 91355

Site

Manhole Before Install

Installation Process

Installed

Upstream

Downstream

Temporary Flow Study

Alliance

2020.06 Wiley Canyon MH

Meter Start Date		From	6/4/2020
Meter Stop Date		To	6/12/2020
Velocity (fps)		Level (in)	Flow (mgd)
Average	0.488	0.255	0.004
Maximum	2.980	1.050	0.060
Minimum	0.000	0.000	0.000
Pipe Size		18.000	
Estimated Capacity (mgd)		Not Calculated	
Capacity Used		Not Calculated	
Sensor Type		Hach - Flodar	

Utility Systems, Science and Software

9314 Bond Av, Suite A
El Cajon, CA 92021

601 N. Parkcenter Dr, Suite 209
Santa Ana, CA 92705

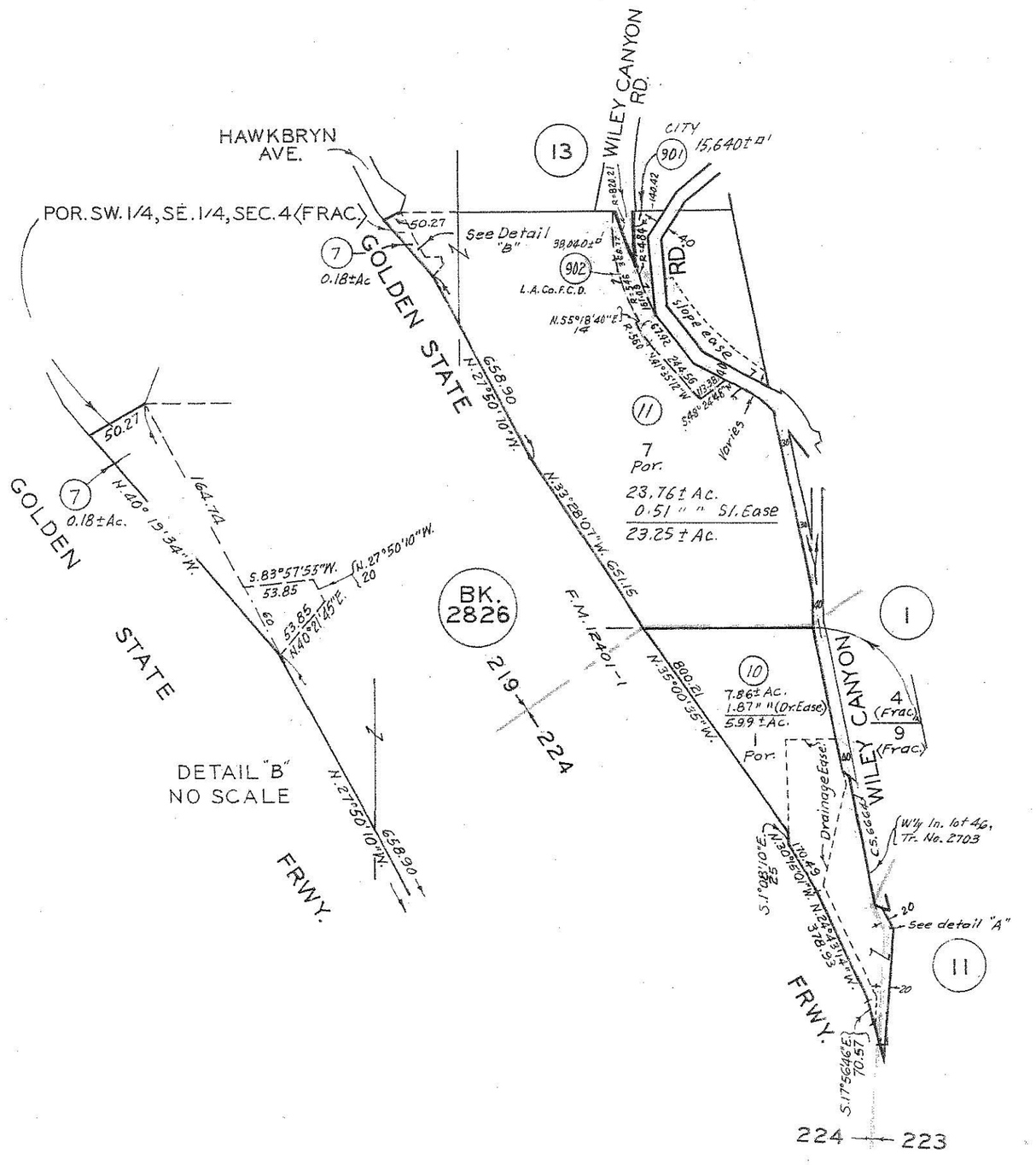
Appendix E

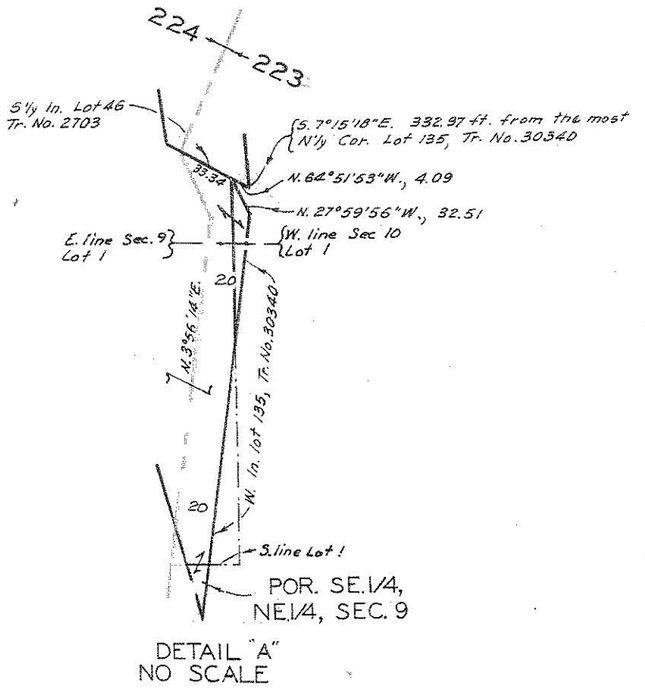
APN/Tract Maps

2825 12

SCALE 1" = 400'

7404
740732
741010
741011
741015
771027
860626
860812
880321
880427
9007190200G001-
931220070100 01-B1
950314
960506
1999012902006001-B1
20051026100030 01-B1





CODE
219
223
224

T.3N., R.16W.

FOR PREV. ASSM'T SEE
2825 - 5 & 7

ASSESSOR'S MAP
COUNTY OF LOS ANGELES, CALIF.

LEGAL DESCRIPTION:

PARCEL A:
PARCEL 1:
ALL THAT CERTAIN PARCEL OF LAND ACQUIRED BY THE STATE OF CALIFORNIA BY PARCEL 4 OF DEED 63, RECORDED MARCH 22, 1951 AS INSTRUMENT NO. 3206 IN BOOK 35868 PAGE 28, OF OFFICIAL RECORDS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY AND THAT CERTAIN PARCEL OF LAND ACQUIRED BY THE STATE OF CALIFORNIA BY DEED 31, RECORDED IN BOOK 8172 PAGE 187, OF SAID OFFICIAL RECORDS, BOUNDED NORTHWESTERLY BY THAT CERTAIN COURSE HAVING A BEARING AND DISTANCE OF NORTH 62°16'58" EAST 50.27 FEET IN PARCEL 2 OF STATE HIGHWAY RELINQUISHMENT NUMBER 602, RECORDED IN BOOK R6678 PAGE 858 OF SAID OFFICIAL RECORDS, AND BOUNDED SOUTHWESTERLY BY THE FOLLOWING DESCRIBED LINE:

BEGINNING AT THE SOUTHWESTERLY CORNER OF SAID PARCEL 4; THENCE NORTHWESTERLY IN A DIRECT LINE TO THE SOUTHWESTERLY TERMINUS OF SAID COURSE, HAVING A BEARING OF NORTH 62°16'18" EAST, TOGETHER WITH ALL THE RIGHTS OF ACCESS AS ACQUIRED BY THE STATE OF CALIFORNIA BY SAID PARCEL 4.

EXCEPT THEREFROM ALL OIL, GAS, MINERALS, AND OTHER HYDROCARBON SUBSTANCES LYING BELOW THE SURFACE OF SAID LAND, BUT WITH NO RIGHT OF SURFACE ENTRY AS PROVIDED IN DEEDS OF RECORDS.

ALSO EXCEPT THEREFROM, ALL OIL, MINERALS, NATURAL GAS AND OTHER HYDROCARBONS BY WHATSOEVER NAME KNOWN THAT MAY BE WITHIN OR UNDER THE HEREIN CONVEYED PARCEL OF LAND, AND THE RIGHTS THERETO, TOGETHER WITH CERTAIN OTHER CONDITIONS, AS ACCEPTED AND RESERVED IN SAID DEED 63.

ALL THAT CERTAIN PARCEL OF LAND AS DESCRIBED IN AND CONVEYED BY THAT CERTAIN DIRECTOR'S DEED AS RECORDED ON APRIL 14, 1971 AS INSTRUMENT NO. 1770 OF THE OFFICIAL RECORDS IN THE OFFICE OF THE COUNTY RECORDER OF THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA.

PARCEL 2:
THAT PORTION OF LOT 7 AND OF THE SOUTHWEST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 4, TOWNSHIP 3 NORTH, RANGE 16 WEST, SAN BERNARDINO BASE AND MERIDIAN, IN THE CITY OF SANTA CLARITA, IN THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT MAP THEREOF, DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHEAST CORNER OF SAID SECTION 4; THENCE NORTHERLY ALONG THE EASTERLY LINE OF SAID SECTION TO THE NORTHEAST CORNER OF SAID LOT 7; THENCE WESTERLY ALONG THE NORTHERLY LINE OF SAID LOT 7 TO THE EASTERLY LINE OF THE WESTERLY 380 FEET OF SAID LOT 7; THENCE SOUTHERLY ALONG SAID LAST MENTIONED EASTERLY LINE TO THE SOUTHERLY LINE OF THE NORTHERLY 270 FEET OF SAID LOT 7; THENCE WESTERLY ALONG SAID SOUTHERLY LINE AND ITS WESTERLY PROLONGATION TO THE NORTHEASTERLY LINE OF THE LAND DESCRIBED IN THE DEED TO THE STATE OF CALIFORNIA, RECORDED ON JUNE 28, 1929 AS INSTRUMENT NO. 1085, IN BOOK 8172 PAGE 187, OFFICIAL RECORDS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY; THENCE SOUTHEASTERLY ALONG SAID NORTHEASTERLY LINE, TO AND ALONG THE NORTHEASTERLY LINE TO THE LAND DESCRIBED IN PARCEL 2-A (AMENDED) OF THE FINAL ORDER OF CONDEMNATION ENTERED IN CASE NO. 860012, SUPERIOR COURT OF THE STATE OF CALIFORNIA FOR THE COUNTY OF LOS ANGELES, A CERTIFIED COPY OF WHICH BEING RECORDED ON MAY 13, 1966 AS INSTRUMENT NO. 3063 IN BOOK D3304 PAGE 451, OFFICIAL RECORDS, OF SAID COUNTY TO THE SOUTHERLY LINE OF SAID SECTION; THENCE EASTERLY ALONG SAID SOUTHERLY LINE TO THE POINT OF BEGINNING.

EXCEPT THEREFROM THAT PORTION OF SAID LAND DESCRIBED AS PARCEL NO. 117A IN THE FINAL ORDER OF CONDEMNATION, ENTERED IN CASE NO. C 546819, SUPERIOR COURT OF LOS ANGELES, RECORDED MAY 22, 1990 AS INSTRUMENT NO. 90-925383, OCTOBER 1, 1990 AS INSTRUMENT NO. 90-1674164, AND FEBRUARY 4, 1991 AS INSTRUMENT NO. 91-166097, ALL OF OFFICIAL RECORDS.

ALSO EXCEPT THEREFROM THAT PORTION OF SAID LAND DESCRIBED IN EXHIBIT "A" AND DEPICTED IN EXHIBIT "B" IN THE DEED TO THE CITY OF SANTA CLARITA, RECORDED SEPTEMBER 28, 1998 AS INSTRUMENT NO. 98-1754090, OFFICIAL RECORDS.

PARCEL 3:
THAT PORTION OF LOT 7 AND OF THE SOUTHWEST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 4, TOWNSHIP 3 NORTH, RANGE 16 WEST, SAN BERNARDINO BASE AND MERIDIAN, IN THE CITY OF SANTA CLARITA, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT MAP THEREOF, DESCRIBED AS FOLLOWS:

BEGINNING AT THE INTERSECTION OF THE NORTHERLY LINE OF SAID LOT 7 WITH THE EASTERLY LINE OF THE WESTERLY 380 FEET OF SAID LOT 7; THENCE SOUTHERLY ALONG SAID EASTERLY LINE TO THE SOUTHERLY LINE OF THE NORTHERLY 270 FEET OF LOT 7; THENCE WESTERLY ALONG SAID SOUTHERLY LINE AND ITS WESTERLY PROLONGATION TO THE NORTHEASTERLY LINE OF THE LAND DESCRIBED IN THE DEED TO THE STATE OF CALIFORNIA, RECORDED ON JUNE 28, 1929 AS INSTRUMENT NO. 1085, IN BOOK 8172 PAGE 187, OFFICIAL RECORDS, IN SAID OFFICE OF THE COUNTY RECORDER; THENCE NORTHWESTERLY ALONG SAID NORTHEASTERLY LINE TO THE NORTHERLY LINE OF SAID SOUTHWEST QUARTER THENCE EASTERLY ALONG SAID NORTHERLY LINE AND SAID NORTHERLY LINE OF LOT 7 TO THE POINT OF BEGINNING.

EXCEPT THAT PORTION WITHIN THE LINES OF THE LAND DESCRIBED IN PARCEL 4 OF THE DEED TO THE STATE OF CALIFORNIA, RECORDED MARCH 22, 1951 AS INSTRUMENT NO. 3206, IN BOOK 35868 PAGE 28, OF SAID OFFICIAL RECORDS.

PARCEL B:
PARCEL 1:
THAT PORTION OF THE NORTHEAST QUARTER OF FRACTIONAL SECTION 9, TOWNSHIP 3 NORTH, RANGE 16 WEST, SAN BERNARDINO MERIDIAN, IN THE CITY OF SANTA CLARITA, IN THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT OF SAID LAND FILED IN THE DISTRICT LAND OFFICE ON JUNE 29, 1897, DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHEAST CORNER OF THE NORTHEAST QUARTER OF SAID SECTION 9; THENCE ALONG THE EAST LINE OF SAID QUARTER SECTION, NORTH 0° 12' EAST 1508.90 FEET TO THE TRUE POINT OF BEGINNING; THENCE SOUTH 4° 25' WEST 200.90 FEET; THENCE SOUTH 12° 35' WEST 356.04 FEET; THENCE SOUTH 32° 25' WEST TO THE EASTERLY TERMINUS OF THAT CERTAIN COURSE DESCRIBED IN THE DEED TO THE STATE OF CALIFORNIA, RECORDED APRIL 6, 1951 AS INSTRUMENT NO. 3492, IN BOOK 35992 PAGE 102, OFFICIAL RECORDS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY, AS HAVING A BEARING AND LENGTH OF "NORTH 75° 26' 10" EAST 251.75 FEET"; THENCE WESTERLY ALONG SAID CERTAIN COURSE TO THE WESTERLY LINE OF WILEY CANYON ROAD, 40 FEET WIDE, AS SHOWN ON COUNTY SURVEYOR'S MAP NO. 6664 ON FILE IN THE OFFICE OF THE COUNTY ENGINEER OF SAID COUNTY, SAID WESTERLY LINE BEING ALSO THE EASTERLY LINE OF THE LAND DESCRIBED IN PARCEL 1 OF THE DEED TO THE STATE OF CALIFORNIA, RECORDED ON JUNE 21, 1965 AS INSTRUMENT NO. 940, IN BOOK D-2947 PAGE 229, OFFICIAL RECORDS OF SAID COUNTY; THENCE NORTHERLY AND NORTHWESTERLY ALONG THE EASTERLY AND NORTHEASTERLY LINES OF SAID PARCEL 1 TO THE NORTHERLY LINE OF SAID SECTION; THENCE EASTERLY AND SOUTHERLY ALONG THE NORTHERLY AND EASTERLY LINES OF SAID SECTION TO THE POINT OF BEGINNING.

EXCEPT ANY PORTION LYING EASTERLY OF THE WESTERLY LINE OF WILEY CANYON ROAD, 40 FEET WIDE, AS DESCRIBED IN BOOK 761 PAGE 303 OF DEEDS.

PARCEL 2:
THAT PORTION OF WILEY CANYON ROAD, 40 FEET WIDE, IN THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, AS SHOWN ON MAP OF TRACT NO. 30340, FILED IN BOOK 741 PAGES 62 TO 68 INCLUSIVE OF MAPS, IN THE OFFICE OF THE RECORDER OF SAID COUNTY, WHICH EXTENDS FROM THE NORTHERLY PROLONGATION OF THAT CERTAIN COURSE OF NORTH 18° 50' 39" WEST 260.94 FEET IN THE WESTERLY BOUNDARY OF LOT 135 OF SAID TRACT, NORTHERLY TO THE NORTHWESTERLY CONTINUATION OF THAT CERTAIN 1240 FOOT RADIUS CURVE IN THE NORTHEASTERLY BOUNDARY OF SAID LOT.

APN: 2825-012-007 (Affects: Parcel 1 of Parcel A)
2825-012-011 (Affects: Parcels 2 and 3 of Parcel A)
and 2825-012-010 (Affects: Parcel B)

EASEMENTS

8. Rights of the public in and to that portion of the land lying within any road, street and/or highway.

9. Water rights, claims or title to water, whether or not shown by the public records.
(Affects Parcel 1 of Parcel A and Parcel B)

10. Any facts, rights, interests or claims which would be disclosed by a correct ALTA/NSPS survey.

11. Rights of parties in possession.

THE FOLLOWING MATTERS AFFECT PARCEL A:

12. An oil and gas lease executed by Walter E. Berman and Dorothy Berman, husband and wife, as to an undivided one-half (1/2) interest; and Charles M. Monell, an unmarried man, as to an undivided one-half (1/2) interest as lessor and W. O. Anderson and J. I. Anderson as lessee, recorded as Book M3146 Page 316 of Official Records. Defects, liens, encumbrances or other matters affecting the leasehold estate, whether or not shown by the public records are not shown herein.

13. An easement for road purposes over a strip of land 40 feet wide, includes in Wiley Canyon Road, as shown on County Surveyor's Map No. 6664 on file in the Office of the county surveyor of said County of Los Angeles. (13)

14. An easement for public utility and incidental purposes, recorded May 13, 1966 as Instrument No. 3063 in Book D3304 Page 451 of Official Records. (14)
In Favor of: State of California
Affects: as described therein

15. A waiver of any claims for damages by reason of the location, construction, landscaping or maintenance of a contiguous freeway, highway or roadway, as contained in the document recorded as Book D3304 Page 451 of Official Records.

16. Abutter's rights of ingress and egress to or from freeway have been relinquished in the document recorded April 14, 1971 as Instrument No. 1770 of Official Records.
(Affects Parcel 1)

17. An easement for public utilities and incidental purposes, recorded March 20, 1975 as Instrument No. 2388 of Official Records. (17)
In Favor of: Southern California Edison Company, a Corporation
Affects: as described therein

18. An easement for underground cables, wires, wave guides and conduits together with all necessary related underground surface and above ground pedestals and incidental purposes, recorded April 10, 1975 as Instrument No. 1597 of Official Records. (18)
In Favor of: The Pacific Telephone and Telegraph Company, a Corporation
Affects: as described therein

19. An easement for slope and incidental purposes, recorded September 28, 1998 as Instrument No. 98-1754090 of Official Records. (19)
In Favor of: The City of Santa Clarita
Affects: as described therein

20. A notice of power to sell tax defaulted property dated June 30, 2012 executed by the county tax collector for non-payment of delinquent taxes recorded August 19, 2015 as Instrument No. 2015-1018841 of Official Records.
(Affects Parcel 1)

21. A notice of power to sell tax defaulted property dated June 30, 2012 executed by the county tax collector for non-payment of delinquent taxes recorded August 19, 2015 as Instrument No. 2015-1018843 of Official Records.
(Affects Parcels 2 and 3)

THE FOLLOWING MATTERS AFFECT PARCEL B:

22. An easement for pole lines and incidental purposes in the document recorded in Book 2646 of Deeds, Page 261. The location of the easement cannot be determined from record information. (22)

23. An easement for pipe line for the transportation of water and incidental purposes, recorded in Book 4130 of Deeds, Page 27.
In Favor of: Standard Oil Company, a Corporation — **SAID EASEMENT IS BLANKET IN NATURE**
Affects: as described therein
The location of the easement cannot be determined from record information.

24. An easement for pipe lines for the transportation of oil, petroleum, gas or water and for telegraph and telephone lines and incidental purposes, recorded in Book 6741 of Deeds, Page 15.
In Favor of: Standard Oil Company, a Corporation — **SAID EASEMENT IS INDETERMINATE IN NATURE**
Affects: as described therein
The location of the easement cannot be determined from record information.

25. Easements and rights of way over the lands herein described which may be necessary for the lessee in the lease recorded October 16, 1951 in Book 37430 Page 234, Official Records, in its operation upon the lands retained by it under the provisions of said lease.
The location of the easement cannot be determined from record information.

26. An easement for drainage, pipe, communication and power lines and temporary construction purposes and incidental purposes, recorded June 21, 1965 as Instrument No. 940, in Book D2947 Page 229 of Official Records. (26)
In Favor of: State Of California
Affects: as described therein
The terms and provisions contained in the document entitled "Director's Deed" recorded June 17, 1969 as Instrument No. 2524 of Official Records.

27. Abutter's rights of ingress and egress to or from Golden State Freeway have been relinquished in the document recorded June 21, 1965 as Instrument No. 940 of Official Records.

28. A waiver of any claims for damages by reason of the location, construction, landscaping or maintenance of a contiguous freeway, highway or roadway, as contained in the document recorded June 21, 1965 as Instrument No. 940 of Official Records.

29. An easement for public utilities and incidental purposes, recorded October 17, 1973 as Instrument No. 2858 of Official Records. (29)
In Favor of: The Pacific Telephone and Telegraph Company
Affects: as described therein

30. Any private easements or lesser rights in, to, over Wiley Canyon Road that were not affected by the proceedings vacating said road, as the same was vacated by instrument recorded May 24, 1974 as Instrument No. 4414, Official Records. (30)

31. An easement for public utilities and incidental purposes, recorded May 05, 1982 as Instrument No. 82-462869 of Official Records.
In Favor of: The Pacific Telephone and Telegraph Company
Affects: as described therein — **SAID EASEMENT IS INDETERMINATE IN NATURE**
The location of the easement cannot be determined from record information.

32. An easement for public utilities and incidental purposes, recorded May 18, 1982 as Instrument No. 82-506871 of Official Records.
In Favor of: The Pacific Telephone and Telegraph Company
Affects: as described therein — **SAID EASEMENT IS INDETERMINATE IN NATURE**
The location of the easement cannot be determined from record information.

33. An easement for public utilities and incidental purposes, recorded July 22, 1985 as Instrument No. 85-839958 of Official Records. (33)
In Favor of: Pacific Bell
Affects: as described therein
The location of the easement cannot be determined from record information.

34. Survey prepared by SR Consultants West, Inc., dated December 21, 2004, revised January 14, 2005 and revised March 10, 2005, under Job No. 946 H, shows the following:
A. The facts that power poles and signs are located on said land.
B. The fact that parking spaces are located along the southeasterly portion of said land.

35. A notice of power to sell tax defaulted property dated June 30, 2012 executed by the county tax collector for non-payment of delinquent taxes recorded August 19, 2015 as Instrument No. 2015-1018842 of Official Records.

36. An easement shown or dedicated on the map of Assessor's Map recorded on file in Book 2825, Page 012, of Assessor's Maps. (36)
For: Drainage and incidental purposes

SURVEYOR'S CERTIFICATE:

TO: WILEY CYN LLC AND FIRST AMERICAN TITLE INSURANCE COMPANY:

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2016 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 2, 3, 4, 6, 8 AND 14 OF TABLE A THEREOF. THE FIELDWORK WAS COMPLETED ON MAY 18, 2018.

LICENSED LAND SURVEYOR
MICHAEL A. KENNADA
L.S.5642
STATE OF CALIFORNIA

DATE OF MAP : 05/28/18

Michael A. Kennada

MICHAEL A. KENNADA LS 5642

BASIS OF BEARINGS:

THE BEARINGS SHOWN HEREON ARE BASED ON THE BEARING NORTH 10°55'20" WEST OF THE WESTERLY LINE OF THE RANCHO SAN FRANCISCO AS SHOWN ON RECORD OF SURVEY FILED IN BOOK 258 PAGES 31 THROUGH 38, INCLUSIVE, OF RECORD OF SURVEY, IN THE OFFICE OF THE COUNTY RECORDER OF LOS ANGELES COUNTY, AND SHOWN AS NORTH 10°55'18" WEST ON THIS MAP.

NOTES

FLOOD ZONE DESIGNATION:
BASED ON THE FEDERAL EMERGENCY AGENCY (FEMA) FLOOD INSURANCE RATE MAP COMMUNITY PANEL NOS. 06037C1031F DATED SEPTEMBER 26, 2008, THE SUBJECT SITE IS IN ZONE "A" AND "AO (DEPTH 3')".

ZONE "A" DEFINED AS "NO BASE FLOOD ELEVATIONS DETERMINED".
ZONE "AO" DEFINED AS "FLOOD DEPTHS OF 1 TO 3 FEET (USUALLY SHEET FLOW ON SLOPING TERRAIN); AVERAGE DEPTHS DETERMINED. FOR AREAS OF ALLUVIAL FAN FLOODING, VELOCITIES ALSO DETERMINED".

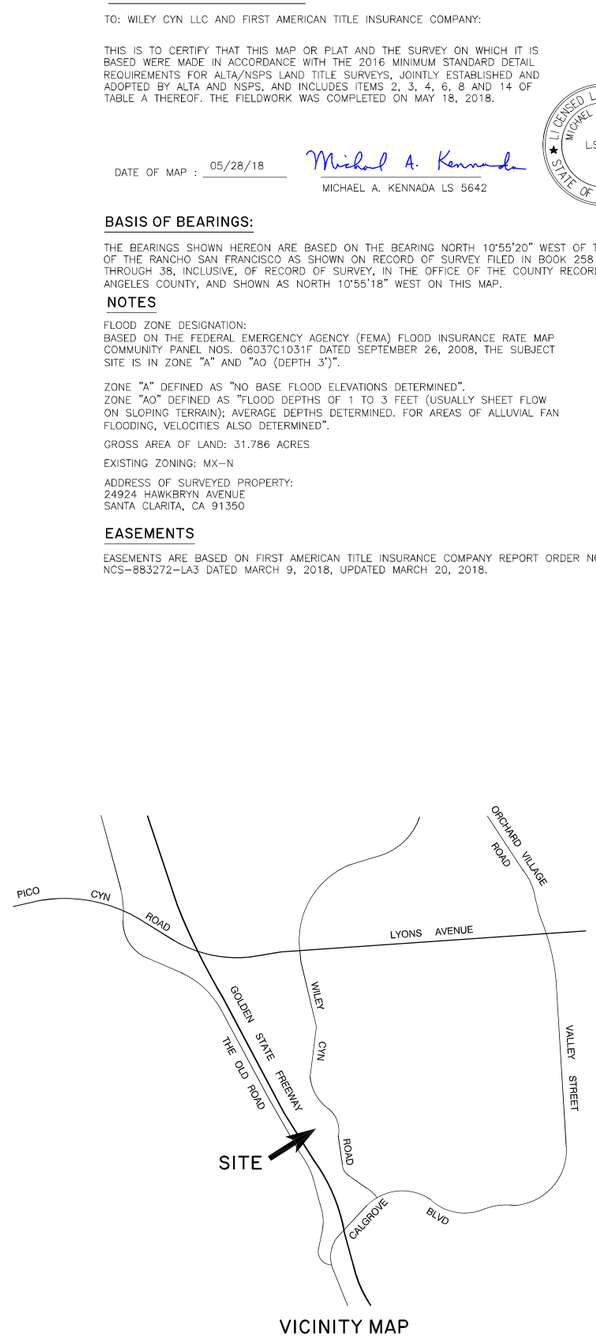
GROSS AREA OF LAND: 31.786 ACRES

EXISTING ZONING: MX-N

ADDRESS OF SURVEYED PROPERTY:
24924 HAWKBRYN AVENUE
SANTA CLARITA, CA 91350

EASEMENTS

EASEMENTS ARE BASED ON FIRST AMERICAN TITLE INSURANCE COMPANY REPORT ORDER NO. NCS-883272-LA3 DATED MARCH 9, 2018, UPDATED MARCH 20, 2018.



VICINITY MAP

PREPARED FOR:
WILEY CYN LLC
13120 TELFAIR AVENUE
SYLMAR, CA 91342

NO.	REVISION	DATE	CHK'D BY

Vertex Survey, Inc.
28348 Constellation Road, Suite 800
Santa Clarita, CA 91355
Tel: 661-254-1928
Fax: 661-254-1929

VERTEX SURVEY INC.

ALTA/NSPS LAND TITLE SURVEY
FOR
SMISER PROPERTY

W.O.: _____ SCALE: _____ DATE: 05/28/2018 SHEET 1 OF 4 SHEETS

98-1754090 BOUNDARY OF LAND OF THE CITY OF SANTA CLARITA AS DESCRIBED IN DEED RECORDED SEPTEMBER 28, 1998 AS INSTRUMENT NO. 98-1754090, OR ESTAB. AT RECORD ANGLES AND DISTANCES PER SAID DEED

91-166097 BOUNDARY OF LAND OF THE LOS ANGELES COUNTY FLOOD CONTROL DISTRICT AS DESCRIBED IN DEED RECORDED FEBRUARY 4, 1991 AS INSTRUMENT NO. 91-166097, OR ESTAB. AT RECORD ANGLES AND DISTANCES PER SAID DEED

90-925383 BOUNDARY OF LAND OF THE LOS ANGELES COUNTY FLOOD CONTROL DISTRICT AS DESCRIBED IN DEED RECORDED MAY 22, 1990 AS INSTRUMENT NO. 90-925383, AND RECORDED OCTOBER 1, 1990 AS INSTRUMENT NO. 90-1674164, OR ESTAB. AT RECORD ANGLES AND DISTANCES PER SAID DEED

D3304/451 BOUNDARY OF LAND OF THE STATE OF CALIFORNIA AS DESCRIBED IN DEED RECORDED MAY 13, 1966 AS INSTRUMENT NO. 3063 IN BOOK D3304 PAGE 451, OR. PARCEL 2A (AMENDED). ESTAB. AT RECORD ANGLES AND DISTANCES PER RS 281-1-13

8172/187 BOUNDARY OF LAND OF THE STATE OF CALIFORNIA AS DESCRIBED IN DEED RECORDED JUNE 28, 1929 AS INSTRUMENT NO. 1085 IN BOOK 8172 PAGE 187, OR. ESTAB. AT RECORD ANGLES AND DISTANCES PER RS 281-1-13

D2947/229 BOUNDARY OF LAND OF THE STATE OF CALIFORNIA AS DESCRIBED IN DEED RECORDED JUNE 21, 1965 AS INSTRUMENT NO. 940 IN BOOK D2947 PAGE 229, OR. ESTAB. AT RECORD ANGLES AND DISTANCES PER RS 281-1-13

INST4414 BOUNDARY OF LAND OF DESCRIBED IN DEED RECORDED MAY 24, 1974 AS INSTRUMENT NO. 4414, OR. ESTAB. AT RECORD ANGLES AND DISTANCES PER SAID DEED

SOUTH ¼ CORNER SECTION 4
FD. COUNTY SURVEYOR BRASS CAP
MONUMENT "RE 7078" PER CSB 5390

FD. 1 ½" IP, EMPTY
N89°22'13"W 2.01'
HELD FOR LINE EAST-WEST

PARCEL A:
PARCEL 1

PARCEL A:
PARCEL 3

PARCEL A:
PARCEL 2

PARCEL B:
PARCEL 1

PARCEL B:
PARCEL 2

GOLDEN STATE FREEWAY

WILEY CANYON ROAD

WILEY CANYON ROAD 40'

WILEY 40'

EAST LINE OF THE WEST 380' OF LOT 7 SE¼ FRACTIONAL SECTION 4

NORTH LINE LOT 7 SE¼ FRACTIONAL SECTION 4

WESTERLY LINE OF THE RANCHO SAN FRANCISCO

EASTERLY LINE SECTION 4

SOUTHWESTERLY LINE OF THE RANCHO SAN FRANCISCO

POB PARCEL A: PARCEL 3

POB PARCEL A: PARCEL 2

SOUTHEAST CORNER SECTION 4
FD. COUNTY SURVEYOR BRASS CAP
MONUMENT "RE 7078" PER CSB 5390

FD. ¾" IP "LS 5930" PER RS 204-20-21

FD. LT & TAG "LS 5930" PER RS 204-20-21

FD. ¾" IP "LS 5930" PER RS 204-20-21

STA. NO. 3
RANCHO SAN FRANCISCO
FD. SPIKE AND WASHER "LS 5930"
PER RS 204-20-21

(A) SAN FRANCISCO NO. 4
FD. SPIKE AND WASHER "LS 5930"
PER RS 204-20-21,
S03°43'59"E 0.57'
ESTAB.AT RECORD ANGLE AND
DISTANCE PER RS 258-31-38

(B) FD. SPIKE AND WASHER "LS 5930"
PER RS 204-20-21,
S01°40'02"E 0.57'

(C) FD. SPIKE AND WASHER "LS 5930"
PER RS 204-20-21,
S48°52'14"W 0.61'

(D) OLD WILEY CANYON ROAD PER CS 6664.
ESTAB. AT RECORD ANGLE AND DISTANCE
PER RS 258-31-38

(E) FD. LT & TAG "LS 5930" PER RS 204-20-21.
S01°51'41"E 0.44'

(F) FD. ¾" IP , NO TAG IN LIEU OF
"LS 5930" PER RS 204-20-21.
S17°56'19"W 0.48'.
ESTAB. BY INTERSECTION

(G) NORTHERLY PROLONGATION OF THE WESTERLY LINE OF LOT
135 OF TRACT NO. 30340 MB 741-62-68.
ESTAB. AT RECORD ANGLE AND DISTANCE PER SAID TRACT.

(H) FD. ¾" IP "LS 5930"
PER RS 204-20-21.
N06°24'09"E 3.56'
ESTAB. BY INTERSECTION

(I) FD. ¾" IP "LS 5930"
PER RS 204-20-21.
S47°06'20"E 2.83'

(J) FD. ¾" IP "LS 5930"
PER RS 204-20-21.
S45°16'11"E 2.76'

(K) FD. ¾" IP "LS 5930"
PER RS 204-20-21.
S45°44'01"E 2.81'

(L) FD. ¾" IP "LS 5930"
PER RS 204-20-21.
S45°42'57"E 2.82'

REFERENCES
RI RS 204-20-21

0' 50' 100' 200' 300' 400'
SCALE: 1" = 100'

PREPARED FOR:
WILEY CYN LLC
13120 TELFAIR AVENUE
SYLMAR, CA 91342

NO.	REVISION	DATE	CHK'D BY

Vertex Survey, Inc.
28348 Constellation Road, Suite 800
Santa Clarita, CA 91355
Tel: 661-254-1928
Fax: 661-254-1929

ALTA/NSPS LAND TITLE SURVEY
FOR
SMISER PROPERTY

W.O.: _____ SCALE: 1" = 100' DATE: 05/28/2018 SHEET 2 OF 4 SHEETS

LEGEND

BELL	BELL SYSTEM MANHOLE
BM	PAC BELL UNDERGROUND MARKER RISER
CH	CONCRETE CHANNEL
GP	GUY POLE
GW	GUY WIRE
POL	POINT ON CHAIN LINK FENCE
PP	POWER POLE
TP	TELEPHONE COMPANY PEDESTAL

0' 30' 60' 120' 180' 240'

SCALE: 1" = 60'

PREPARED FOR:

WILEY CYN LLC
13120 TELFAIR AVENUE
SYLMAR, CA 91342

NO.	REVISION	DATE	CHK'D BY

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28348 Constellation Road, Suite 800
Santa Clarita, CA 91355
Tel: 661-254-1928
Fax: 661-254-1929

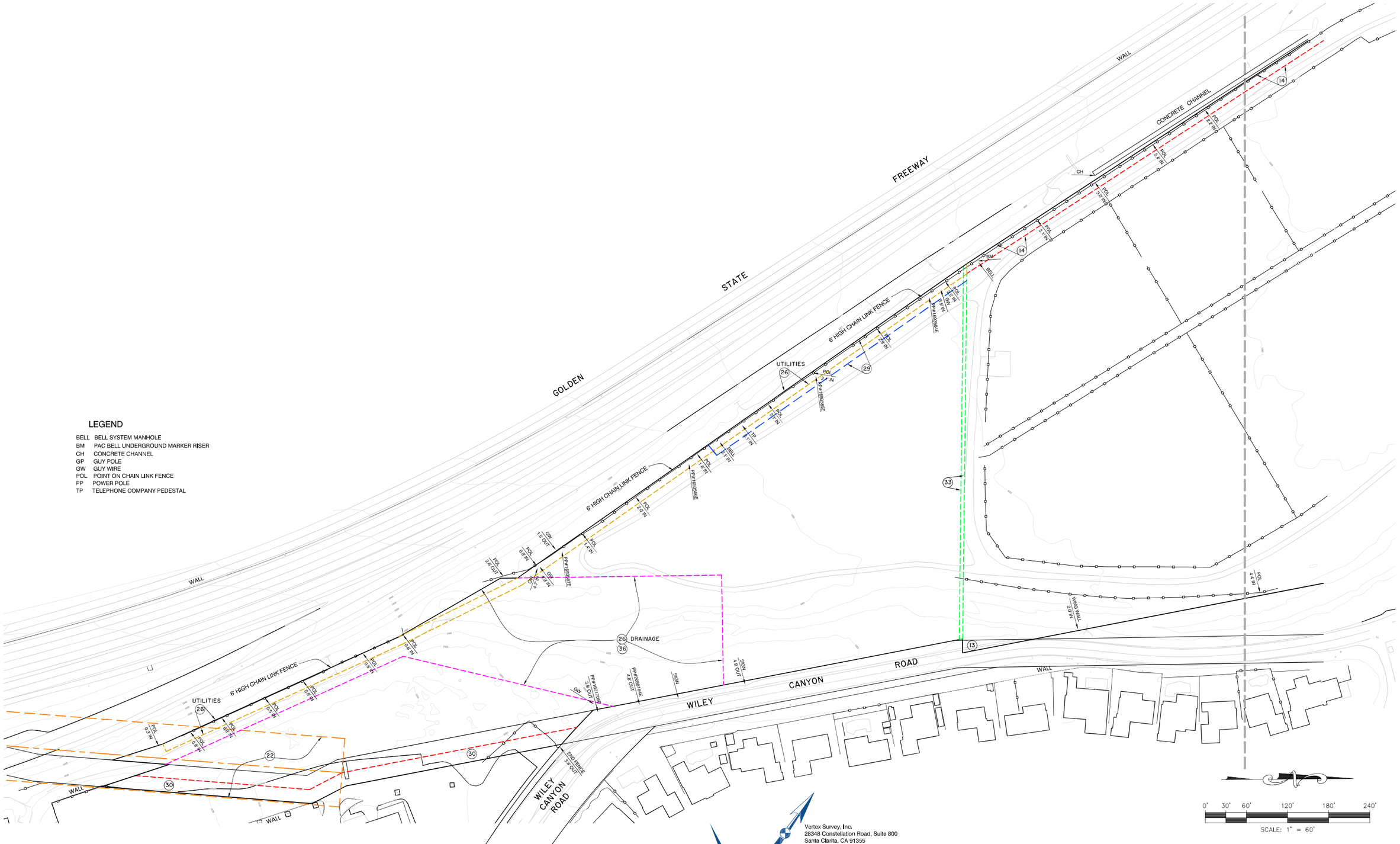
VERTEX SURVEY INC.

ALTA/NSPS LAND TITLE SURVEY
FOR
SMISER PROPERTY

W.O.: _____ SCALE: 1" = 60' DATE: 05/28/2018 SHEET 3 OF 4 SHEETS

LEGEND

BELL BELL SYSTEM MANHOLE
BM PAC BELL UNDERGROUND MARKER RISER
CH CONCRETE CHANNEL
GP GUY POLE
GW GUY WIRE
POL POINT ON CHAIN LINK FENCE
PP POWER POLE
TP TELEPHONE COMPANY PEDESTAL



Vertex Survey, Inc.
28348 Constellation Road, Suite 800
Santa Clarita, CA 91355
Tel: 661-254-1928
Fax: 661-254-1929

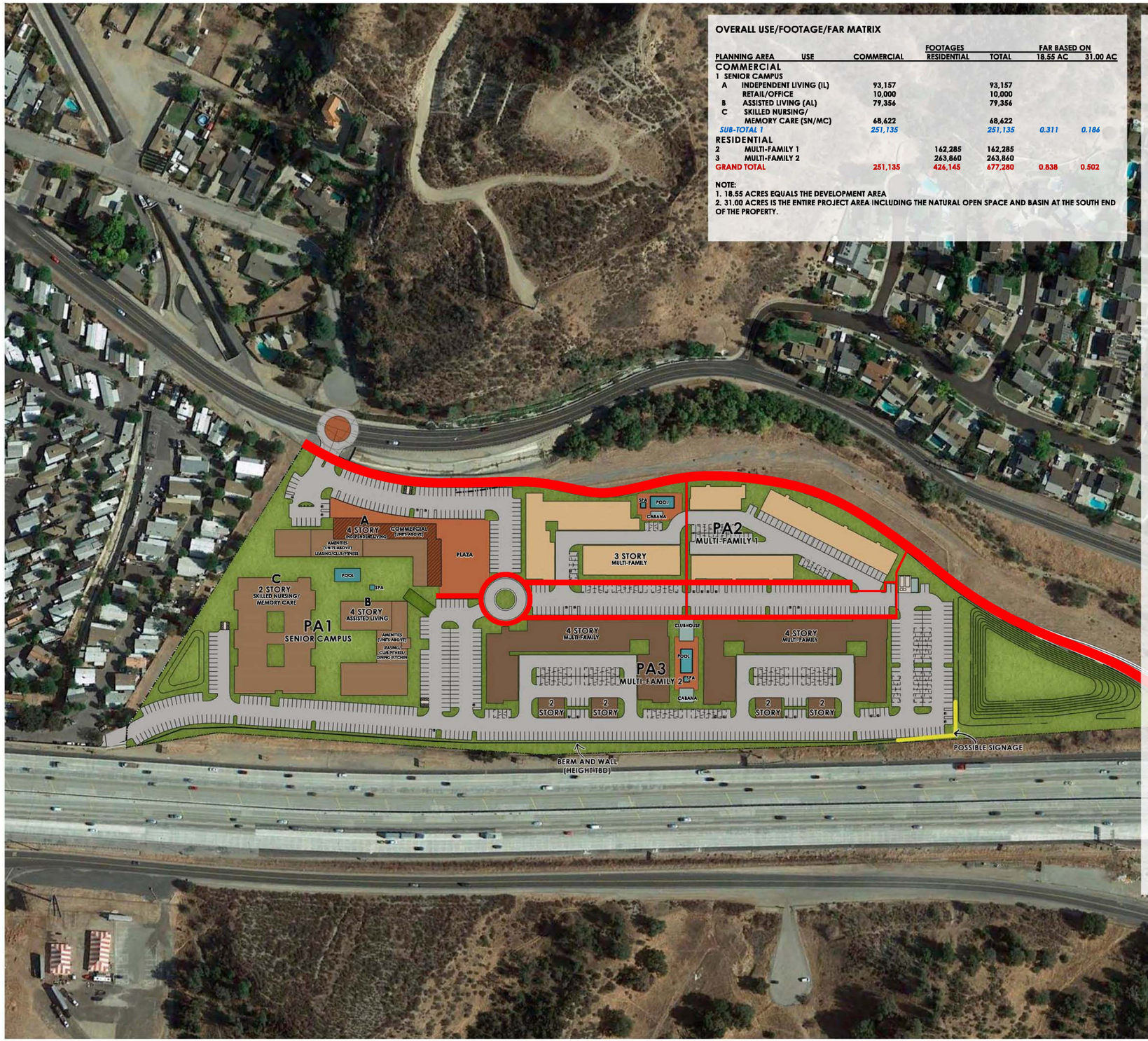
PREPARED FOR:

WILEY CYN LLC
13120 TELFAIR AVENUE
SYLMAR, CA 91342

NO.	REVISION	DATE	CHK'D BY

ALTA/NSPS LAND TITLE SURVEY
FOR
SMISER PROPERTY

W.O.: _____ SCALE: 1" = 60' DATE: 05/28/2018 SHEET 4 OF 4 SHEETS



OVERALL USE/FOOTAGE/FAR MATRIX

PLANNING AREA	USE	COMMERCIAL	FOOTAGES RESIDENTIAL	TOTAL	FAR BASED ON 18.55 AC	31.00 AC
COMMERCIAL						
1	SENIOR CAMPUS					
A	INDEPENDENT LIVING (IL)	93,157		93,157		
	RETAIL/OFFICE	10,000		10,000		
B	ASSISTED LIVING (AL)	79,356		79,356		
C	SKILLED NURSING/ MEMORY CARE (SN/MC)	68,622		68,622		
SUB-TOTAL 1		*251,135*		*251,135*	*0.311*	*0.186*
RESIDENTIAL						
2	MULTI-FAMILY 1		162,285	162,285		
3	MULTI-FAMILY 2		263,860	263,860		
GRAND TOTAL		251,135	426,145	677,280	0.838	0.502

NOTE:
1. 18.55 ACRES EQUALS THE DEVELOPMENT AREA
2. 31.00 ACRES IS THE ENTIRE PROJECT AREA INCLUDING THE NATURAL OPEN SPACE AND BASIN AT THE SOUTH END OF THE PROPERTY.

DETAILED PROGRAM/PARKING MATRIX

PA	USE	STORIES	UNITS/ ROOMS	ACRES	PROGRAM MIX	%	NRSF	PARKING REQ/PROP RATIO	NUMBER	PARKING PROVIDED GARAGE	CARPORT	OPEN	TOTAL
COMMERCIAL													
1	SENIOR CAMPUS												
A	IL	4	87 DU		65 1 BEDROOM	75%	700						
					22 2 BEDROOM	25%	875						
					87 FLATS			1.0 SP/DU	87			87	87
								1 SP/8 DU GUEST	11			11	11
	COMMERCIAL	GRND LVL			10.000 SF			1.0 SP/200 SF	50			50	50
					DELIVERY VAN				1			1	1
B	AL	4	90 DU/100 BEDS		10 STUDIOS	11%	450						
					70 1 BEDROOM	78%	550						
					10 2 BEDROOM	11%	750						
					90 FLATS			0.5 SP/DU	45			45	45
								1 SP/8 DU GUEST	12			12	12
C	SN/MC	2	42 RMS/44 BDS					0.5 SP/RM	21			21	21
					DELIVERY VAN				1			1	1
SUB-TOTAL 1			*177 DU/42 RMS*	*6.67*					*228*			*228*	*228*
RESIDENTIAL													
2	MULTI-FAMILY	3 + MEZ			1 BEDROOM								
					23 CARRIAGE		725						
					18 ST FLATS		750						
					41 1 BEDRMS	28%		1.0 SP/DU	41				
					1 BED + MEZ								
					13 CARRIAGE		925						
					9 ST FLATS		950						
					22 1 BD+MEZ	15%		1.0 SP/DU	22				
					2 BEDROOM								
					35 CARRIAGE		950						
					6 ST FLATS		1050						
					41 2 BEDRMS	28%		2.0 SP/DU	82				
					2 BED + MEZ								
					29 CARRIAGE		1150						
					3 ST FLATS		1250						
					32 2 BD+MEZ	22%		2.0 SP/DU	64				
					3 BEDROOM								
					9 ST FLATS		1250						
					9 3 BEDRMS	6%		2.0 SP/DU	18				
					GUEST 145			0.50 SP/DU	73				
SUB-TOTAL 2			*145*	*4.16*	*145*		*138,650*	*300*		*89*	*57*	*154*	*300*
								(2.07 SP/DU)					*(2.07 SP/DU)*
3	MULTI-FAMILY	4+ MEZ			EFFICIENCY								
					24 ST FLATS		600						
					24 EFF	11%		1.0 SP/DU	24				
					EFF + MEZ								
					8 ST FLATS		800						
					8 EFF+MEZ	4%		1.0 SP/DU	8				
					1 BEDROOM								
					45 ST FLATS		750						
					45 1 BEDRMS	20%		1.0 SP/DU	45				
					1 BED + MEZ								
					15 ST FLATS		950						
					15 1 BD+MEZ	7%		1.0 SP/DU	15				
					2 BEDROOM								
					36 CARRIAGE		950						
					42 ST FLATS		1050						
					78 2 BEDRMS	34%		2.0 SP/DU	156				
					2 BED + MEZ								
					18 CARRIAGE		1150						
					14 ST FLATS		1250						
					32 2 BD+MEZ	14%		2.0 SP/DU	64				
					2 BEDROOM								
					8 REMOTE CARRIAGE		1100	2.0 SP/DU	16				
					3 BEDROOM								
					20 ST FLATS		1250						
					20 3 BEDRMS	9%		2.0 SP/DU	40				
					GUEST 230			0.50 SP/DU	115				
SUB-TOTAL 3			*230*	*7.72*	*230*		*219,100*	*483*		*110*	*120*	*253*	*483*
								(2.10 SP/DU)					*(2.10 SP/DU)*
GRAND TOTAL			552 + 42 ROOMS (375 DU ARE MF RESIDENTIAL AND 177 ARE COMMERCIAL)	18.55				1011		199	177	635	1011

NOTES:
1. ACCESSIBLE AND ELECTRIC VEHICLE PARKING PER STATE REQUIREMENTS ARE INCLUDED IN THE ABOVE COUNTS
2. PA 1 A-C IS PROPOSED TO HAVE ALL OPEN PARKING
3. PA 2 AND 3 ARE PROPOSED TO HAVE 1 SINGLE CAR GARAGE OR 1 CARPORT PER UNIT
4. CARPORTS STALLS ARE PROPOSED TO BE 9' WIDE AND THE 9' DIMENSIONS INCLUDE THE STRUCTURAL SUPPORTS FOR THE CARPORTS
5. IT IS PROPOSED THAT CARPORTS ARE NO ENCLOSED AND ARE OPEN ON THE SIDE AND REAR
6. IT IS PROPOSED THAT LOCKABLE STORAGE FOR UNITS THAT DO NOT HAVE GARAGES CAN PROVIDE THE 250 CF OFF A PRIVATE DECK
7. IT IS ASSUMED THE POSTAL PARKING SHALL BE INCLUDED IN THE OVERALL PARKING COUNT FOR EACH NEIGHBORHOOD
8. THERE ARE 109 UNITS WITH MEZZANINES. IT IS ASSUMED THAT FOR PURPOSES OF PARKING THE MEZZANINES ARE NOT CONSIDERED BEDROOMS
9. THE MEZZANINE SPACE FOR THE 109 UNITS HAVE AN AREA/OF 10,800 SF
10. UNDER THE MXN CODE UP TO 187 PARKING STALLS CAN BE SHARED BETWEEN THE RESIDENTIAL AND COMMERCIAL USES (375 RESIDENTIAL UNITS X 0.5 SPACES/DU)
11. IT IS ASSUMED THAT THE 200 SF OPEN SPACE REQUIREMENT PER UNIT WILL BE MET BY A COMBINATION OF PRIVATE OUTDOOR SPACE AND COMMON OPEN SPACE. THERE IS A 15' MINIMUM DIMENSION FOR THE COMMON OPEN SPACE TO BE COUNTABLE. WATER QUALITY BASINS, NATURAL WATER COURSE AND AREA EAST OF WILEY CANYON ROAD NOT COUNTABLE.
12. IT IS ASSUMED THAT A 55' HEIGHT FOR PA 3 WILL BE ALLOWED SO THAT THE MEZZANINE SPACE WILL BE FEASIBLE
13. IT IS ASSUMED THAT THE 10,000 SF COMMERCIAL (RETAIL/OFFICE USES) AND THE 68,622 SF SKILLED NURSING/MEMORY CARE USES WILL REQUIRE 1 DELIVERY VAN SPACE EACH AT 12' X 20'

WILEY CANYON

SANTA CLARITA, CA

WILEY CANYON, LLC

OPTION ONE
Site Plan

0 50' 100' 200' 300'
SCALE: 1" = 100'-0"

Architecture. Design. Relationships.

01

Job No. 2019-107
Date 2020-03-11

Appendix F

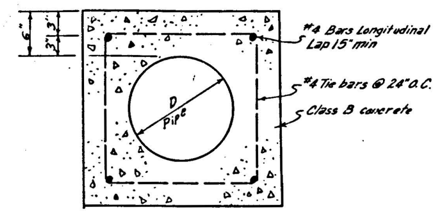
Sewer Plans

SEWER REFERENCE

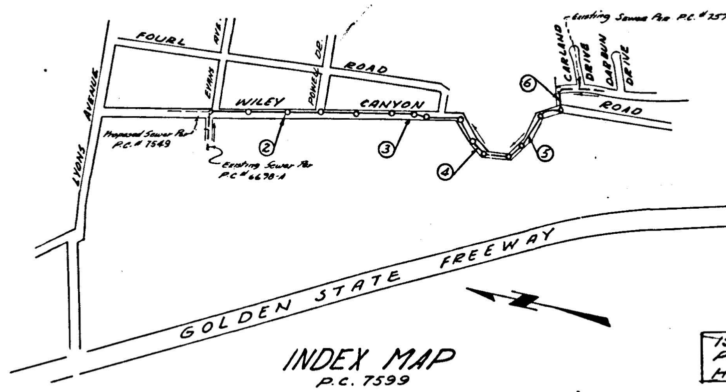
PC 7599

B.M. SL. 642 ELEV. 1262.071
Road Dept. B.M. Tag North Side Conc. Base at N.E. Corner Edison High Tension Tower No. M-3T3 W3-3 35' South of Centerline of Lyons Ave. and ±30' East of Centerline of Wiley Canyon Road.
NEWHALL QUAD. 1958

7.5-#1
010



SPECIAL ENCASEMENT DETAIL
Terminate longitudinal Bars 3" from each end of encasement



INDEX MAP
P.C. 7599
SCALE 1"= 600'

Any connection to the sewage system of County Sanitation District, provided directly or indirectly by the sewers shown on these plans, shall be considered a temporary connection until all area sewered is annexed to said district, at which time the connection shall become permanent. If for any reason the annexation to the district of any area sewered hereunder is not completed, the property not in the district will be required to disconnect unless a contract is entered into with the district providing for the disposal of sewage from the area.

REVISIONS Pg. 1&3
Revised location of J.C. @ Sta. 14+32.65 to 14+12.15. Revised alignment from Sta. 16+52.75 to 20+19.62. Added Special Encasement Detail 1
By Ralph Schafer R.C.E. 13906 Date 7/12/66

ISSUE NO HOUSE CONNECTION PERMITS UNTIL OUTFALL SEWER HAS BEEN CONSTRUCTED

NEWHALL BLDG. DIST. NO. 8.2

NOTES:

1. PROVIDE STAKES ON THE PROPERTY LINE OR PROPERTY LINES PRODUCED AT RIGHT ANGLES TO THE SEWER LINE AT THE CENTER LINE OF EACH MANHOLE.
2. NO REPRESENTATIVE OF THE COUNTY ENGINEER WILL SURVEY OR LAY OUT ANY PORTION OF THE WORK.
3. ~~THE PRIVATE ENGINEER SHALL FURNISH THE COUNTY ENGINEER WITH GRADE SHEETS AND STATIONING FOR ALL HOUSE LATERALS AND Y-BRANCHES AND SHALL PROVIDE STAKES FOR THEM AT THEIR PROPER LOCATIONS WITH STATIONING PLAINLY MARKED. ALL HOUSE LATERALS SHALL BE CONSTRUCTED IN A STRAIGHT ALIGNMENT AT RIGHT ANGLES FROM THE MAIN LINE SEWER EXCEPT AS SHOWN ON THE PLANS. HOUSE LATERALS FROM CHIMNEYS SHALL NOT HAVE AN ANGLE OF LESS THAN 45° WITH THE MAIN LINE SEWER; ANY CHANGE IN ALIGNMENT SHALL BE REQUESTED IN WRITING BY THE PRIVATE ENGINEER.~~
4. ~~THE PRIVATE ENGINEER SHALL FURNISH THE HOUSE LATERAL DEPTH AT THE PROPERTY LINE BELOW THE TOP OF CURB ELEVATION FOR EACH HOUSE LATERAL ON THE GRADE SHEET.~~
5. NO REVISIONS SHALL BE MADE IN THESE PLANS WITHOUT THE APPROVAL OF THE COUNTY ENGINEER.
6. THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION DIVISION BY TELEPHONE, MADISON 9-4747, EXT. 81551, AT LEAST TWENTY-FOUR HOURS BEFORE STARTING ANY WORK UNDER THIS CONTRACT.
7. MANHOLES SHALL BE BRICK SEWER STRUCTURES PER S-3 — PRECAST CONCRETE MANHOLES PER S-5 OR S-6 MAY BE USED AS AN ALTERNATE IN LOCATIONS APPROVED BY THE COUNTY ENGINEER.
8. USE STANDARD MANHOLE FRAMES AND COVERS, S-15, ~~EXCEPT AS NOTED.~~
9. ~~MANHOLE TOPS IN UNIMPROVED RIGHTS-OF-WAY TO BE SIX INCHES ABOVE FINISHED GRADE~~
10. USE EXTRA STRENGTH PIPE. ALL PIPE IS STANDARD DEPTH EXCEPT AS NOTED.
11. USE MECHANICAL COMPRESSION JOINTS FOR ALL V.C.P. JOINTS PER SPEC'S., SECS. 36 & 48/49
12. ~~WHERE EVER GROUND WATER IS ENCOUNTERED DURING THE CONSTRUCTION OF THE SEWERS, THE V.C.P. JOINTS SHALL BE OF JOINT COMPOUND PER SPEC'S., SECS. 33 & 40, OR MECHANICAL COMPRESSION JOINTS PER SPEC'S., SEC. 36.~~
13. IF A POWER POLE IS WITHIN THREE FEET OF THE SEWER, THE SEWER SHALL BE ENCASED, PER S-23, CASE III, TWO FEET ON EACH SIDE FROM THE POINT OF INTERFERENCE.
14. IF DURING THE COURSE OF CONSTRUCTION IT IS DETERMINED THAT THERE IS LESS THAN FOUR FEET OF COVER OVER THE TOP OF A MAIN LINE ~~OR HOUSE LATERAL~~ V.C.P. SEWER WHICH IS NOT INDICATED ON THE PLANS, THE PIPE SHALL BE ENCASED PER S-23, CASE III; UNLESS OTHERWISE APPROVED BY THE COUNTY ENGINEER.
15. ~~HOUSE LATERALS TO BE CONSTRUCTED WITH INVERTS AT PROPERTY LINE.......... FEET BELOW CURB GRADE EXCEPT AS NOTED.~~
16. RESURFACE ALL TRENCHES WITHIN PAVED AREAS TO MEET L.A. COUNTY ROAD DEPT. OR CALIFORNIA STATE HIGHWAY REQUIREMENTS IN ACCORDANCE WITH PERMITS.
17. FOR ALLOWABLE LEAKAGE TEST USE FORMULA NO. ....2......., SPEC'S., SEC. 54.
18. ~~ALL Y'S TO BE CONSTRUCTED AT STATIONS AS NOTED.~~
19. ALL STATE AND LOCAL TRENCH SAFETY ORDERS WILL BE RIGIDLY ENFORCED
20. CONSTRUCTION IN FILLED AREAS
 (a) AN ACCEPTABLE CERTIFICATION OF COMPACTION TEST RESULTS SHALL BE SUBMITTED TO THE CONSTRUCTION DIVISION COMPACTION TESTS AREA TO BE MADE IN ACCORDANCE WITH A.S.T.M. STANDARD METHOD OF TEST D-698-42 T.
 (b) NO CONSTRUCTION IS PERMITTED IN FILLED AREAS WHERE THE RELATIVE DENSITY OF COMPACTION IS LESS THAN 80%
 (c) IF THE RELATIVE DENSITY OF COMPACTION IS LESS THAN 90%, ALL MAIN LINE AND HOUSE LATERALS SHALL BE CRADLED PER S-23 OR HAVE A SPECIAL BASE COURSE PER S 22, SPECIAL MANHOLE BASES PER S-14 ARE REQUIRED.
 (d) IF THE RELATIVE DENSITY OF COMPACTION IS 90% OR GREATER, THE SPECIAL PROVISIONS (c) ARE NOT REQUIRED.
21. ALL AREAS WHERE SPECIAL BACK FILL IS CALLED FOR SHALL COMPLY WITH THE FOLLOWING:
 (a) BACKFILL TRENCH AND REPLACE OTHER EARTH REMOVED SO AS TO RESTORE THE PRE-EXISTING GRADES AND SLOPES
 (b) ALL BACKFILL AND EARTH REPLACED SHALL BE MECHANICALLY COMPACTED TO A MINIMUM OF 90% OF MAXIMUM DENSITY PER A.S.T.M. STANDARD METHOD OF TEST D698-47T
 (c) AN ACCEPTABLE CERTIFICATION OF COMPACTION TEST RESULTS SHALL BE SUBMITTED TO THE CONSTRUCTION DIVISION. COMPACTION TESTS AREA TO BE MADE IN ACCORDANCE WITH A.S.T.M. STANDARD METHOD OF TEST D-698-42 T

COLLECT CHARGES AS INDICATED
Ralph Schafer

NO CONNECTIONS FOR THE DISPOSAL OF INDUSTRIAL WASTES SHALL BE MADE TO SEWERS SHOWN ON THESE DRAWINGS WITHOUT WRITTEN PERMISSION FROM THE CHIEF ENGINEER AND GENERAL MANAGER OF THE COUNTY SANITATION DISTRICTS.

PROFILE ALIGNMENT AND GRADE OF

SANITARY SEWERS

P.C. 7599 PAGE 1

TO BE CONSTRUCTED IN

WILEY CANYON ROAD

PRIVATE CONTRACT NO. 7599

W.S. 62

3 SHEETS; 6 PAGES

SCALE: VERT. 1"=8' HORIZ. 1"=40' MAY, 1966

38634

PREPARED IN THE OFFICES OF
JENNINGS ENGINEERING CO.
1100 S. BEVERLY DRIVE, LOS ANGELES, CALIFORNIA
By: S. J. Jennings
REG. C. E. NO. 7858

FOR LEGEND SEE PLAN NO. S-1

NOTE:
GRADES TO WHICH THIS IMPROVEMENT IS TO BE CONSTRUCTED ARE SHOWN ON PLANS AND PROFILES. GRADE POINTS FOR TOP OF CURBS, CENTER LINE OF STREETS, OR CENTER LINE OF ALLEYS ARE SHOWN BY CIRCLES ON PROFILES. AT ALL POINTS BETWEEN DESIGNATED POINTS THE GRADE SHALL BE ESTABLISHED SO AS TO CONFORM TO A STRAIGHT LINE DRAWN BETWEEN SAID DESIGNATED POINTS.
ELEVATIONS ARE IN FEET ABOVE U.S.C. & G.S. SEA LEVEL DATUM OF 1929.
THIS DRAWING AND THE DATA HEREON ARE HEREBY MADE A PART OF THE SPECIFICATIONS.
WORK SHALL BE CONSTRUCTED ACCORDING TO STANDARD SPECIFICATIONS DATED Nov 25 1962 & AS REVISED, ON FILE IN THE OFFICE OF THE COUNTY ENGINEER AND SHALL BE PROSECUTED ONLY IN THE PRESENCE OF THE COUNTY ENGINEER.
BEFORE WORK CAN BE STARTED, THE CONTRACTOR MUST OBTAIN A PERMIT TO EXCAVATE IN COUNTY STREETS FROM THE L.A. COUNTY ROAD DEPT., DISTRICT OFFICE NO. .5....., AND PAY A FEE TO THE COUNTY ENGINEER, ROOM 330, COUNTY ENGINEERING BUILDING, 108 WEST SECOND STREET OR ..ANTELOPE..VALLEY............ REGIONAL OFFICE, SUFFICIENT TO COVER THE COST OF CONSTRUCTION INSPECTION AND RECORD PLANS.
APPROVAL OF THIS PLAN BY THE COUNTY OF LOS ANGELES DOES NOT CONSTITUTE A REPRESENTATION AS TO THE ACCURACY OF THE LOCATION OF OR THE EXISTENCE OR NON-EXISTENCE OF ANY UNDERGROUND UTILITY PIPE, OR STRUCTURE WITHIN THE LIMITS OF THIS PROJECT. THIS NOTE APPLIES TO ALL PAGES.
IF WORK IS TO BE DONE IN A STATE HIGHWAY, A PERMIT MUST BE OBTAINED FROM THE STATE OF CALIFORNIA, DIVISION OF HIGHWAYS, 120 SOUTH SPRING STREET, LOS ANGELES, CALIFORNIA.

COUNTY OF LOS ANGELES, CALIFORNIA
JOHN A. LAMBIE, COUNTY ENGINEER — J. D. PARKHURST, CHIEF ENGINEER

CO. SAN. DIST. NO. 32

APPROVED BY, Richard E. Kuhn — ASSISTANT SANITATION ENGINEER

APPROVED BY — OFFICE ENGINEER

CHECKED BY Ralph Schafer 6/2/66
REG. C.E. NO. 13906

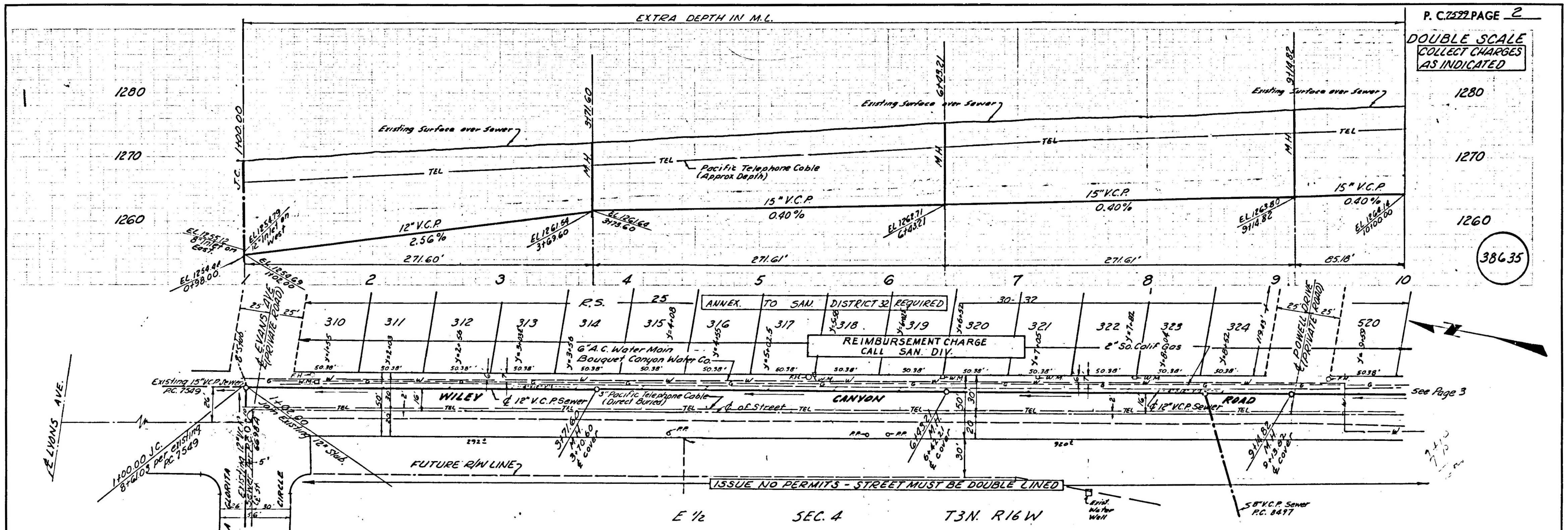
J. N. 0367.27

P. C. 7599 PAGE 2

DOUBLE SCALE

COLLECT CHARGES AS INDICATED

38635



K+E IMPERIAL TRACING CLOTH L.A. COUNTY SEWER SHEET NO. 1 SOUTHERN CALIFORNIA BLUEPRINT CO. LA 1200

PC 7599 PAGE 3

DOUBLE SCALE

EXTRA DEPTH IN M.L.

EXTRA DEPTH IN M.L.

Existing Surface over Sewer

Pacific Telephone Cable (Approx. Depth)

15" V.C.P. 0.40%

12" V.C.P. 0.40%

10" V.C.P. 1.00%

10" V.C.P 6.32%

10" V.C.P 6.04%

10" V.C.P 6.32%

COLLECT CHARGES AS INDICATED

38636

1280 1270 1260

10 11 12 13 14 15 16 17 18 19 20

16.23 240.92 250.57 285.00 81.32

P.S. 25

521 522 523 524 525 526 527 528 529 530 531 532 534 535 536 537 796 795 793

WILEY CANYON ROAD

5" Pacific Telephone Cable (Direct Buried)

12"W.S.

6" A.C. Water Main Bequet Canyon Water Co.

See Sheet 2

℄ of Street

REIMBURSEMENT CHARGE CALL SAN. DIV.

ANNEX. TO SAN. DIST. 32 REQUIRED

2" Sq. Cont. Gas

SANTA CLARA FLOOD

10"V.C.P. DOUBLE BARREL SIPHON

12"V.C.P. SEWER

PRIVATE STREET

NOTE: One traffic lane to remain open at all times. Entire Dist. to be notified before work is made. Phone CA 5-7677 ext 7201

ISSUE NO PERMIT - STREET MUST BE DOUBLE LINED

E½ SEC. 4, T3N, R16W

WABUSKA ST.

RIVER-SOUTH FORK CHANNEL R/W

REIMBURSEMENT CHARGE CALL SAN. DIV.

E½ SEC. 4, T3N R16W

ANNEX TO SAN DIST. 32 REQUIRED

PC 7599 PAGE 4

DOUBLE SCALE

Extra Depth in Main Line

Existing Surface over Sewer

10" V.C.P 1.80%

10" V.C.P 1.96%

12" V.C.P 0.40%

IDENTICAL

COLLECT CHARGES AS INDICATED

38637

1300 1290 1280

20 21 22 23 24 25 26 27

191.16 108.66 200.91 146.24

PRIOR TO CONSTRUCTING IN THIS AREA THE CONTRACTOR SHALL SUBMIT A PLAN FOR SHORING TO DIVISION OF INDUSTRIAL SAFETY, ROOM 910, 3460 WILSHIRE BLVD., L.A.S. PHONE DU. 1-3951 ATT. MR. E.K. MILLER.

REIMBURSEMENT CHARGE CALL SAN. DIV.

E½ SEC. 4 T3N R16W

ANNEX TO SAN. DISTR. 32 REQUIRED

ANNEX. TO SAN. DISTR. 32 REQ'D.

WILEY CANYON ROAD

E½ SEC. 4 T3N R16W

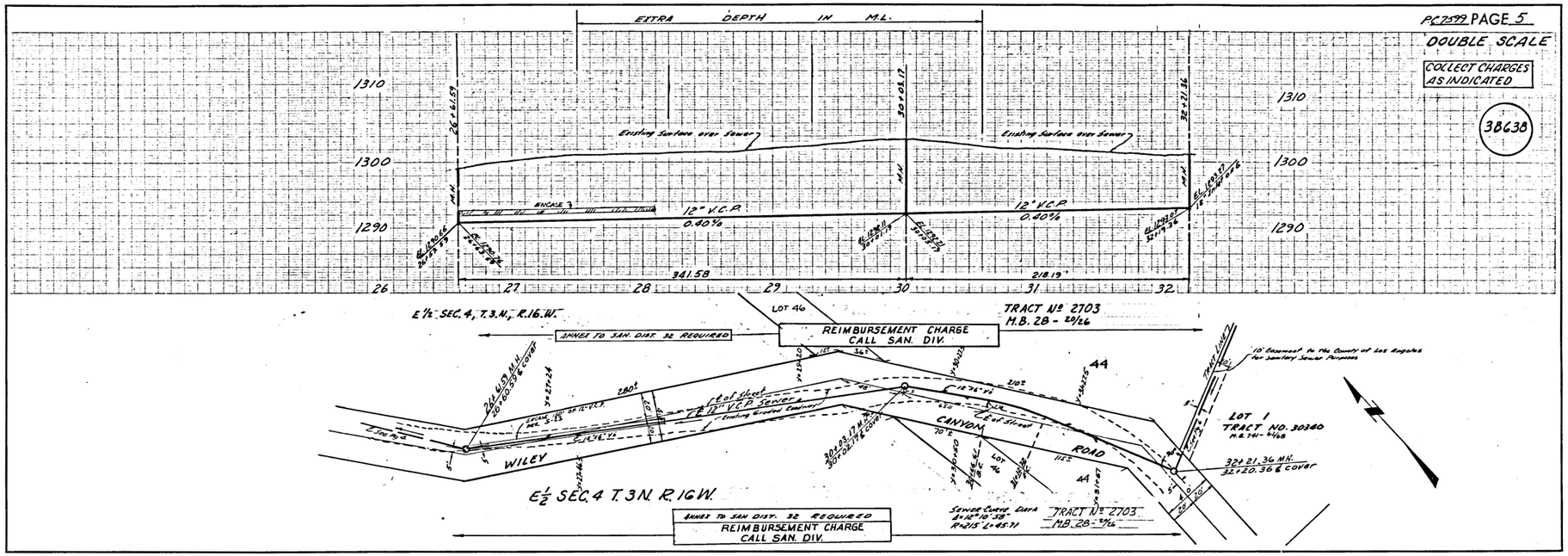
E. E. E. 100 SQ. CAL. BLUE PRINT SHEET NO. 2

PC 7599 PAGE 5

DOUBLE SCALE

COLLECT CHARGES AS INDICATED

38638

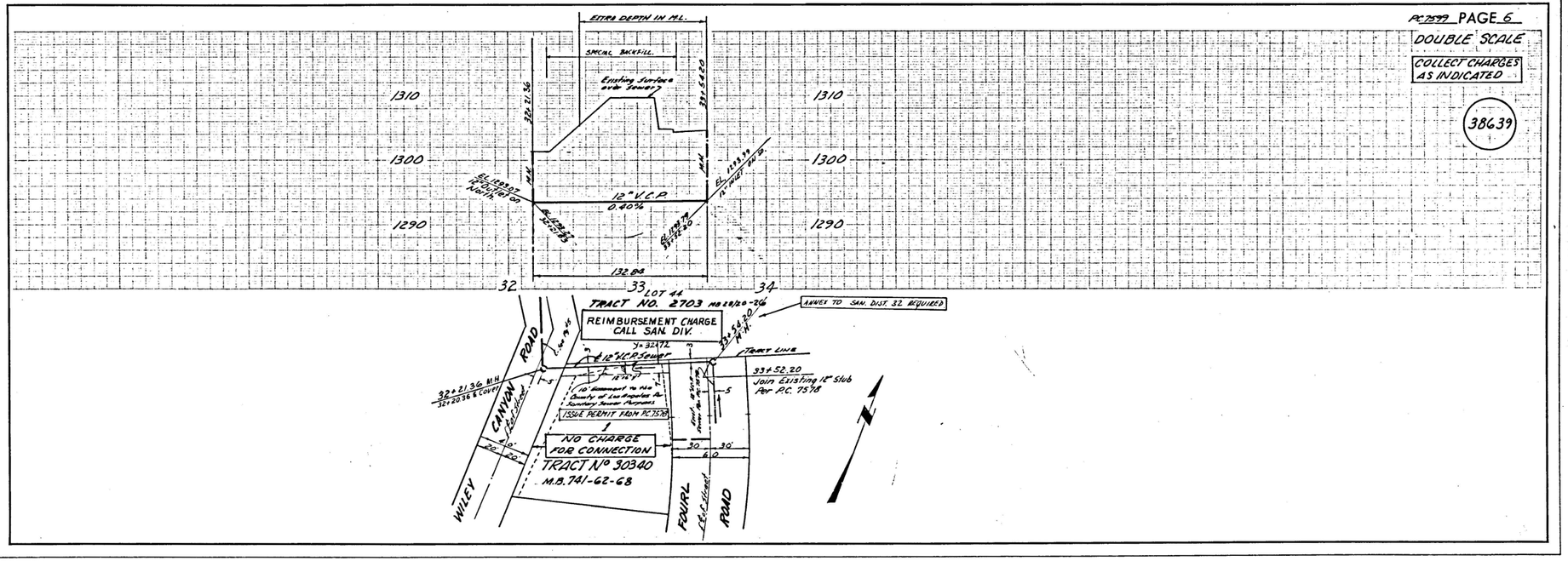


PC 7599 PAGE 6

DOUBLE SCALE

COLLECT CHARGES AS INDICATED

38639



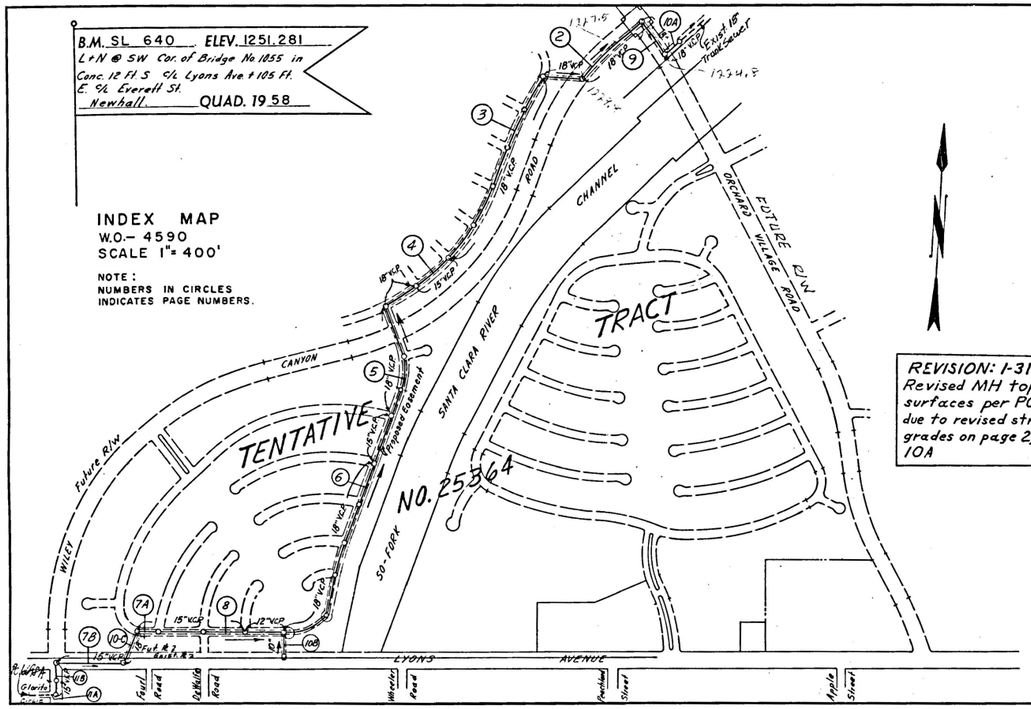
SEWER REFERENCE

PC 7549

B.M. SL 640 ELEV. 1251.281
L+N @ SW Cor. of Bridge No 1855 in Conc. 12 Ft S of C/L Lyons Ave. & 105 Ft. E. of C/L Everett St.
Newhall QUAD. 1958

INDEX MAP
W.O.- 4590
SCALE 1"= 400'

NOTE:
NUMBERS IN CIRCLES INDICATE PAGE NUMBERS.



DOUBLE SCALE

NEW HALL BLDG. DIST. NO. 8.2

NOTES:

1. PROVIDE STAKES ON THE PROPERTY LINE OR PROPERTY LINES PRODUCED AT RIGHT ANGLES TO THE SEWER LINE AT THE CENTER LINE OF EACH MANHOLE.
2. NO REPRESENTATIVE OF THE COUNTY ENGINEER WILL SURVEY OR LAY OUT ANY PORTION OF THE WORK.
3. THE PRIVATE ENGINEER SHALL FURNISH THE COUNTY ENGINEER WITH GRADE SHEETS AND STATIONING FOR ALL HOUSE SEWERS AND Y BRANCHES AND SHALL PROVIDE STAKES FOR THEM AT THEIR PROPER LOCATIONS WITH STATIONING PLAINLY MARKED. ALL HOUSE LATERALS SHALL BE CONSTRUCTED IN A STRAIGHT ALIGNMENT AT RIGHT ANGLES FROM THE MAIN LINE SEWER EXCEPT AS SHOWN ON THE PLANS. HOUSE LATERALS FROM CRANKING CASES NOT HAVING AN ANGLE OF LESS THAN 45° WITH THE MAIN LINE SEWER. ANY CHANGE IN ALIGNMENT SHALL BE REQUESTED IN WRITING BY THE PRIVATE ENGINEER.
4. THE PRIVATE ENGINEER SHALL FURNISH THE HOUSE LATERAL DEPTH AT THE PROPERTY LINE BELOW THE TOP OF CURB ELEVATION FOR EACH HOUSE LATERAL ON THE GRADE SHEET.
5. NO REVISIONS SHALL BE MADE IN THESE PLANS WITHOUT THE APPROVAL OF THE COUNTY ENGINEER.
6. THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION DIVISION BY TELEPHONE, MADISON 9-4747, EXT. 81531, AT LEAST TWENTY-FOUR HOURS BEFORE STARTING ANY WORK UNDER THIS CONTRACT.
7. MANHOLES SHALL BE BRICK SEWER STRUCTURES PER S-3 . PRECAST CONCRETE MANHOLES PER S-5 OR S-6 MAY BE USED AS AN ALTERNATE IN LOCATIONS APPROVED BY THE COUNTY ENGINEER.
8. USE STANDARD MANHOLE FRAMES AND COVERS, S-15 , EXCEPT AS NOTED.
9. MANHOLE TOPS IN UNIMPROVED RIGHTS-OF-WAY TO BE SIX INCHES ABOVE FINISHED GRADE.
10. USE EXTRA STRENGTH PIPE, ALL PIPE IS STANDARD DEPTH EXCEPT AS NOTED.
11. USE CEMENT MORTAR OR MECHANICAL COMPRESSION JOINTS FOR ALL V.C.P. JOINTS PER SPEC'S., SECS. 36 & 48.
12. WHERE EVER GROUND WATER IS ENCOUNTERED DURING THE CONSTRUCTION OF THE SEWERS, THE V.C.P. JOINTS SHALL BE OF JOINT COMPOUND PER SPEC'S., SECS. 35 & 48, OR MECHANICAL COMPRESSION JOINTS PER SPEC'S., SEC. 36.
13. IF A POWER POLE IS WITHIN 7-FEET OF THE SEWER, THE SEWER SHALL BE ENCASED, PER S-23 TWO FEET ON EACH SIDE FROM THE POINT OF INTERFERENCE.
14. IF DURING THE COURSE OF CONSTRUCTION IT IS DETERMINED THAT THERE IS LESS THAN FOUR FEET OF COVER OVER THE TOP OF A MAIN LINE OR HOUSE LATERAL V.C.P. SEWER WHICH IS NOT INDICATED ON THE PLANS, THE PIPE SHALL BE ENCASED PER S-23 UNLESS OTHERWISE APPROVED BY THE COUNTY ENGINEER.
15. HOUSE LATERALS TO BE CONSTRUCTED WITH RISERS AT PROPERTY LINE WHERE CURB GRADE EXCEEDS 6% MORE.
16. RESURFACE ALL TRENCHES WITHIN PAVED AREAS TO MEET L.A. COUNTY ROAD DEPT. OR CALIFORNIA STATE HIGHWAY REQUIREMENTS IN ACCORDANCE WITH PERMITS.
17. FOR ALLOWABLE LEAKAGE TEST USE FORMULA NO. 2 , SPEC'S., SEC. 34.
18. ALL STATE AND LOCAL TRENCH SAFETY ORDERS WILL BE RIGIDLY ENFORCED
19. ALL JOINTS BETWEEN CAST IRON PIPE AND VITRIFIED CLAY PIPE SHALL BE MADE WITH A RUBBER SLEEVE JOINT (WITH WOODS, IF NECESSARY) PER STANDARD SPECIFICATIONS, SEC. 36, OR APPROVED EQUAL.

REVISION: 1-31-69
Revised MH tops & surfaces per PC8197 due to revised street grades on page 2, 9, & 10A

COLLECT CHARGES AS INDICATED
Ralph Schafer

BEFORE BREAKING INTO ANY EXISTING STRUCTURE AND BEFORE FINAL ACCEPTANCE OF THIS WORK, COUNTY SANITATION DISTRICT (DU 4-1281) SHALL BE NOTIFIED IN ORDER THAT REQUIRED INSPECTION CAN BE MADE.

NO CONNECTIONS FOR THE DISPOSAL OF INDUSTRIAL WASTES SHALL BE MADE TO SEWERS SHOWN ON THESE DRAWINGS WITHOUT WRITTEN PERMISSION FROM THE CHIEF ENGINEER AND GENERAL MANAGER OF THE COUNTY SANITATION DISTRICTS.

PROFILE ALIGNMENT AND GRADE OF P.C. 7549
SANITARY SEWERS PAGE 1
TO BE CONSTRUCTED IN R W

NORTH OF LYONS AVENUE

PRIVATE CONTRACT NO. 7549

W.S. 62
6 SHEETS; 12 PAGES
SCALE: VERT. 1"=8' HORIZ. 1"=40' FEBRUARY , 1966

38652

PREPARED IN THE OFFICES OF
VOORHEIS - TRINDLE CO.
By: J. R. Nelson
REG. C. E. NO. 8781

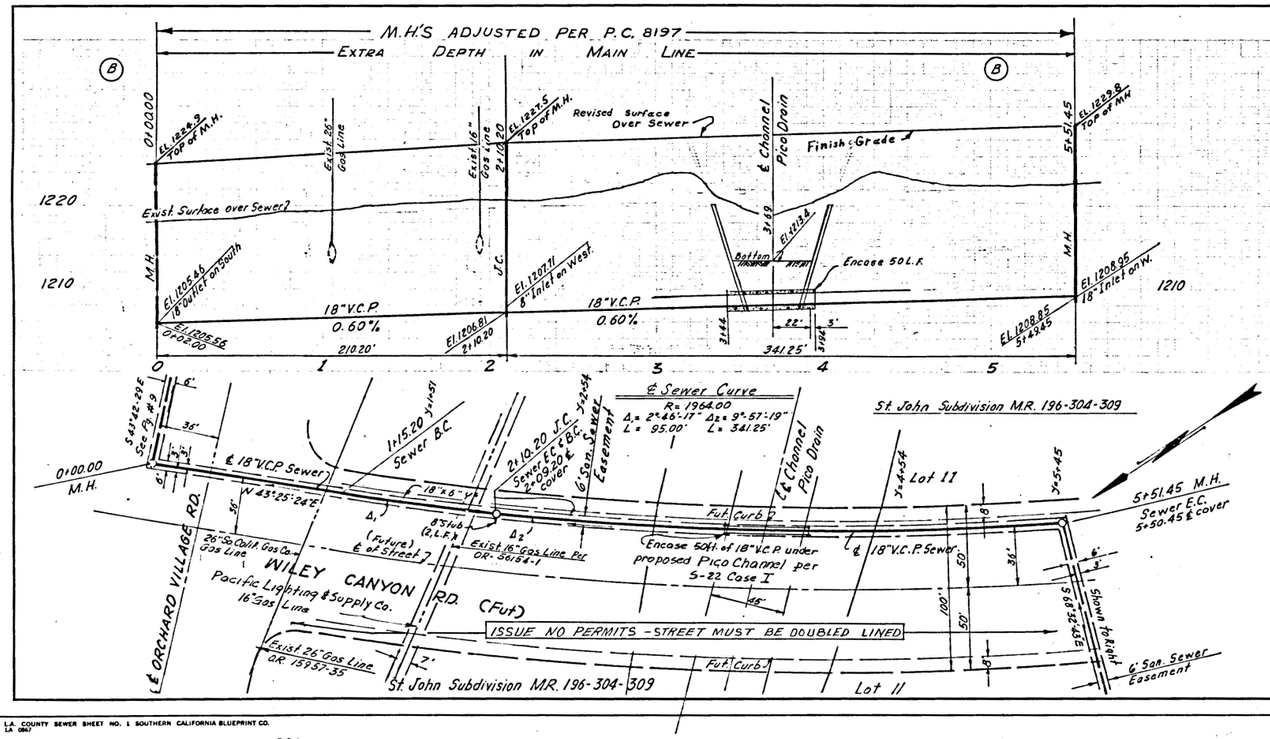
FOR LEGEND SEE PLAN NO. S-1

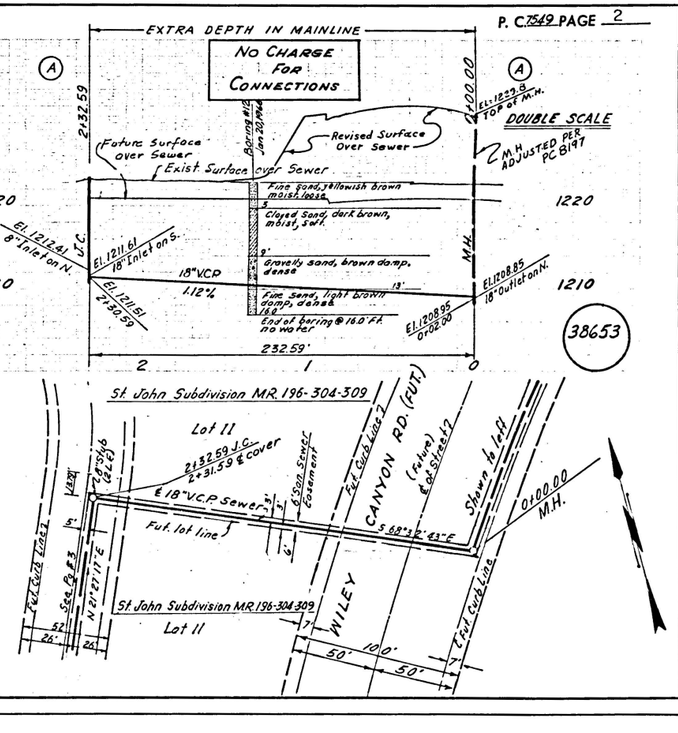
NOTE:
GRADES TO WHICH THIS IMPROVEMENT IS TO BE CONSTRUCTED ARE SHOWN ON PLANS AND PROFILES. GRADE POINTS FOR TOP OF CURBS, CENTER LINE OF STREETS, OR CENTER LINE OF ALLEYS ARE SHOWN BY CIRCLES ON PROFILES. AT ALL POINTS BETWEEN DESIGNATED POINTS THE GRADE SHALL BE ESTABLISHED SO AS TO CONFORM TO A STRAIGHT LINE DRAWN BETWEEN SAID DESIGNATED POINTS.
ELEVATIONS ARE IN FEET ABOVE U.S.C. & G.S. SEA LEVEL DATUM OF 1929.
THIS DRAWING AND THE DATA HEREON ARE HEREBY MADE A PART OF THE SPECIFICATIONS WORK SHALL BE CONSTRUCTED ACCORDING TO STANDARD SPECIFICATIONS DATED 10-27-65 revised 1-31-69 ON FILE IN THE OFFICE OF THE COUNTY ENGINEER AND SHALL BE PROSECUTED ONLY IN THE PRESENCE OF THE COUNTY ENGINEER.
BEFORE WORK CAN BE STARTED, THE CONTRACTOR MUST OBTAIN A PERMIT TO EXCAVATE IN COUNTY STREETS FROM THE L.A. COUNTY ROAD DEPT., DISTRICT OFFICE NO. 3 AND PAY A FEE TO THE COUNTY ENGINEER, ROOM 330, COUNTY ENGINEERING BUILDING, 108 WEST SECOND STREET OR ANTELOPE VALLEY REGIONAL OFFICE, SUFFICIENT TO COVER THE COST OF CONSTRUCTION INSPECTION AND RECORD PLANS.
APPROVAL OF THIS PLAN BY THE COUNTY OF LOS ANGELES DOES NOT CONSTITUTE A REPRESENTATION AS TO THE ACCURACY OR THE LOCATION OF OR THE EXISTENCE OR NON-EXISTENCE OF ANY UNDERGROUND UTILITY PIPE, OR STRUCTURE WITHIN THE LIMITS OF THIS PROJECT. THIS NOTE APPLIES TO ALL PAGES.
IF WORK IS TO BE DONE IN A STATE HIGHWAY, A PERMIT MUST BE OBTAINED FROM THE STATE OF CALIFORNIA, DIVISION OF HIGHWAYS, 120 SOUTH SPRING STREET, LOS ANGELES, CALIFORNIA.

COUNTY OF LOS ANGELES, CALIFORNIA
JOHN A. LAMBIE, COUNTY ENGINEER J. D. PARKHURST, CHIEF ENGINEER
CO. SAN. DIST. NO 32
APPROVED BY: Richard E. Klug, ASSISTANT SANITATION ENGINEER APPROVED BY: W. Gottemoeller, OFFICE ENGINEER
CHECKED BY: Ralph Schafer 5/10/66 REG. C.E. NO. 13926

J. N. 0366.91

P. C. 7549 PAGE 2





38653

PC 7549 PAGE 3

No Charge For Connections

DOUBLE SCALE

38654

EXTRA DEPTH IN MAIN LINE

Exist. Surface over Sewer — Future Surface Over Sewer

Boring #10 Jan. 20, 1966

Clayed sand dark brown, moist soft

Fine sand, light, brown, damp moderately dense

Gravelly clayey sand, brown, damp, moderately dense rocks to 4 inches

End of boring @ 15' no water

18"V.C.P. 0.64%

18"V.C.P. 0.40%

El. 1216.41 8' Inlet on W.

El. 1215.51 8'55.63

El. 1213.78 5'05.03

El. 1212.80 3'41.33

El. 1213.70 8' Inlet on W.

El. 1214.68 8' Inlet on W.

IDENTICAL

270.00' 244.30'

St John Sub. Per Lot 10

M.R. Book 196-304-309 Lot 11

6' San Sewer Easement

Future Street

Full Curb Line

Boring #10

See Pg No 4 (8" Stub (2 L.F.))

℄ 18"V.C.P Sewer

Future ℄ of Street

8" Stub (2 L.F.)

18"x4"-Y Inlet

N 20° 27' 44" E

8'55.63 J.C. Sewer ℄ Cover

5'05.03 ℄ cover

3'41.33 A.H.

3'00.00 BK. J.C. ℄ of A.H. 2'40.33 ℄ cover 2'95.00 ℄ cover Bk.

71.98.58 B.C. Sewer

Y=1.194 E.C. Sewer

3'41.32 B.C. Sewer

Lot 10 Lot 11

St. John subdivision Per M.R. BOOK 196 Pages 304 to 309

℄ of Sewer Curve
Δ = 2°57'55"
R = 1329.00'
L = 61.05'

℄ of Sewer Curve
Δ = 0°59'33"
R = 2171.00'
L = 37.61'

EXTRA DEPTH IN MAIN LINE

Boring #11 Jan. 20, 1966

3'41.33 A.H. = 3'00.00 BK

Future Surface Over Sewer — Exist. Surface over Sewer

Clayey sand, dark brown, moist loose

Fine sand, light brown, damp moderately dense

18"V.C.P. 0.40%

End of boring @ 17.0 Ft. no water

El. 1213.70 8' Inlet on W.

El. 1212.78 8' Inlet on W.

El. 1211.88 0'10.00

El. 1211.61 0'02.00

El. 1211.51 18" Outlet end

El. 1212.41 8' Inlet on North

IDENTICAL

230.00' 70.00'

St John Sub. M.R. 196-304-309 Lot 11

0'70.00 J.C. 0'65.00 ℄ cover

0'00.00 J.C.

8" Stub (2 L.F.)

18"V.C.P. Sewer

13.79' St. ℄

N 21° 27' 17" E

See Pg. #24

3'00.00 BK. 3'41.33 A.H. 2'40.33 ℄ cover 2'95.00 ℄ cover

Y=2.149 Y=2.171 Y=1.100 Y=1.039

Lot 11

St. John Sub. Per M.R 196-304-309

No Charge For Connections

DOUBLE SCALE

38655

EXTRA DEPTH IN MAIN LINE

Exist. Surface over Sewer — Future Surface Over Sewer

Boring #9 Jan. 20, 1966

Clayey sand, dark brown, moist soft

Fine to medium Sand, light brown, damp, medium dense.

Rocks @ 11.0' to 5 inches

Gravelly clayey sand, light brown, moist dense rocks to 8 inches

End of boring @ 15.0 Ft. no water

15"V.C.P. 1.04%

18"V.C.P. 0.60%

El. 1222.76 17'48.63

El. 1222.20 14'14.45

El. 1220.62 14'10.96

El. 1220.04 13'45.00

El. 1220.04 13'65.00

El. 1217.68 11'52.65

El. 1218.08 8' Inlet on W.

El. 1217.18 11'35.63

El. 1216.41 8' Inlet on W.

El. 1215.51 8'55.63

338.17' 47.46' 229.37' 280.00'

St John Sub. Per M.R. 196-304-309 Lot 10

St John subdivision Per Lot 10

M.R 196-304-309 Lot 10

6' San Sewer Easement

Future Street

Full Curb Line

Future ℄ of Street

℄ 18"V.C.P. Sewer

℄ 15"V.C.P. Sewer

18"x4"-Y Inlet

15"x4"-Y Inlet

8" Stub (2 L.F.)

17'50.63 J.C. Sewer E.C. 17'49.63 ℄ cover

14'12.46 J.C. Sewer E.C. 14'11.96 ℄ cover

11'34.63 J.C. Sewer E.C. 11'33.63 ℄ cover

8'55.63 J.C. Sewer E.C. 8'54.63 ℄ cover

13'65.00

IDENTICAL

See Pg No. 5

See Pg No. 3

Y=1.0170 Y=1.0144 Y=1.0151 Y=1.0135 Y=1.0119

Y=1.2150 Y=1.2120 Y=1.1064 Y=1.0048 Y=0.9928 Y=0.9763

Lot 10

St. John subdivision Per M.R. BOOK 196 Pgs. 304-309

℄ of Sewer Curve

Δ1 = 14°34'45" R = 1329.00' L = 338.17

Δ2 = 11°56'05" L = 276.83'

Δ3 = 12°04'17" L = 280.00'

LOT 10

St. John subdivision Per M.R. BOOK 196 Pgs. 304 to 309

K&E 175153 LA COUNTY SEWER SHEET NO. 2 SO. CAL. BLUEPRINT CO. LA 0857

PC 7549 PAGE 5

NO CHARGE FOR CONNECTIONS

DOUBLE SCALE

Extra Depth In Main Line

38656

St John Subdivision Per M.R. Book 196-304-309

St. John Sub. M.R. 196-304-309

St John Subdivision M.R 196-304-309

Saint John Subdivision Per M.R Book 196-304-309 Pages 304-309

PC 7549 PAGE 6

NO CHARGE FOR CONNECTIONS

DOUBLE SCALE

EXTRA DEPTH IN MAIN LINE

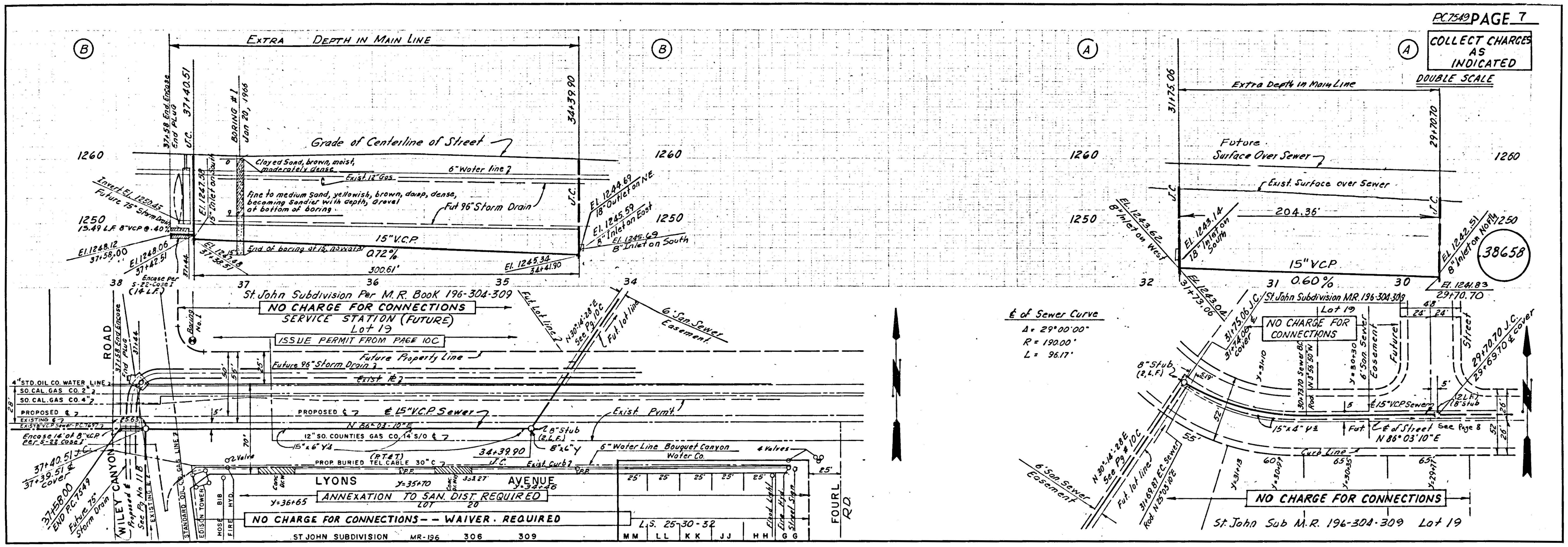
38657

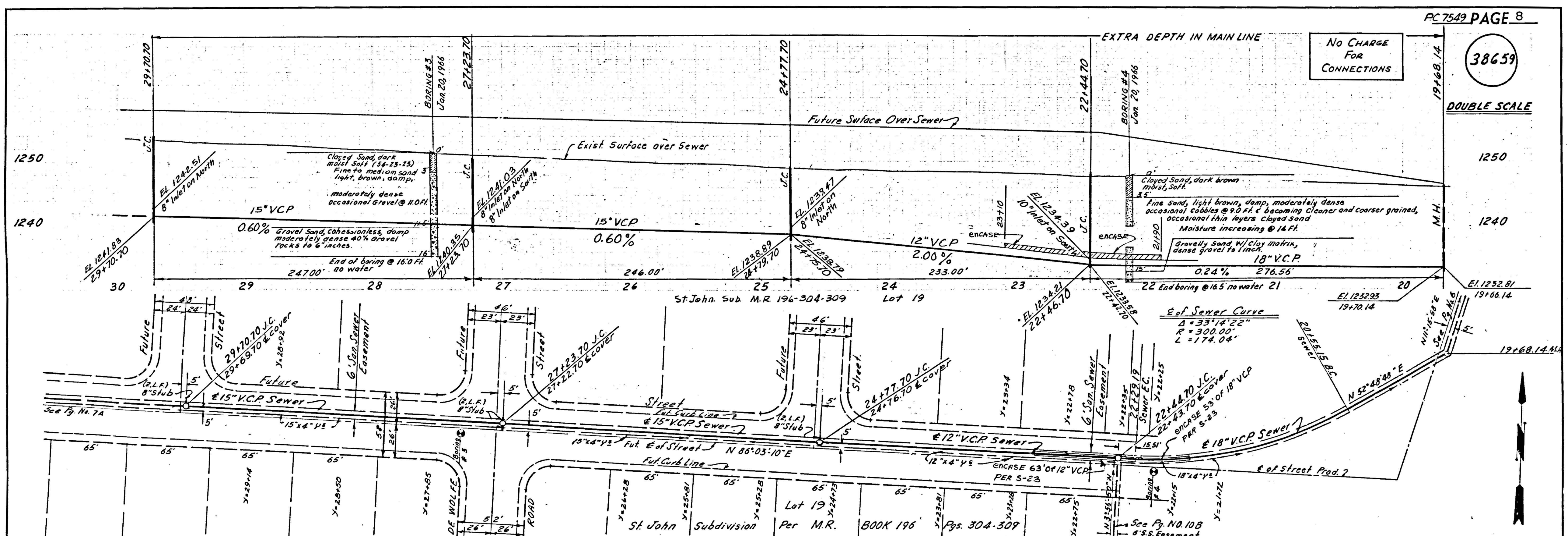
St. John Subdivision Per M.R. 196-304-309

St John Subdivision Per M.R. 196-304-309

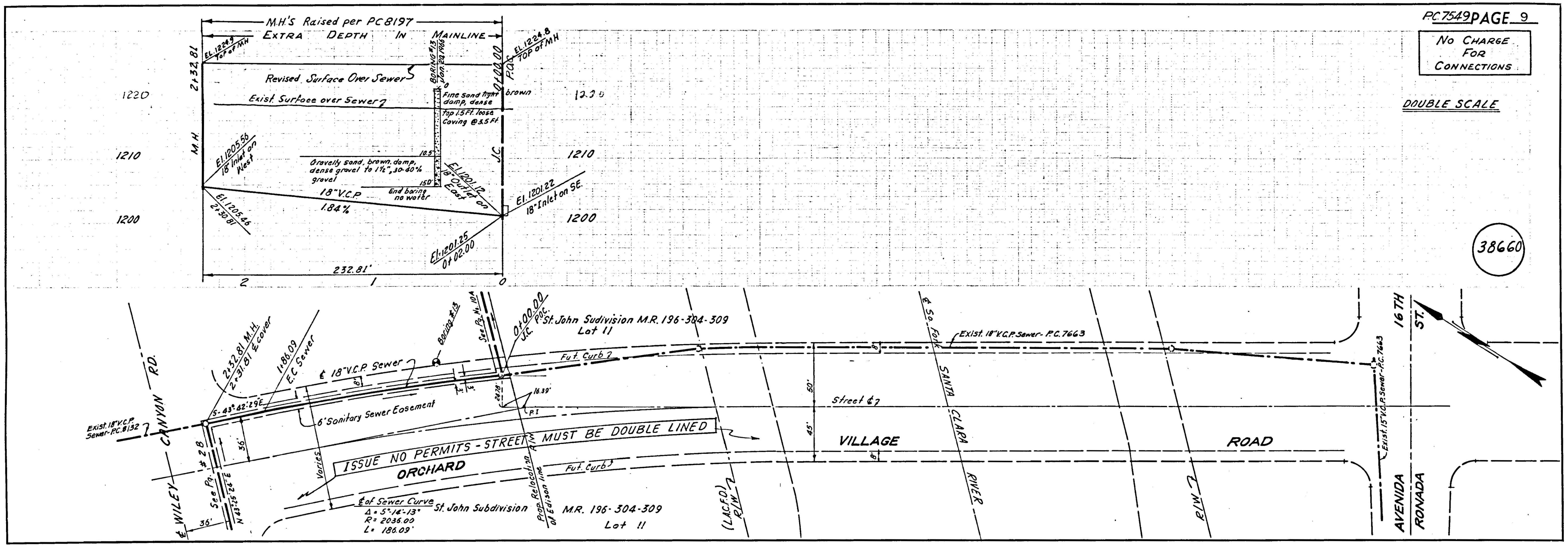
St. John Sub M.R. 196-304-309

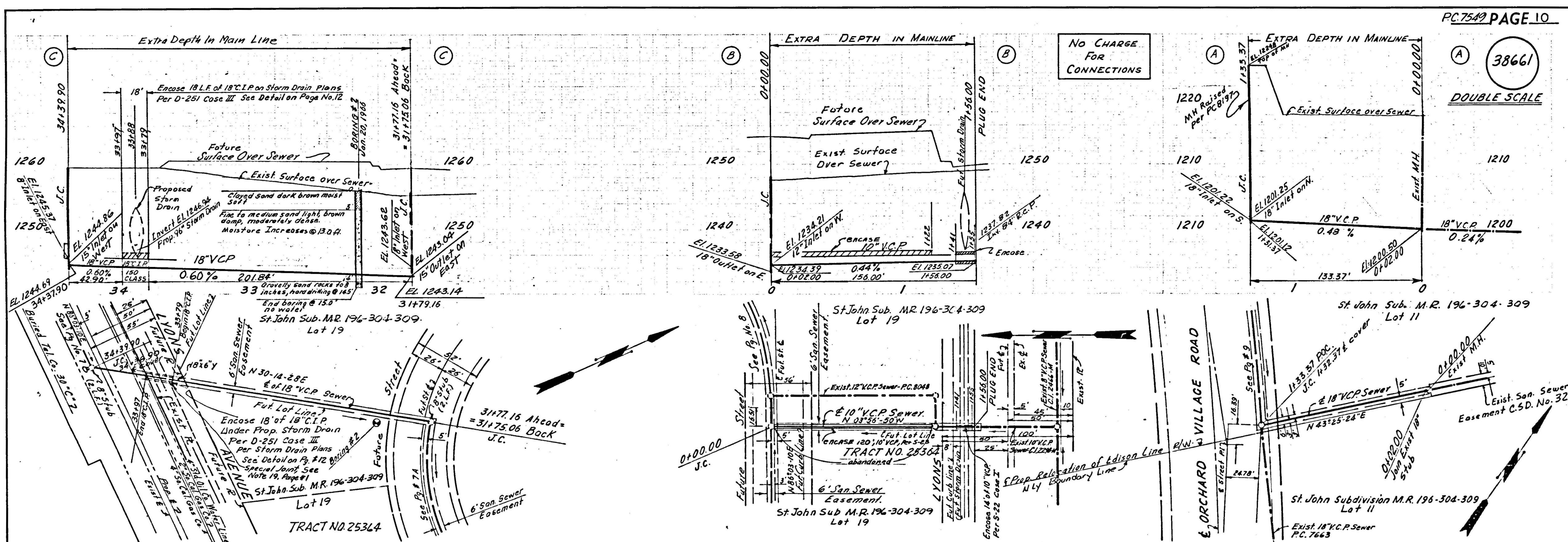
K&E 175153 L/ COUNTY SEWER SHEET NO. 2 SO. CAL. BLUEPRINT CO. LA 6867





K&E 175153 L.A. COUNTY SEWER SHEET NO. 2 SO. CAL. BLUEPRINT CO. LA 0867





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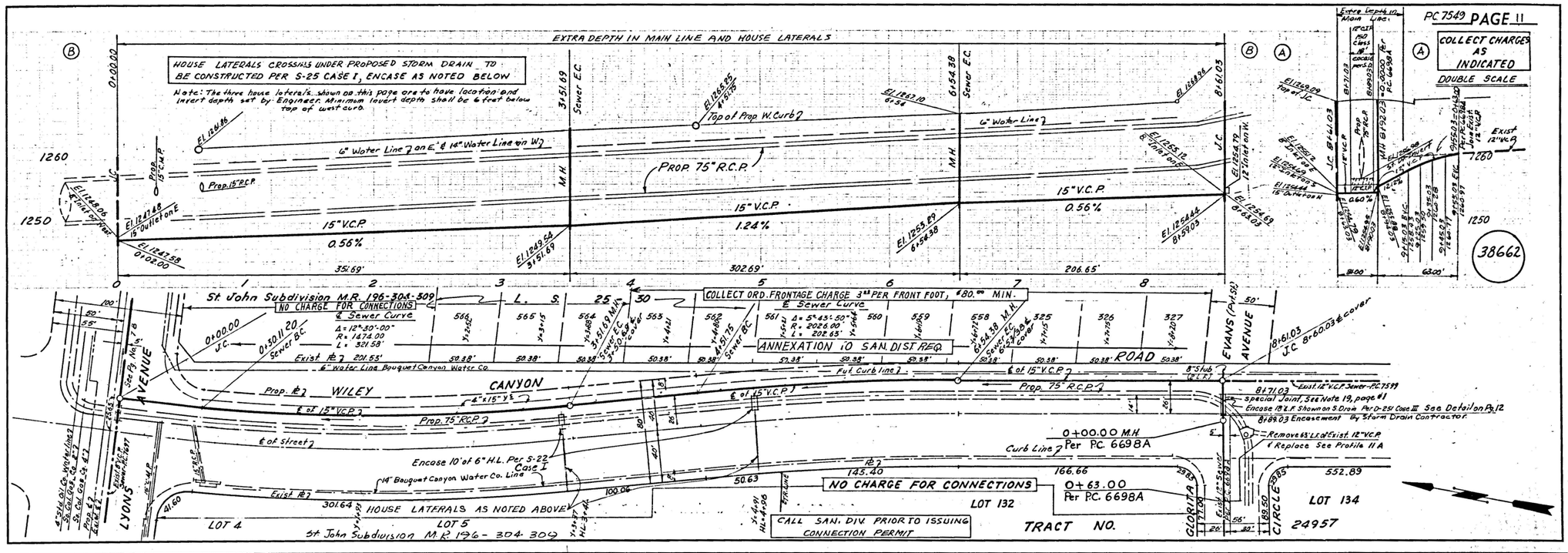
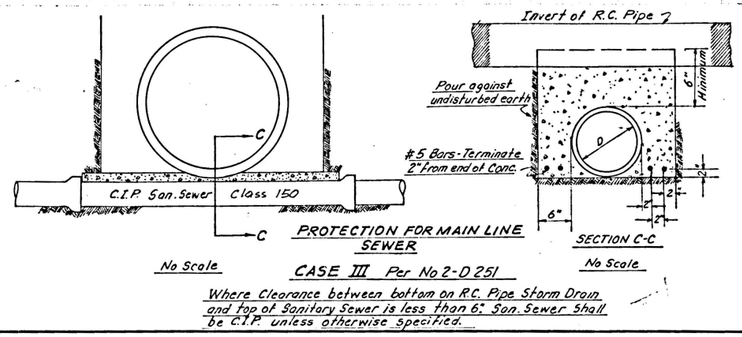
LA 0867



38663



PROTECTION FOR MAIN LINE SEWER

CASE III Per No 2-D 251

Where Clearance between bottom on R.C. Pipe Storm Drain and top of Sanitary Sewer is less than 6' San. Sewer Shall be C.I.P. unless otherwise specified.

K&E 175153 L.A. COUNTY SEWER SHEET NO. 2 SO. CAL. BLUEPRINT CO.
LA 0867

SEWER REFERENCE

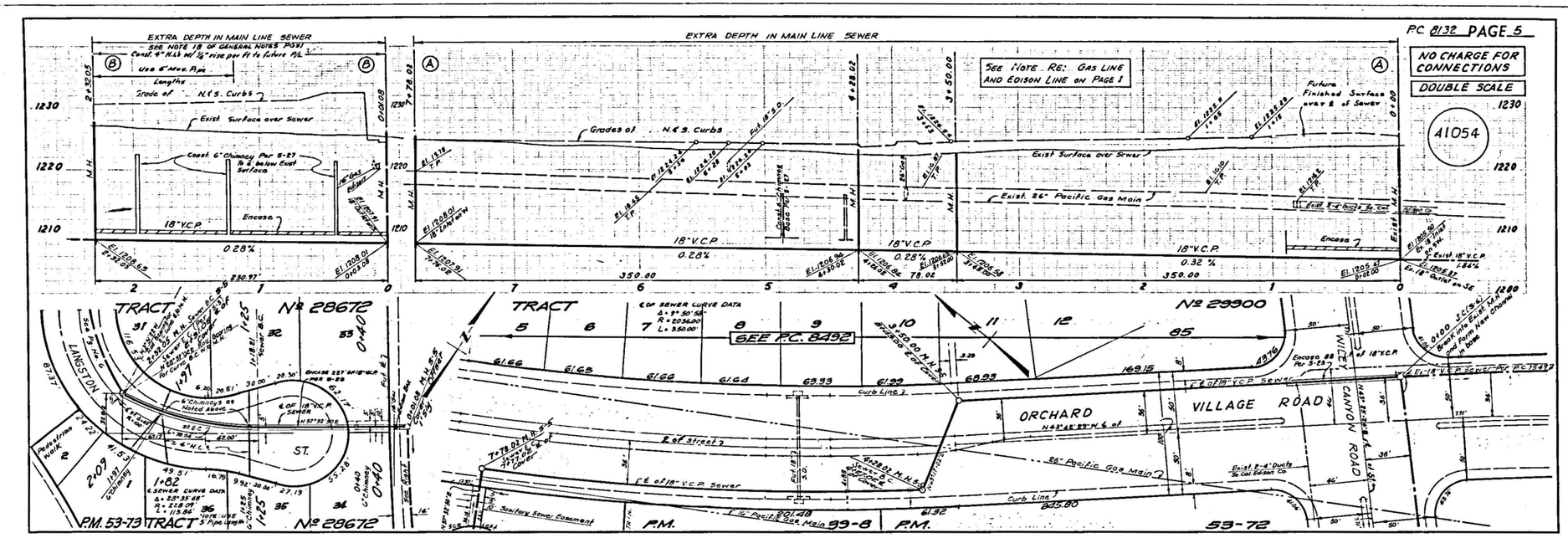
PC 8132

P.C. 8132 PAGE 5

NO CHARGE FOR CONNECTIONS

DOUBLE SCALE

41054

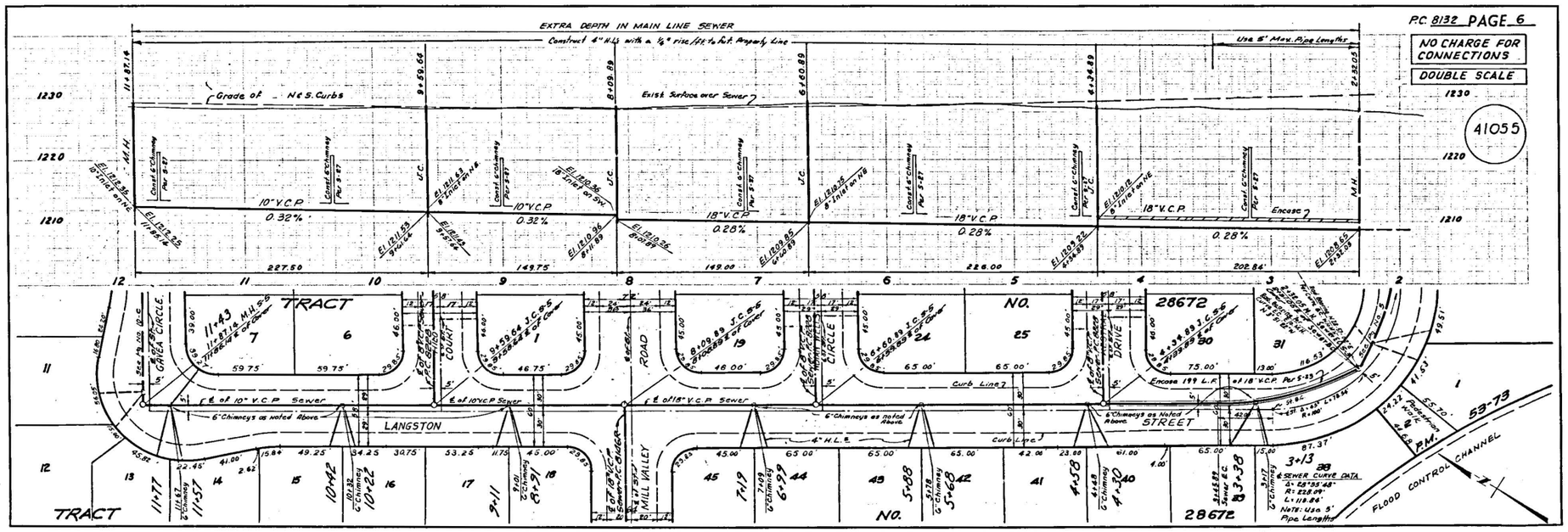


P.C. 8132 PAGE 6

NO CHARGE FOR CONNECTIONS

DOUBLE SCALE

41055



SEWER REFERENCE

SAS TM No. 43896

STEVENSON RANCH AND VICINITY

SEWER AREA STUDY

TRACT NO. 43896 -P.C. 11476

SEWER AREA STUDY
TRACT 43896
SUMMARY

AREA	Q peak (cfs)	REMARKS
1	2.303	(EXISTING)
2	1.642	(EXISTING)
3	0.184	APPROVED TENT. TRACT 33608
4	0.708	APPROVED TENT. TRACT 33608-1
5	0.036	LENNAR HOMES FUTURE
6	0.046	FUTURE
7	0.203	PROPOSED TENT. TRACT 52796
8	0.019	APPROVED TENT. TRACT 52908
9	0.280	(EXISTING)
10	0.045	PROPOSED TENT. TRACT 52905
11	0.066	TENT. TR. 48026
12	0.048	APPROVED TENT. TRACT 48208
13	0.285	(EXISTING)
14	0.63	(EXISTING)
15	1.30	(EXISTING)
16	0.909	(EXISTING)
Exist. Peak Q(Qe) = 7.35 cfs (1,2,9,13, 14, 15 & 16) Ultimate Peak Q (Qu) = 8.65 cfs (1 Thr 16)		
17	0.631	(EXISTING)
TOTAL Qe	7.98	Flow to existing 24" trunk sewer
TOTAL Qu	9.28	

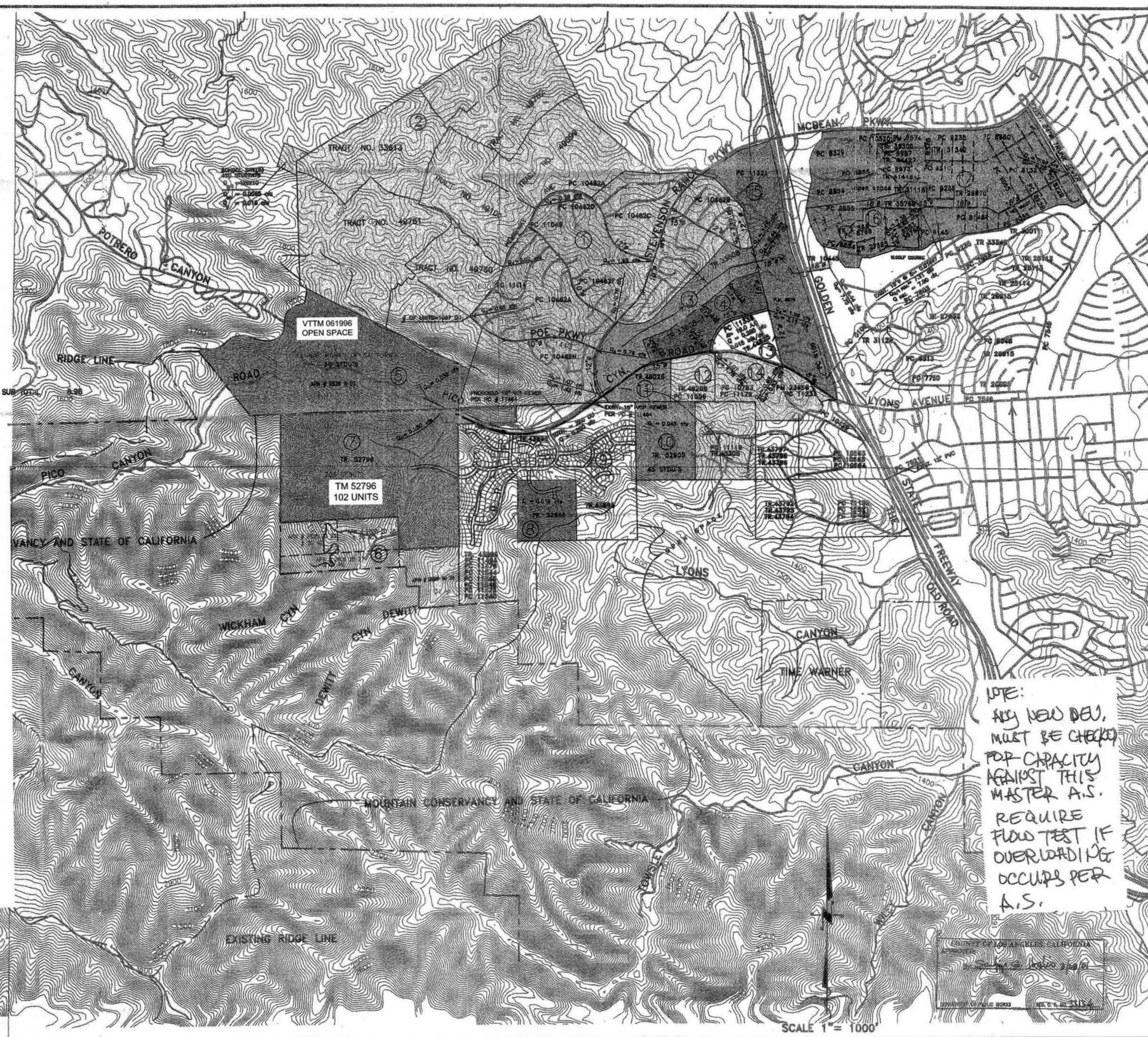
6/20/01
N/R
N/R
10/3/01

SUB TOTAL 8.98

SEWER AREA STUDY
WITH CURRENT LAND USE
FOR TM 52796 AND VTTM 061996

AREA	Q peak (cfs)	REMARKS
1	2.303	UNCHANGED
2	1.642	UNCHANGED
3	0.154	UNCHANGED
4	0.706	UNCHANGED
5	**0.000**	***OPEN SPACE***
6	0.046	UNCHANGED
7	**0.102**	***102 UNIT Q***
8	0.019	UNCHANGED
9	0.28	UNCHANGED
10	0.045	UNCHANGED
11	0.066	UNCHANGED
12	0.046	UNCHANGED
13	0.285	UNCHANGED
14	0.63	UNCHANGED
15	1.3	UNCHANGED
16	0.909	UNCHANGED
Exist. Peak Q(Qe) = 7.35 cfs (1,2,9,13,14,15 & 16) Ultimate Peak Q (Qu) = **8.53 cfs** (1 thru 16)		
17	0.631	UNCHANGED
TOTAL Qe	7.98	Flows to existing 24" trunk sewer
TOTAL Qu	**9.16**	

TABLE PER ALLIANCE LAND PLANNING AND ENGINEERING
APRIL 7, 2014



DESIGNED:	H.HARIRCHI
DRAWN:	H.HARIRCHI
CHECKED:	H.HARIRCHI
SUPERVISED:	H.HARIRCHI
PROJ. ENGINEER:	H.HARIRCHI
DATE:	03/27/2001
SCALE:	1"=1000'
JOB NUMBER:	591-001

SEWER AREA STUDY

TRACT NO. 43896 -P.C. 11476

SR CONSULTANTS, INC.
LAND PLANNING • ENGINEERING • SURVEYING

SHEET NO.
1
OF 1 SHEET

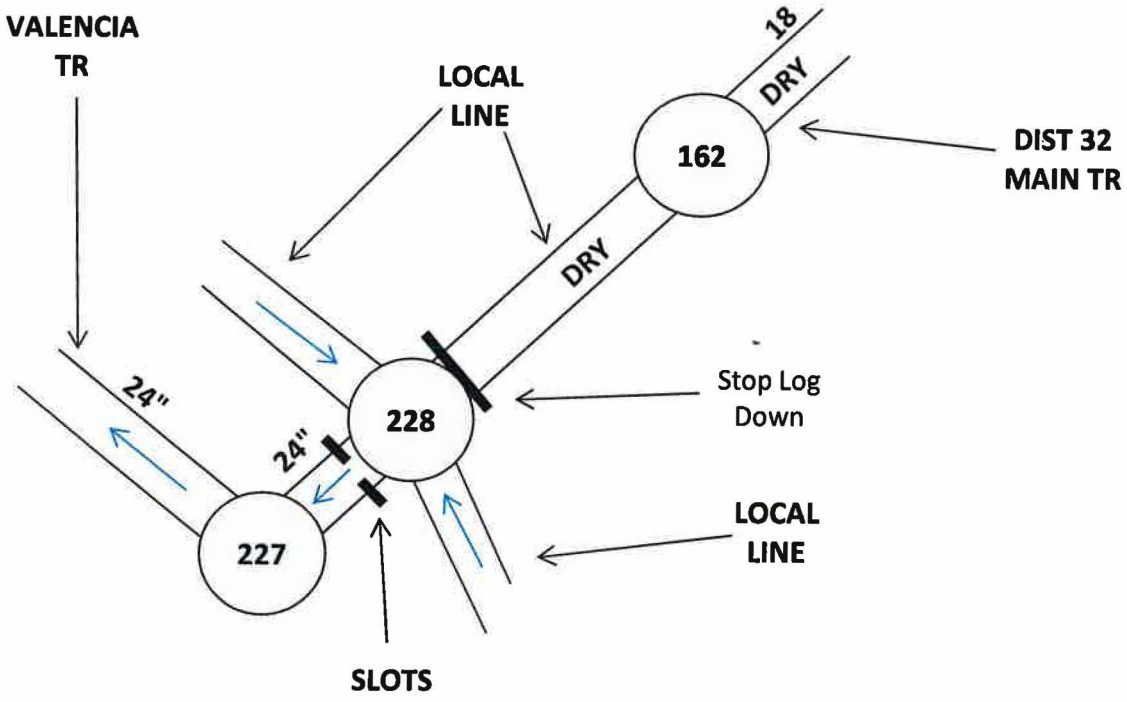
DDD

SEWER REFERENCE

Diversion Structure (24” CDS Trunk Line)


Orchard Village Rd
Wiley Canyon Rd
Orchard Village Rd
Wiley Canyon Rd
Orchard Village Rd
Orchard Village Rd
Orchard Village Rd

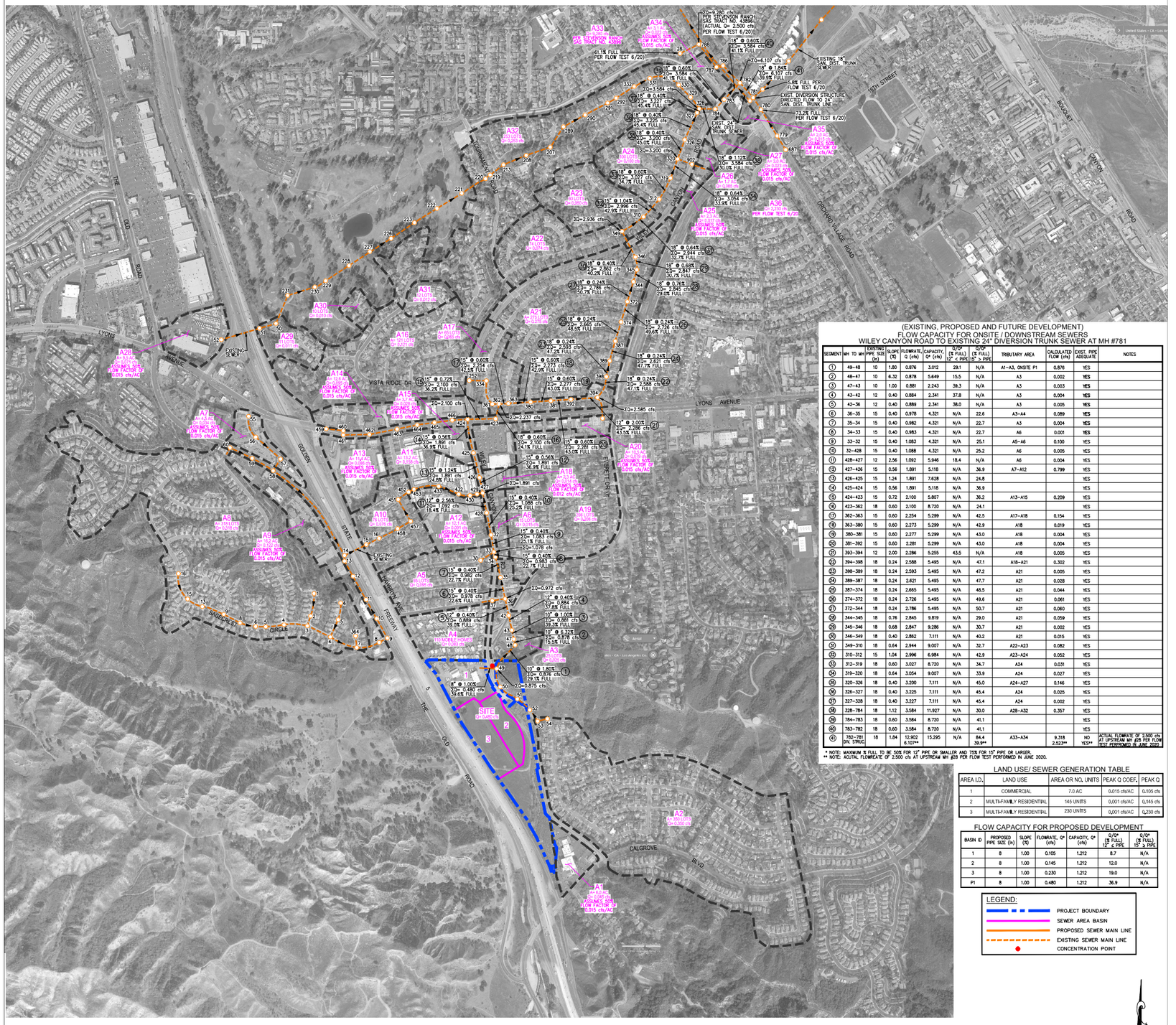
DISTRICT: 32 MAIN TR



Appendix G

Sewer Area Study Map

WILEY CANYON
SEWER AREA STUDY EXHIBIT
8/10/20



(EXISTING, PROPOSED AND FUTURE DEVELOPMENT)
FLOW CAPACITY FOR ONSITE / DOWNSTREAM SEWERS
WILEY CANYON ROAD TO EXISTING 24" DIVERSION TRUNK SEWER AT MH #781

SEGMENT	MH TO MH	EXISTING PIPE SIZE (in)	SLOPE (S)	FLOWRATE, Q (cfs)	CAPACITY, Q* (cfs)	Q/Q* (S FULL) 12" < PIPE	Q/Q* (S FULL) 15" > PIPE	TRIBUTARY AREA	CALCULATED FLOW (cfs)	EXIST. PIPE ADEQUATE	NOTES
①	49–48	10	1.80	0.876	3.012	29.1	N/A	A1–A3, ONSITE P1	0.876	YES	
②	48–47	10	6.32	0.878	5.649	15.5	N/A	A3	0.002	YES	
③	47–43	10	1.00	0.881	2.243	39.3	N/A	A3	0.003	YES	
④	43–42	12	0.40	0.884	2.341	37.8	N/A	A3	0.004	YES	
⑤	42–36	12	0.40	0.889	2.341	38.0	N/A	A3	0.005	YES	
⑥	36–35	15	0.40	0.978	4.321	N/A	22.6	A3–A4	0.089	YES	
⑦	35–34	15	0.40	0.982	4.321	N/A	22.7	A3	0.004	YES	
⑧	34–33	15	0.40	0.983	4.321	N/A	22.7	A6	0.001	YES	
⑨	33–32	15	0.40	1.083	4.321	N/A	25.1	A5–A6	0.100	YES	
⑩	32–428	15	0.40	1.088	4.321	N/A	25.2	A6	0.005	YES	
⑪	428–427	12	2.56	1.092	5.946	18.4	N/A	A6	0.004	YES	
⑫	427–426	15	0.56	1.891	5.118	N/A	36.9	A7–A12	0.799	YES	
⑬	426–425	15	1.24	1.891	7.628	N/A	24.8			YES	
⑭	425–424	15	0.56	1.891	5.118	N/A	36.9			YES	
⑮	424–423	15	0.72	2.100	5.807	N/A	36.2	A13–A15	0.209	YES	
⑯	423–362	18	0.60	2.100	8.720	N/A	24.1			YES	
⑰	362–363	15	0.60	2.254	5.299	N/A	42.5	A17–A18	0.154	YES	
⑱	363–380	15	0.60	2.273	5.299	N/A	42.9	A18	0.019	YES	
⑲	380–381	15	0.60	2.277	5.299	N/A	43.0	A18	0.004	YES	
⑳	381–392	15	0.60	2.281	5.299	N/A	43.0	A18	0.004	YES	
㉑	393–394	12	2.00	2.286	5.255	43.5	N/A	A18	0.005	YES	
㉒	394–398	18	0.24	2.588	5.495	N/A	47.1	A18–A21	0.302	YES	
㉓	398–389	18	0.24	2.593	5.495	N/A	47.2	A21	0.005	YES	
㉔	389–387	18	0.24	2.621	5.495	N/A	47.7	A21	0.028	YES	
㉕	387–374	18	0.24	2.665	5.495	N/A	48.5	A21	0.044	YES	
㉖	374–372	18	0.24	2.726	5.495	N/A	49.6	A21	0.061	YES	
㉗	372–344	18	0.24	2.786	5.495	N/A	50.7	A21	0.060	YES	
㉘	344–345	18	0.76	2.845	9.819	N/A	29.0	A21	0.059	YES	
㉙	345–346	18	0.68	2.847	9.286	N/A	30.7	A21	0.002	YES	
㉚	346–349	18	0.40	2.862	7.111	N/A	40.2	A21	0.015	YES	
㉛	349–310	18	0.64	2.944	9.007	N/A	32.7	A22–A23	0.082	YES	
㉜	310–312	15	1.04	2.996	6.984	N/A	42.9	A23–A24	0.052	YES	
㉝	312–319	18	0.60	3.027	8.720	N/A	34.7	A24	0.031	YES	
㉞	319–320	18	0.64	3.054	9.007	N/A	33.9	A24	0.027	YES	
㉟	320–326	18	0.40	3.200	7.111	N/A	45.0	A24–A27	0.146	YES	
㊱	326–327	18	0.40	3.225	7.111	N/A	45.4	A24	0.025	YES	
㊲	327–328	18	0.40	3.227	7.111	N/A	45.4	A24	0.002	YES	
㊳	328–784	18	1.12	3.584	11.927	N/A	30.0	A28–A32	0.357	YES	
㊴	784–783	18	0.60	3.584	8.720	N/A	41.1			YES	
㊵	783–782	18	0.60	3.584	8.720	N/A	41.1			YES	
㊶	782–781 DIV. STRUC	18	1.84	12.902 6.107**	15.295	N/A	84.4 39.9**	A33–A34	9.318 2.523**	NO YES**	ACTUAL FLOWRATE OF 2.500 cfs AT UPSTREAM MH #28 PER FLOW TEST PERFORMED IN JUNE 2020.

* NOTE: MAXIMUM % FULL TO BE 50% FOR 12" PIPE OR SMALLER AND 75% FOR 15" PIPE OR LARGER.
** NOTE: ACUTAL FLOWRATE OF 2.500 cfs AT UPSTREAM MH #28 PER FLOW TEST PERFORMED IN JUNE 2020.

LAND USE/ SEWER GENERATION TABLE

AREA I.D.	LAND USE	AREA OR NO. UNITS	PEAK Q COEF.	PEAK Q
1	COMMERCIAL	7.0 AC	0.015 cfs/AC	0.105 cfs
2	MULTI-FAMILY RESIDENTIAL	145 UNITS	0.001 cfs/AC	0.145 cfs
3	MULTI-FAMILY RESIDENTIAL	230 UNITS	0.001 cfs/AC	0.230 cfs

FLOW CAPACITY FOR PROPOSED DEVELOPMENT

BASIN ID	PROPOSED PIPE SIZE (in)	SLOPE (%)	FLOWRATE, Q* (cfs)	CAPACITY, Q* (cfs)	Q/Q* (S FULL) 12" ≤ PIPE	Q/Q* (S FULL) 15" ≥ PIPE
1	8	1.00	0.105	1.212	8.7	N/A
2	8	1.00	0.145	1.212	12.0	N/A
3	8	1.00	0.230	1.212	19.0	N/A
P1	8	1.00	0.480	1.212	36.9	N/A

LEGEND:
- PROJECT BOUNDARY
- SEWER AREA BASIN
- PROPOSED SEWER MAIN LINE
- EXISTING SEWER MAIN LINE
- CONCENTRATION POINT

SCALE: 1"=400'

ALLIANCE
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