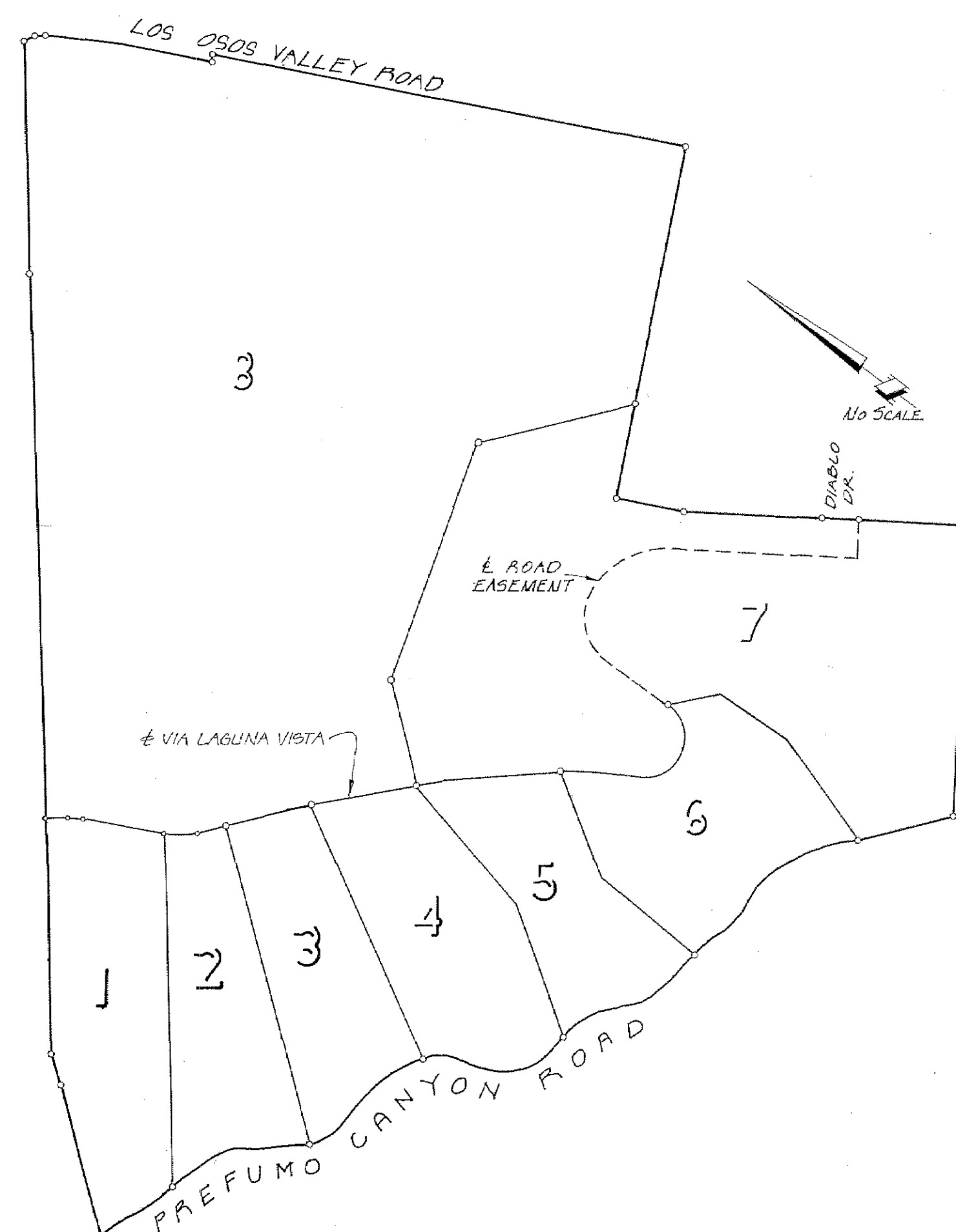


PUBLIC IMPROVEMENT PLANS
FOR
TRACT NO. 1053
PHASE I
SAN LUIS OBISPO, CALIFORNIA

GENERAL NOTES

1. NO CONSTRUCTION SHALL BE STARTED WITHOUT PLANS APPROVED BY THE COUNTY ENGINEERING DEPARTMENT. THE COUNTY ENGINEER SHALL BE NOTIFIED AT LEAST 24 HOURS PRIOR TO STARTING OF CONSTRUCTION. ANY CONSTRUCTION DONE WITHOUT APPROVED PLANS OR PRIOR NOTIFICATION TO THE COUNTY ENGINEER WILL BE REJECTED AND WILL BE DONE AT THE CONTRACTOR'S AND/OR OWNER'S RISK.
2. ALL CONSTRUCTION WORK AND INSTALLATIONS SHALL CONFORM TO THE COUNTY OF SAN LUIS OBISPO STANDARDS AND SPECIFICATIONS, AND ALL WORK SHALL BE SUBJECT TO THE APPROVAL OF THE COUNTY ENGINEER.
3. SOILS TESTS SHALL BE DONE IN ACCORDANCE WITH THE COUNTY STANDARDS AND SPECIFICATIONS SECTIONS 11-351.1403 AND 11-351.1404. ALL TESTS MUST BE MADE WITHIN 15 DAYS PRIOR TO PLACING MATERIAL. THE TEST RESULTS SHALL CLEARLY INDICATE THE LOCATION AND SOURCE OF THE MATERIAL.
4. COMPACTION TESTS SHALL BE MADE ON SUBGRADE MATERIAL AND MATERIAL PLACED AS SPECIFIED BY THE ENGINEER AND AS OUTLINED IN SOILS REPORT #02688 DATED 9/26/86 BY PACIFIC GEOSCIENCE INC. SAID TESTS SHALL BE MADE PRIOR TO PLACING OF THE NEXT MATERIAL.
5. SUBGRADE MATERIAL SHALL BE COMPACTED TO A RELATIVE COMPACTION OF 95% IN THE ZONE BETWEEN FINISHED SUBGRADE ELEVATION AND ONE FOOT BELOW. ALL MATERIAL IN FILL SECTIONS BELOW THE ZONE MENTIONED ABOVE SHALL BE COMPACTED TO 90% RELATIVE COMPACTION.
6. A REGISTERED CIVIL ENGINEER MUST CERTIFY THAT THE IMPROVEMENTS, WHEN COMPLETED, ARE IN ACCORDANCE WITH THE PLANS PRIOR TO THE REQUEST FOR FINAL INSPECTION. AS-BUILT PLANS ARE TO BE PREPARED AFTER CONSTRUCTION IS COMPLETED. THE CIVIL ENGINEER CERTIFYING IMPROVEMENTS AND PREPARING THE AS-BUILT PLANS SHALL BE PRESENT WHEN THE FINAL INSPECTION IS MADE.
7. A BASE PRIME COAT SEAL WILL BE APPLIED IF DIRECTED BY THE COUNTY ENGINEER.
8. AN INSPECTION AGREEMENT IS REQUIRED PRIOR TO THE START OF CONSTRUCTION.
9. ALL UTILITY COMPANIES MUST BE NOTIFIED PRIOR TO THE START OF CONSTRUCTION.
10. A COUNTY ENCROACHMENT PERMIT IS REQUIRED FOR ALL WORK DONE WITHIN THE COUNTY RIGHT-OF-WAY.
11. THE COUNTY INSPECTOR, ACTING ON BEHALF OF THE COUNTY ENGINEERING DEPARTMENT, MAY REQUIRE REVISIONS IN THE PLANS TO SOLVE UNFORESEEN PROBLEMS THAT MAY ARISE IN THE FIELD. ALL REVISIONS SHALL BE SUBJECT TO THE APPROVAL OF THE DEVELOPER'S ENGINEER.
12. THE STREET STRUCTURAL SECTION WILL BE BASED ON A TRAFFIC INDEX OF 5.0 AND SOILS TESTS PERFORMED AT THE TIME OF CONSTRUCTION.
13. ALL FRESH CUT OR FILL SLOPES SHALL BE PROVIDED WITH EROSION CONTROL PLANTING. REQUIRED PLANTINGS SHALL BE ESTABLISHED AND GROWING PRIOR TO THE REQUEST FOR FINAL INSPECTION.
14. ALL UTILITIES SHOWN ARE ACCURATE TO THE EXTENT OF AVAILABLE RECORDS AND KNOWLEDGE. THE CONTRACTOR HAS THE TOTAL RESPONSIBILITY TO VERIFY THE LOCATION OF EXISTING UNDERGROUND UTILITIES AND TO NOTIFY UTILITY COMPANIES WHEN WORKING IN THEIR PROXIMITY.
15. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT "UNDERGROUND SERVICE ALERT" AT 1-800-642-2444 FOR LOCATION OF POWER, GAS, OIL, CABLE TV, AND TELEPHONE UNDERGROUND FACILITIES. THE CONTRACTOR WILL ALSO BE RESPONSIBLE FOR CONTACTING THE APPROPRIATE AGENCY FOR LOCATION OF ALL UNDERGROUND FACILITIES.
16. ANY ALTERATION OR RELOCATION OF EXISTING UTILITY FACILITIES WILL BE THE RESPONSIBILITY OF THE DEVELOPER.
17. PROVIDE ONE FOOT MINIMUM SEPARATION BETWEEN WATER LINES AND PUBLIC UTILITIES WHERE CROSSINGS OCCUR.
18. PROJECT BENCHMARK: THE ELEVATION DATUM FOR THIS PROJECT IS THE L&T AT THE BCR AT THE NORTHEAST CORNER OF DIABLO AND DEL RIO CITY OF SAN LUIS OBISPO BM #9-267 ELEV. 219.79.

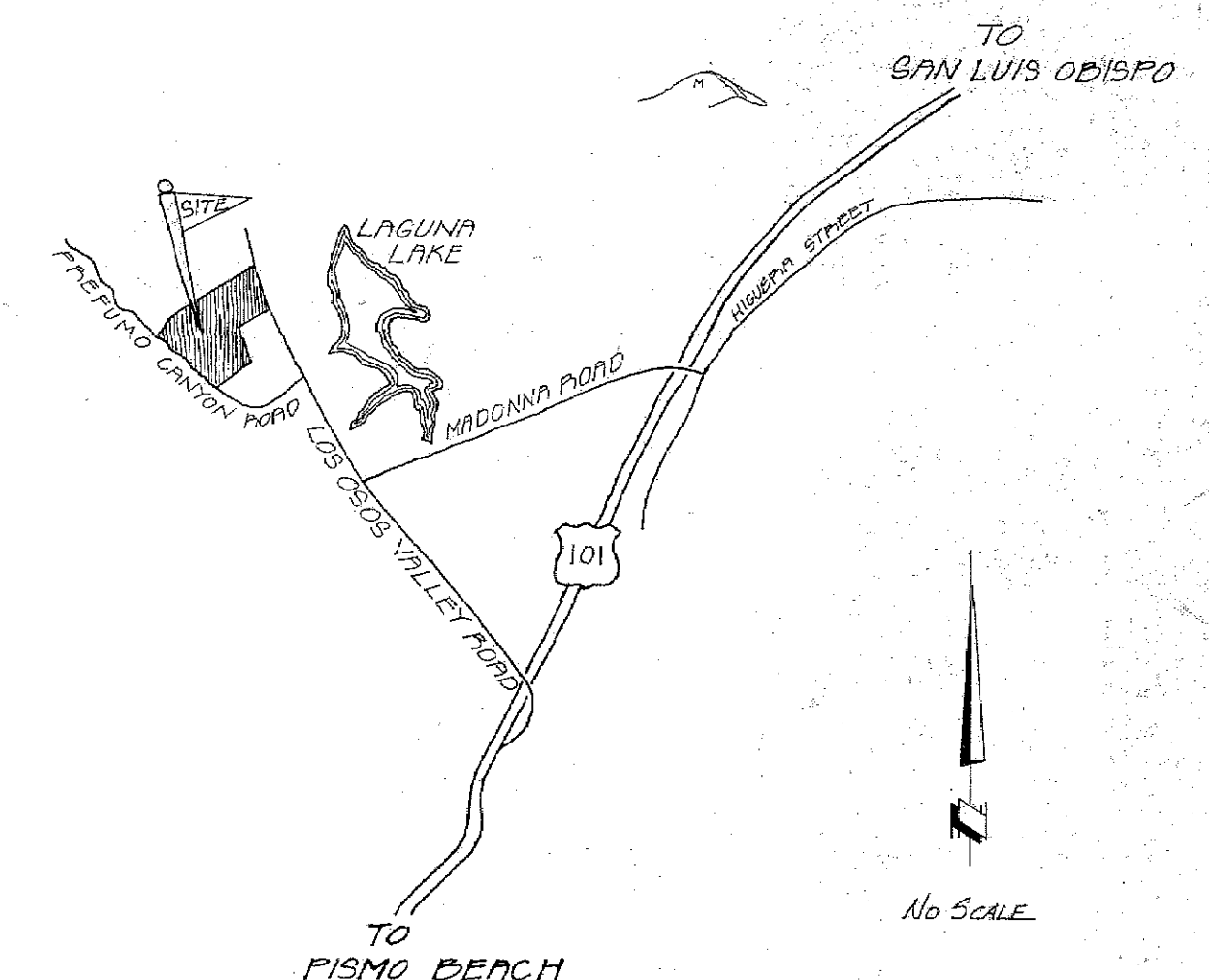
PROJECT MAP



LEGEND

TRACT BOUNDARY	---
LOT LINE	---
ROAD CENTERLINE (C)	---
EASEMENT LINE	---
EXIST. EDGE OF PAVEMENT	---
SAWCUT LINE	---
NEW STORM DRAIN	---
NEW STREET NAME/STOP SIGN	---
UTILITY TRENCH	---
UTILITY BOXES	---
NEW GAS LINE	---
6" PVC TREATED WATER LINE	---
2" PVC RAW WATER LINE	---
PUMP & FILTER CONTROL CIRCUIT	---

VICINITY MAP

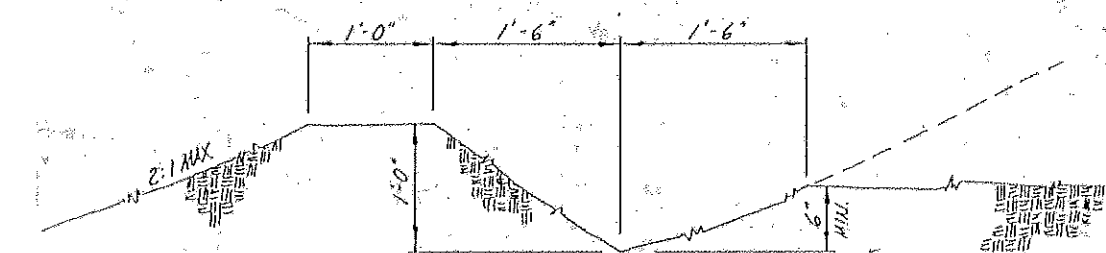


CALIF COORD 654 N 1180 E			
ENGINEERING DEVELOPMENT ASSOCIATES 1320 HIPPODOME ST., SAN LUIS OBISPO, CALIFORNIA 93401			
TRACT NO. 1053			
TITLE SHEET			
DESIGNED BY: J.E.	CHECKED BY: R.C. Martel	APPROVED BY: J.C. Prosser	DATE: 12/31/88
DRAWN BY: C.C. GB	DATE: 9-21-88	RECOMMENDED FOR APPROVAL BY: Clinton Miller	DATE: 12/31/88
JOB NO.: 86-316	COUNTY: SLO	DEPUTY COUNTY ENGINEER	EXP. DATE: 12/31/88
SHEET 1 OF 7			

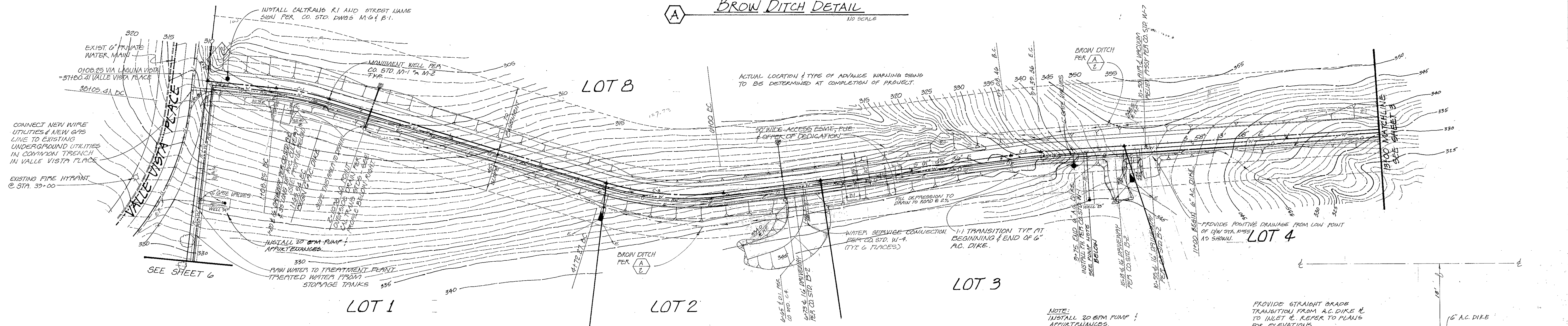
CABLE TV REVIEWED BY: Bob Olson 2-20-89
TELEPHONE SYSTEM REVIEWED BY: R. Payne 3-2-89
GAS SYSTEM REVIEWED BY: R.C. Martel 3-23-89
ELECTRIC SYSTEM REVIEWED BY: Bob Olson 2-25-89

RETH V. CROWE RCE 31501
EXP. DATE 12-88
DATE OF 7
#86-316

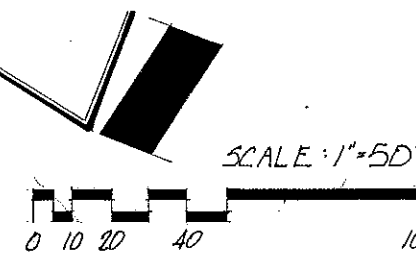
PLAN	SURVEYED		BY	DATE
	PLOTTED			
NOTE BOOK	ALIGNMENT CHECKED		BY	DATE
No.	RT. OF WAY CHECKED			



BROW DITCH DETAIL

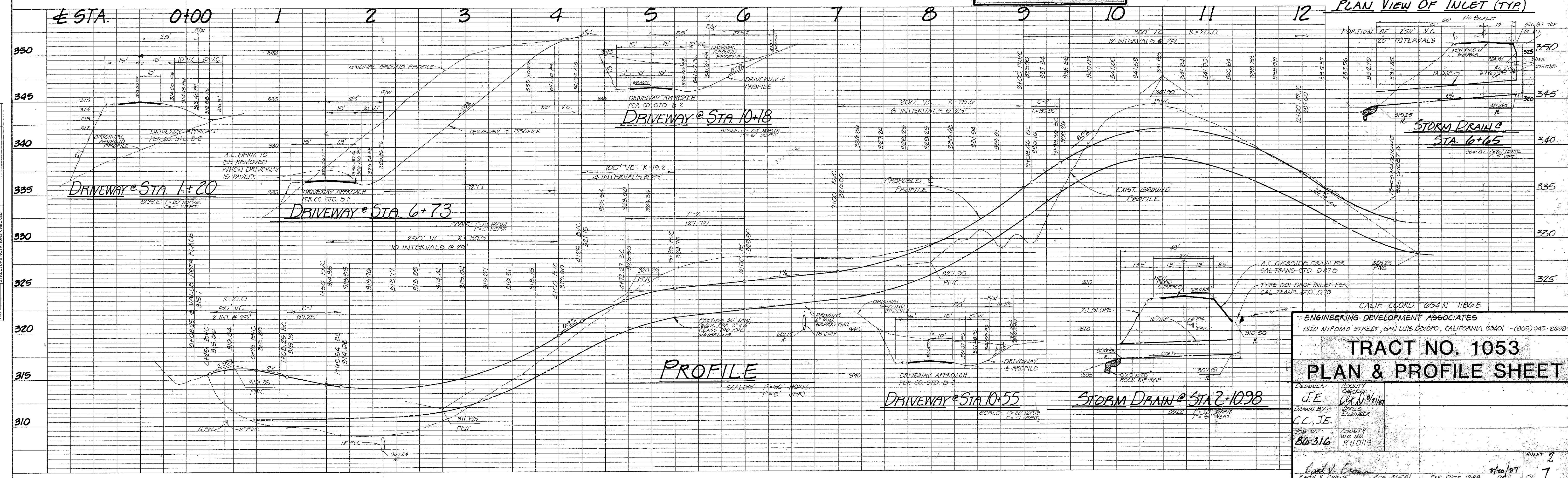
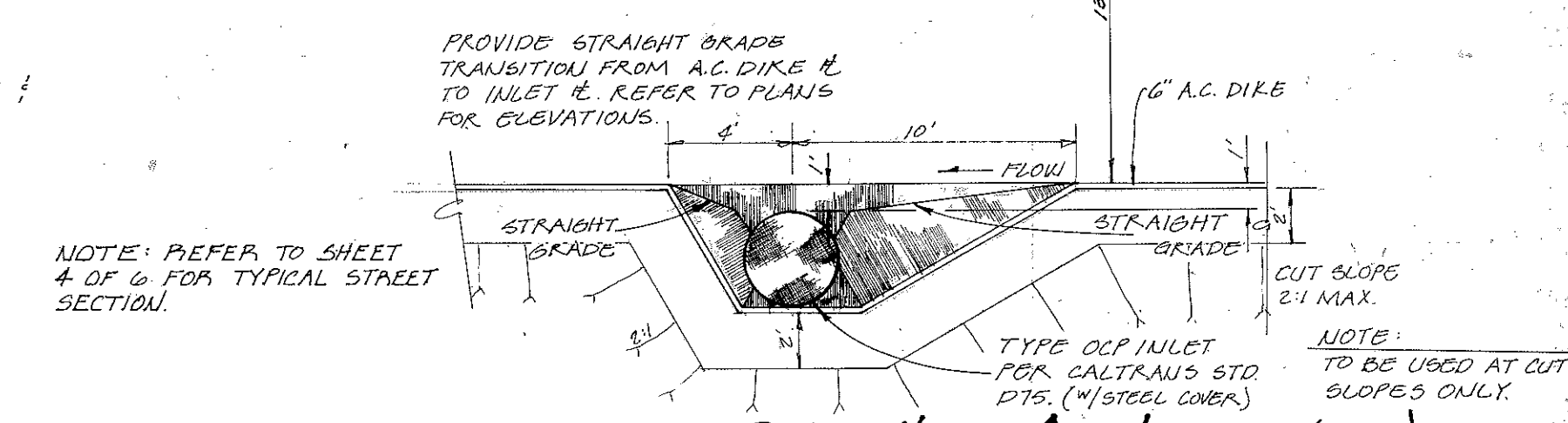


CURVE DATA						
#	Δ			R	L	T
C-1	10°	56'	29"	300'	57.29'	28.73'
C-2	3°	32'	28"	500'	30.90'	15.46'
C-3	24°	23'	40"	300'	127.73'	64.85'



VIA LAGUNA VISTA

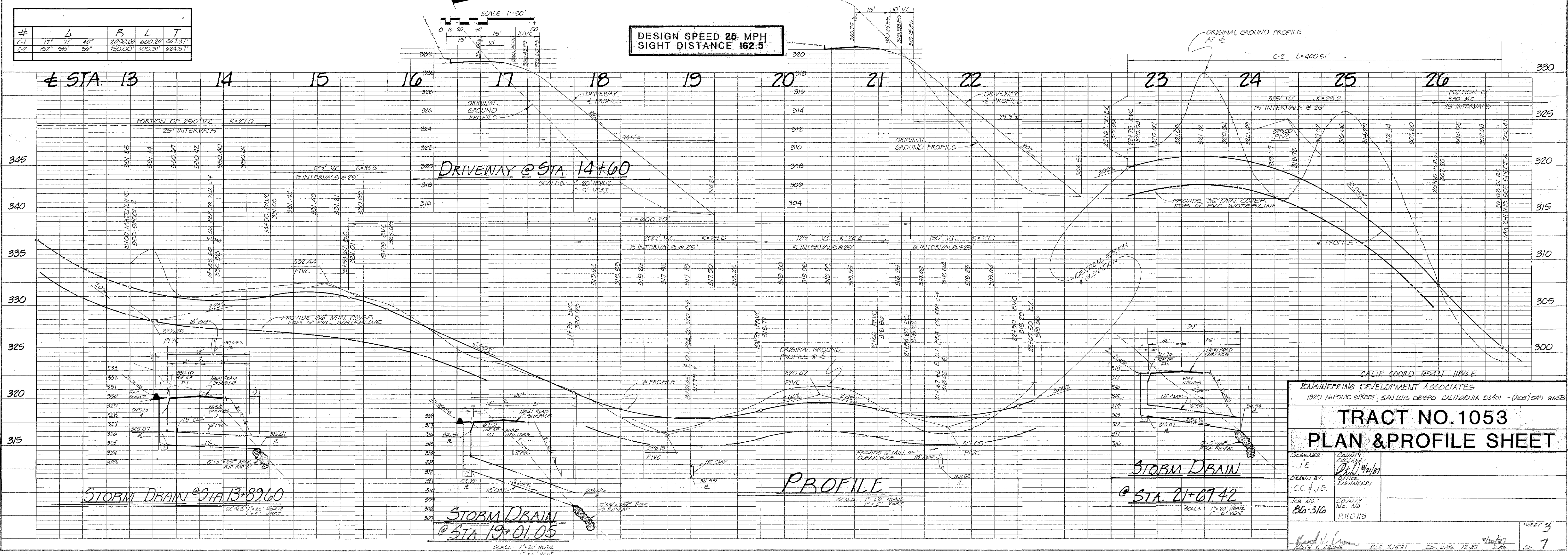
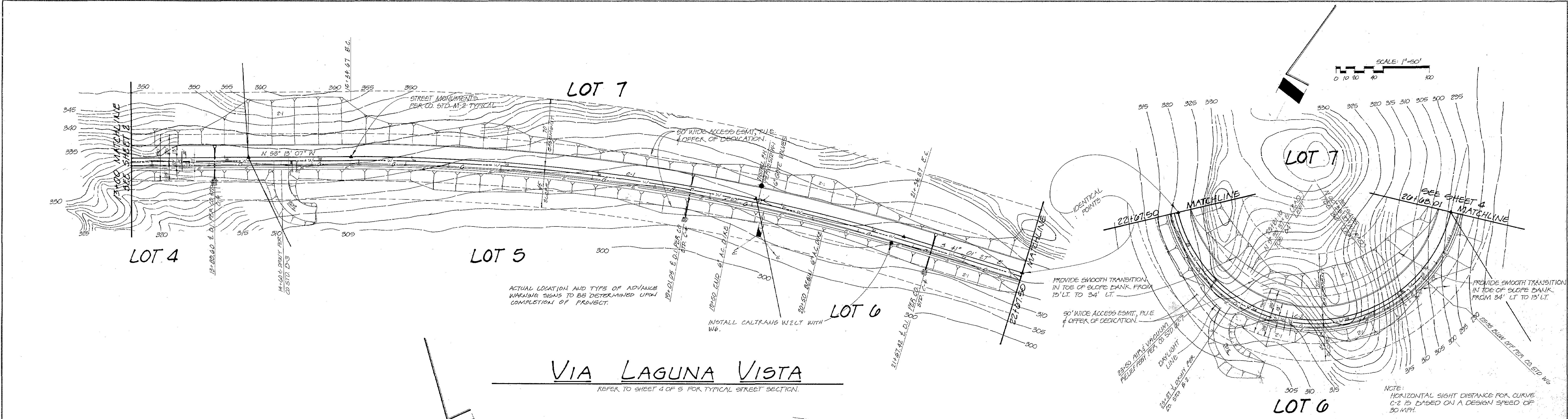
DESIGN SPEED 25 MPH
SIGHT DISTANCE 162.5'



ENGINEERING DEVELOPMENT ASSOCIATES		1310 NIPOMO STREET, SAN LUIS OBISPO, CALIFORNIA 93401 - (805) 349-0668	
TRACT NO. 1053			
PLAN & PROFILE SHEET			
DESIGNER: <i>J.E.</i>	COUNTY ENGINEER: <i>CE 10 1/2/87</i>		
DRAWN BY: <i>C.C., J.E.</i>	CITY ENGINEER:		
JOB NO.: <i>86-316</i>	COUNTY W.D. NO.: <i>R 110115</i>		
<i>Lead V.C. Brown</i>	<i>CCS 8/6/81</i>	<i>Exp. Date 10/88</i>	SHEET <i>2</i>
		<i>8/20/87</i>	<i>7</i>

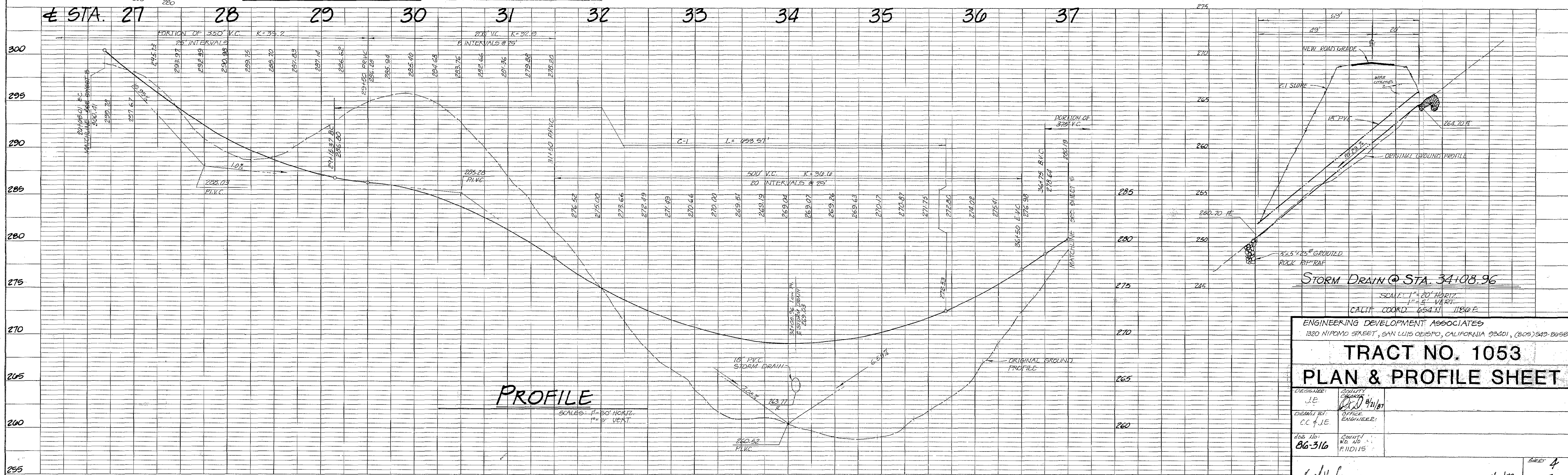
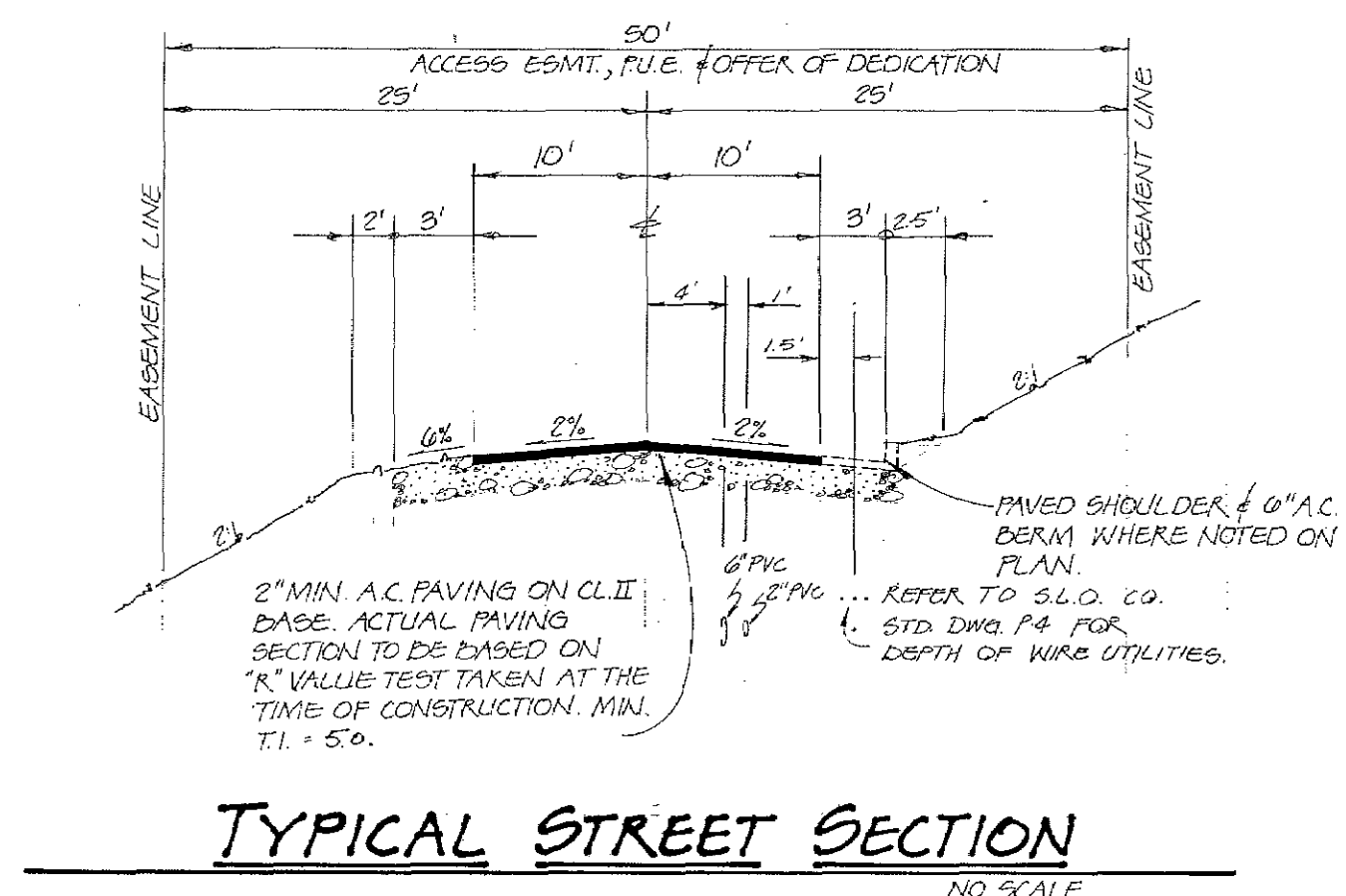
DATE	BY	NO.
PLAN		
SURVEYED		
PLOTTED		
NOTE BOOK		
CHECKED		
BY		
NO.		

DATE	BY	NO.
PROFILE		
SURVEYED		
PLOTTED		
NOTE BOOK		
CHECKED		
BY		
NO.		



ENGINEERING DEVELOPMENT ASSOCIATES 1920 NIPOMO STREET, SAN LUIS OBISPO, CALIFORNIA 93401 - (805) 540-9653	
TRACT NO. 1053 PLAN & PROFILE SHEET	
DESIGNED BY: J.E.	COUNTY ENGINEER: J.E.
DRAWN BY: C.C. & J.E.	OFFICE ENGINEER: J.E.
JOB NO.: 86-316	COUNTY NO. NO.: P.H.D.115
CALIF. COORD. 05/24/11/86	
SHEET 3 OF 7	

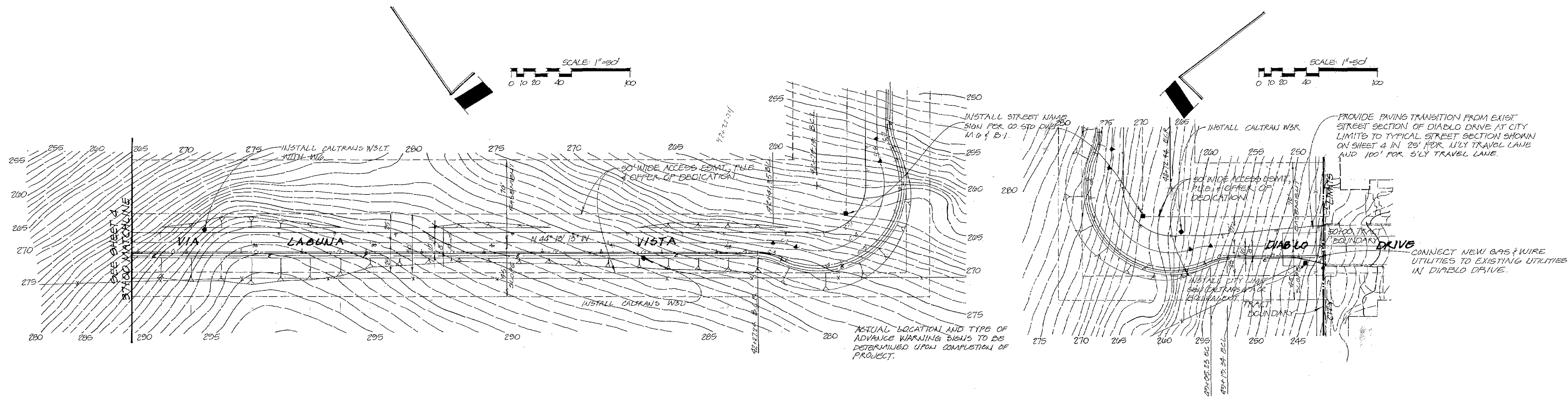
PROFILE	SURVEYED _____		BY _____	DATE _____
	PLOTTED _____			
NOTE BOOK	GRADES CHECKED _____			
No. _____	B. M.'S NOTED _____			
	STRUCTURE NOTATIONS CHECKED _____			



ENGINEERING DEVELOPMENT ASSOCIATES 1820 MIRAMON STREET, SAN LUIS OBISPO, CALIFORNIA 93401, (805)543-0888			
TRACT NO. 1053			
PLAN & PROFILE SHEET			
DESIGNER: J.E.	QUALITY CHECKED J.E. 9/21/07		
DRAWN BY: C.C. & J.E.	OFFICE ENGINEER:		
JOB NO: 86-316	SCOUT NO. 405 P110115		
Keith V. C.C. Law RCE 5/15/81 EXP. DATE 12-88		SHEET 4 OF 7	

PLAN	DATE	BY
	SURVEYED	
	NOTE BOOK	
	RT OF WAY CHECKED	

PROFILE	DATE	BY
	SURVEYED	
	NOTE BOOK	
	RT OF WAY CHECKED	



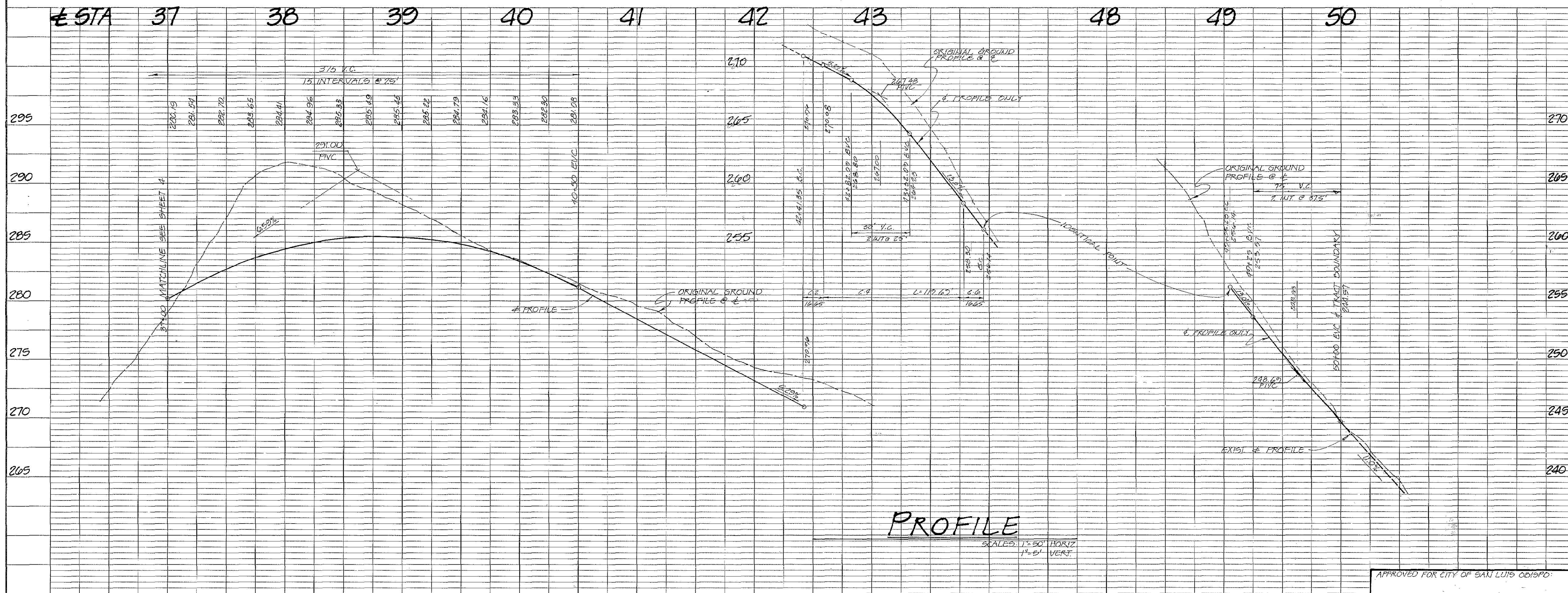
VIA LAGUNA VISTA

DIABLO DRIVE

CURVE DATA				
#	Δ	R	L	T
C-1	30° 00' 13"	40.00'	62.83'	40.00'
C-2	17° 20' 35"	55.00'	16.65'	8.33'
C-3	24° 04' 06"	45.00'	18.00'	9.55'
C-4	122° 41' 25"	55.00'	119.67'	104.95'
C-5	158° 08' 28"	70.00'	148.77'	183.03'
C-6	17° 20' 35"	55.00'	16.65'	8.33'
C-7	24° 04' 06"	45.00'	18.00'	9.55'

NOTE:
FOR TYPICAL STREET SECTION
SEE SHEET 4 OF 5.

DESIGN SPEED 30 MPH
SIGHT DISTANCE 200'



PROFILE

CALIF. COORD. 654 N 1180 E	
ENGINEERING DEVELOPMENT ASSOCIATES	
1920 NIPOMO STREET, SAN LUIS OBISPO, CALIFORNIA 93401 - (805) 549-8653	
TRACT NO. 1053	
PLAN & PROFILE SHEET	
DESIGNED BY: J.E.	CHECKED BY: J.E.
DRAWN BY: C.C. & J.E.	OFFICE ENGINEER: J.E.
DATE: 11/10/87	PROJECT NO.: 86-316
CITY ENGINEER: R.C.E. 19808	
DATE: 7/10/87	

PLAN	DATE	BY	CHKD.
NOTE BOOK			
NO.			

WATER SYSTEM NOTES

1. SCOPE OF WORK: Furnish all labor, material and equipment required to construct water system, including but not limited to water lines, fittings, valves and appurtenances, fire hydrants, well pumps, backwash pump, motor starters, storage tanks, flow and float control switches, electrical controls, wiring, conduit, control panels, junction boxes, ammeters, water meters, filtration unit, gas chlorinator unit, wooden enclosure building and foundation, and perimeter chain link fencing.

2. All materials and equipment shall be in compliance with the Uniform Building Code (UBC), Uniform Plumbing Code (UPC), National Electrical Code (NEC), American Society for Testing and Materials (ASTM), American National Standards Institute (ANSI), and the American Water Works Association (AWWA), current editions. All materials shall be of new stock and shall bear the manufacturer's label. In addition all material and equipment for treated water distribution from tank outlet flange to first hydrant shall be in compliance with NSFPA pamphlet 20, 1982 edition or later.

3. All construction and installations shall be performed by skilled craftsmen directly in the employ of firms specializing in this type of work. In addition, the work shall be in conformance with officially recognized professional industry and trade organizations. Specifically, the work will conform to above listed codes and specifications.

4. Polyvinyl chloride (PVC) water pipe and fittings shall meet and conform to the requirements of AWWA Standard for Polyvinyl chloride (PVC) Pressure Pipe C900-81 and ASTM Standard A2241 as amended to date. The contractor shall furnish documentary evidence and/or certified test results to the Developer's Engineer which indicate that the pipe, fittings, and accessories furnished meet all of the requirements of these specifications. Documentary evidence will be considered sufficient when the pipe manufacturer furnishes a certificate indicating that the pipe has been sampled, tested, and inspected in accordance with the provision of all AWWA and ASTM specifications.

5. Pipe for water main from wells to storage facility shall be PVC ASTM C241 Class 21, and pipe for water main from storage facility through the distribution system shall be PVC AWWA C900-81, Class 150.

6. PVC pipe shall be furnished with solvent-cement belled ends for 2" diameter and integral well belled ends with elastomeric seals for 6" diameter.

7. All PVC fittings and accessories shall be as manufactured and furnished by the pipe supplier or approved equal and have bell and/or spigot configurations compatible with that of the pipe.

8. All PVC pipe and fittings for pressure water mains shall be installed in accordance with the manufacturer's recommendations and with the requirements of the AWWA and ASTM Standard Specification D2774.

9. Steel pipe shall conform to and meet the requirements of AWWA Specifications C201 or C202 with cement mortar lining and coating in accordance with AWWA Specifications C205.

10. Galvanized iron pipe and fittings shall be bituminous coated where below grade.

11. Fittings for steel pipe shall be factory fabricated from steel pipe and shall conform to designs as specified in AWWA Specification C208. The fittings shall be mortared lined in accordance with AWWA Specification C104.

12. Valves shall open in counter-clockwise direction and shall meet the requirements of AWWA Specifications C500 for gate valves and AWWA Specifications C504 for butterfly valves. All 2 inch (2") gate valves shall be all bronze and all 4 inch (4") and 6 inch (6") gate and butterfly valves shall be cast iron class 125 conforming to ANSI B16.1-1960. Valve boxes shall be as shown on County Standard Drawing No. W-2. All corporation stops shall be bronze, round, with inlet for either corporation stop thread for PVC pipe or iron pipe standard (IPS) thread for steel pipe, and outlet for the type of service pipe used.

13. Fire hydrants shall be dry barrel type, 30 inch (30") bury, and meet the requirements of AWWA Specifications C502 and C503 with two (2), two and one-half inch (2-1/2") outlets with National Standard fire thread and one (1) four inch (4") section outlet with California Standard fire thread. Hydrants shall be installed in accordance with County Standard Drawing No. W-1.

14. Blowoff assemblies and air and vacuum release valve assemblies shall be provided and installed according to County Standard Drawing No. W-6 and W-7, respectively.

VALLE VISTA PLACE

SEE SHEET 2

2" CLASS 200 PVC MAIN WATERLINE FROM PUMPS TO FILTRATION UNIT.

6" CLASS 200 PVC WATERLINE FROM STORAGE TANKS

SCALE: 1"=50'

15. Water service connections are to be one inch (1") and installed in accordance with County Standard Drawing No. W-4.

16. Water lines shall be installed at a depth which will provide a minimum cover of thirty-six (36") inches over the top of the pipe measured from the finished grade. Trenching and backfilling shall comply with County Standard No. W-8.

17. Thrust blocks of Class "B" concrete shall be installed as indicated on the plans and shall conform to the requirements of County Standard Drawing No. W-2.

18. Steel water storage tanks shall comply with AWWA D100 and also meet all foundation and seismic requirements of the Building Code. Interior sides and bottom and exterior bottom of steel tanks shall be treated with a non-toxic bituminastic (coal tar pitch) butylene epoxy emulsion meeting or exceeding AWWA D102 standards. Exterior sides and roof of steel tanks shall be primed and painted. Color to be verified by owner. All paints and other protective coatings shall comply with AWWA D102-78. All materials used for application on surfaces in contact with water shall be certified in writing by manufacturer as conforming to all requirements for use in potable water systems of the U.S. Public Health Service.

19. Pressure and leakage test - All system components except steel storage tanks shall be tested in accordance with the procedure as outlined in the San Luis Obispo County Engineering Department "Standard Improvement Specifications and Drawings," section 11-351.1736.

20. Measurement of water leakage during the test shall be performed by the Contractor by a method approved by the Developer's Engineer.

21. Should any section of pipe and fittings fail any of the tests specified above, the Contractor shall at his own expense, locate and repair defective joints or pipe and repeat to the satisfaction of the Developer's Engineer.

22. Upon completion of the pressure and leakage test, the entire system shall be thoroughly flushed out. Storage tanks shall be disinfected and sampled for bacteriological quality in accordance with procedures described in "Methods for Disinfecting Tanks and Reservoirs," AWWA Journal, 71(1):49-50 (January 1979). All other system components shall be disinfected and bacteriological tests performed in accordance with AWWA Standard C501-68, latest revision, and/or the requirements of the County Health Department.

23. Contractor is responsible for furnishing and installing all necessary thrust blocks, pipe, fittings, and valves required to inject the sterilizing solution at points designated by the Developer's Engineer and withdraw water and/or solution in order to effect satisfactory results.

24. All pipes above grade shall be supported at intervals not to exceed 10 feet, and at each change in horizontal and vertical direction by a pipe support, pipe clamp, or pipe hanger.

25. Contractor shall provide clearance around all pipes at penetrations through walls and slabs. Clearances shall be provided at each penetration to maintain a minimum clearance of one-half inch (1/2") between the outside of the pipe and the wall. The space between the pipe and wall shall be carefully packed or caulked with waterproof material per UPC Standards and Specifications.

26. Upon completion of the water system, the Contractor shall operate and test the entire system and all of its components in the presence of the Developer's Engineer and County Inspector to ensure the proper operation and functioning of the system and its components for all modes. The Contractor shall adjust, repair and/or replace at his own expense, any portion or component of the water system which does not operate properly and repeat the water system to the satisfaction of the Developer's Engineer.

SYSTEM OPERATION LOGIC

A. Normal Condition - Average Daily Demand

- Water withdrawn from system for domestic use.
- Storage water level falls to 3' below top of tank shell, lead well and chlorinator booster pumps on.
- Lead well and chlorinator booster pumps run until water level in tanks reaches 1.5' below top of tank shell, system then switches off.

B. Normal Condition - Maximum Daily Demand

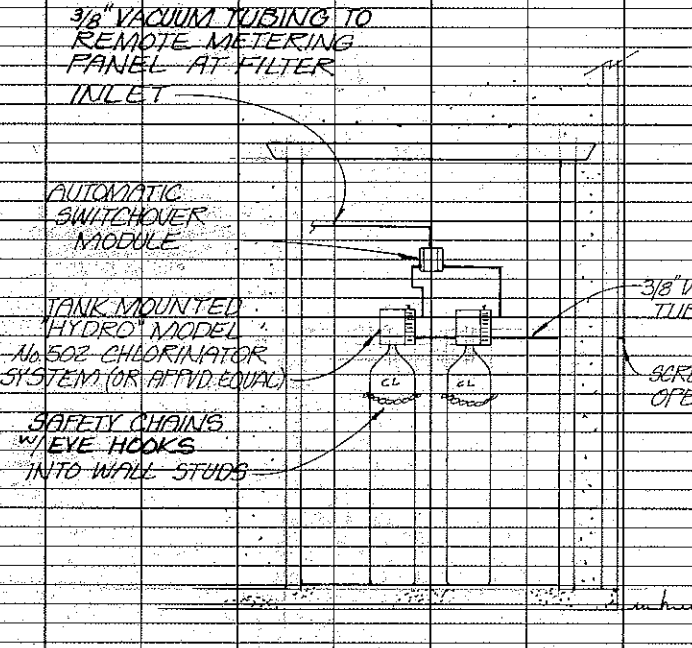
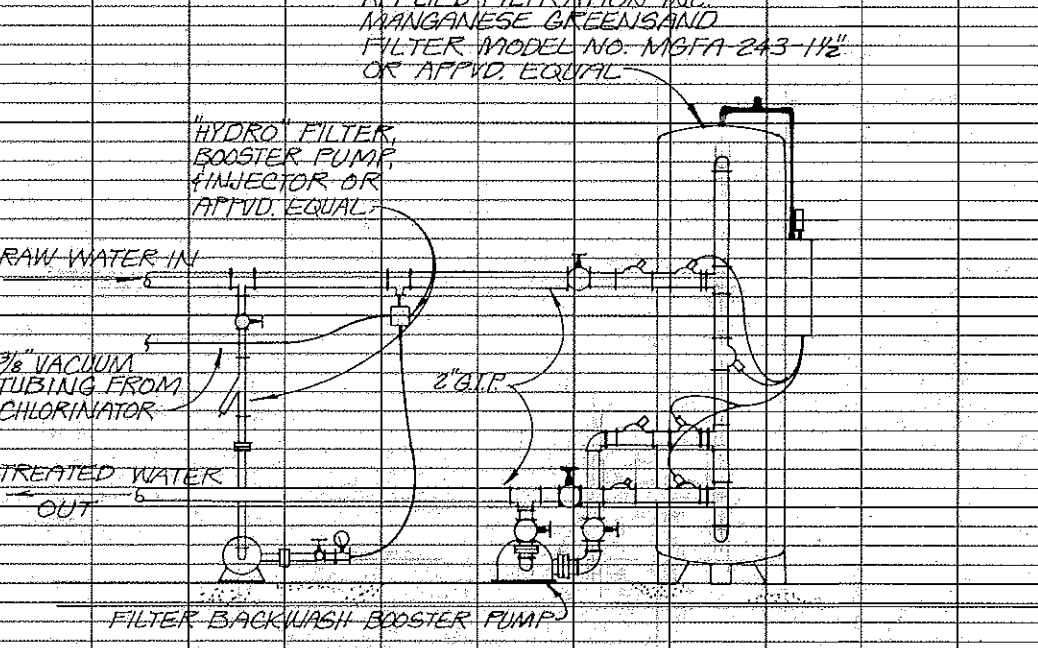
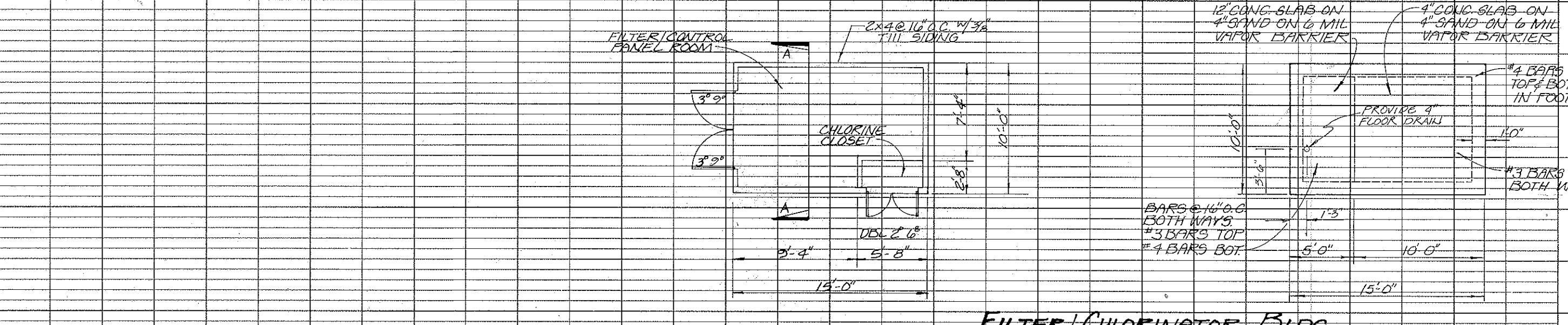
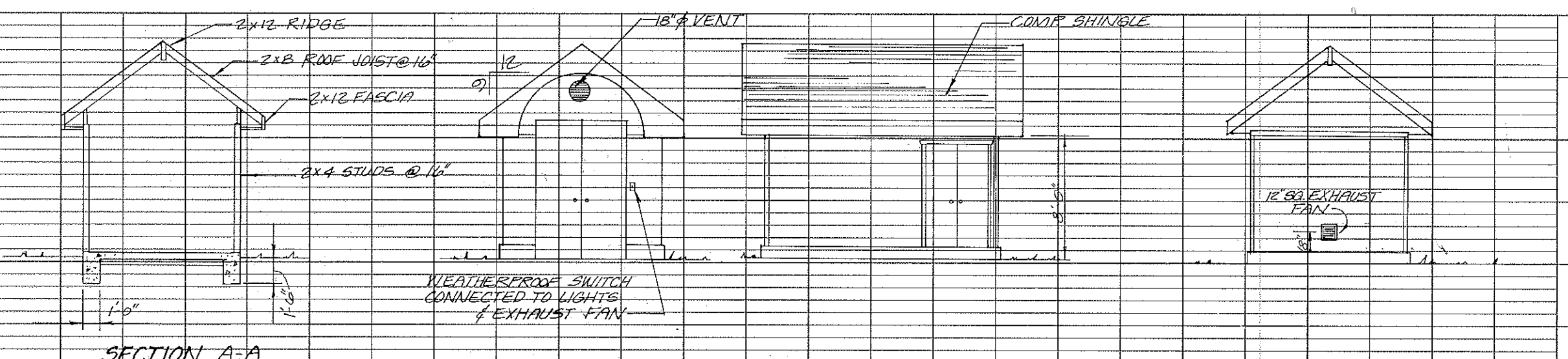
- Water withdrawn from system for domestic and residential irrigation use.
- Lead well and chlorinator booster pumps switch on at 3' below top of tank shell but water level continues to fall. Lag well pump switches on at 5' below top of tank shell.
- Both well pumps and chlorinator booster pumps run until water level in tank reaches 1.5' below top of tank shell, system then switches off.

C. Fire Condition

- Water withdrawn from system through fire hydrant, flow exceeds 150 gallons per minute, flow switch on system outlet closes overriding system normal operation modes.
- Filter backwash cycle disabled, both wells switch on, chlorinator booster pump switches on.
- After fire flow condition has passed, flow switch opens and system returns to normal operating mode.
- Filter backwash cycle enabled.
- Both well pumps and chlorinator booster pump run until water level in tanks reaches 1.5' below top of tank shell, system then switches off.

D. For all flow situations

- Loss of power to system activates Power Off Warning Lights mounted at both well heads as well as at water storage/treatment area.
- Filter backwash cycle is automatically activated periodically as needed except during fire flow conditions.
- Overflow-high level alarm occurs when water level reaches 1'-3" below top of tank shell.
- Low level alarm occurs when water level reaches 6' below top of tank shell. 30,000 gallons remain in storage when low level alarm activates.



ENGINEERING DEVELOPMENT ASSOCIATES
1820 NIPOMO STREET SAN LUIS OBISPO CA 93401 (805) 549 8658

TRACT NO. 1053 WATER SYSTEM

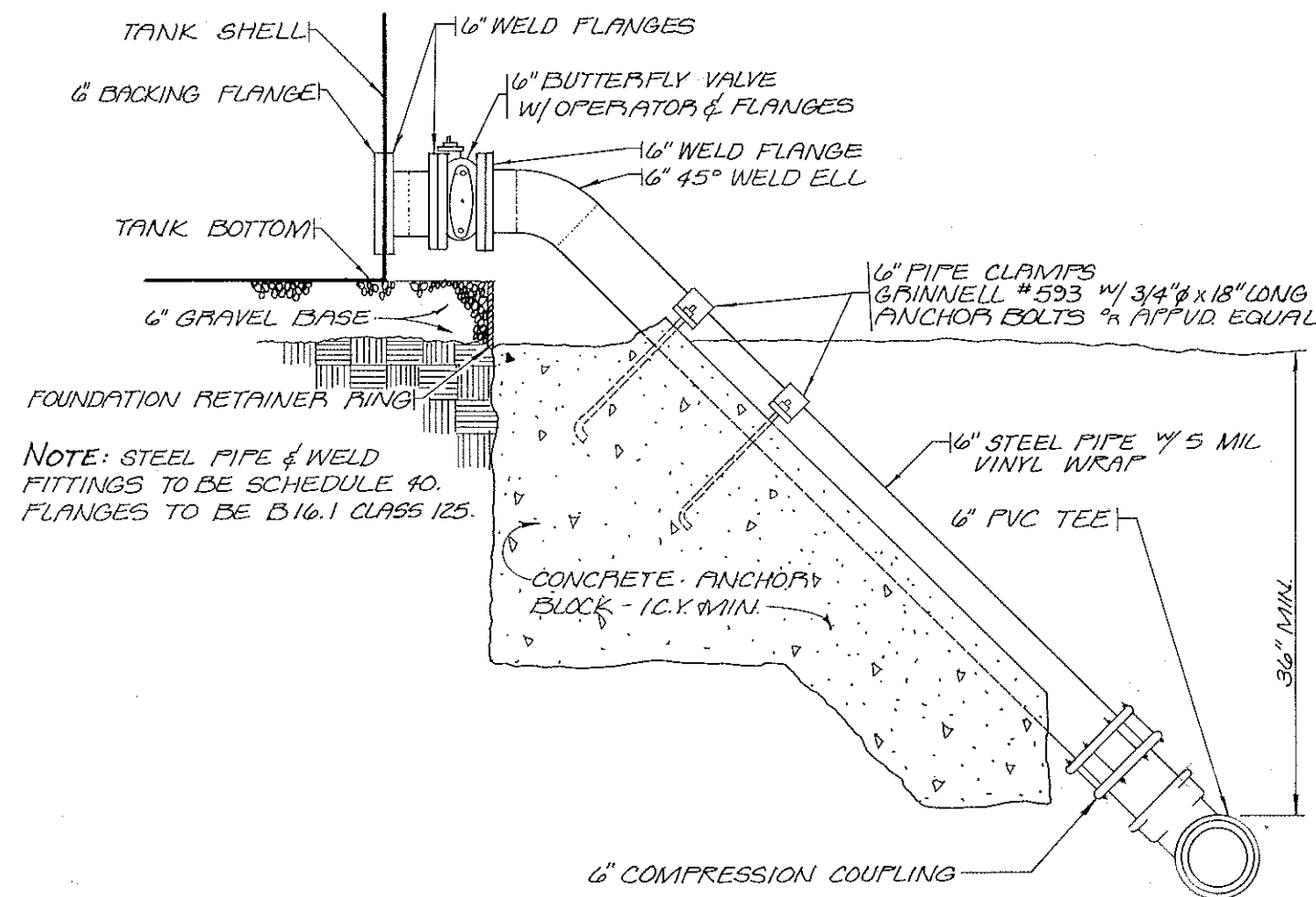
DESIGNER: FRB CO. CHKD: BEN 9/1/87
DRAWN BY: FRB OFFICE ENGINEER: 1

JOB # 86316 CO. W.D. #1 P110115

DATE 1/10/87

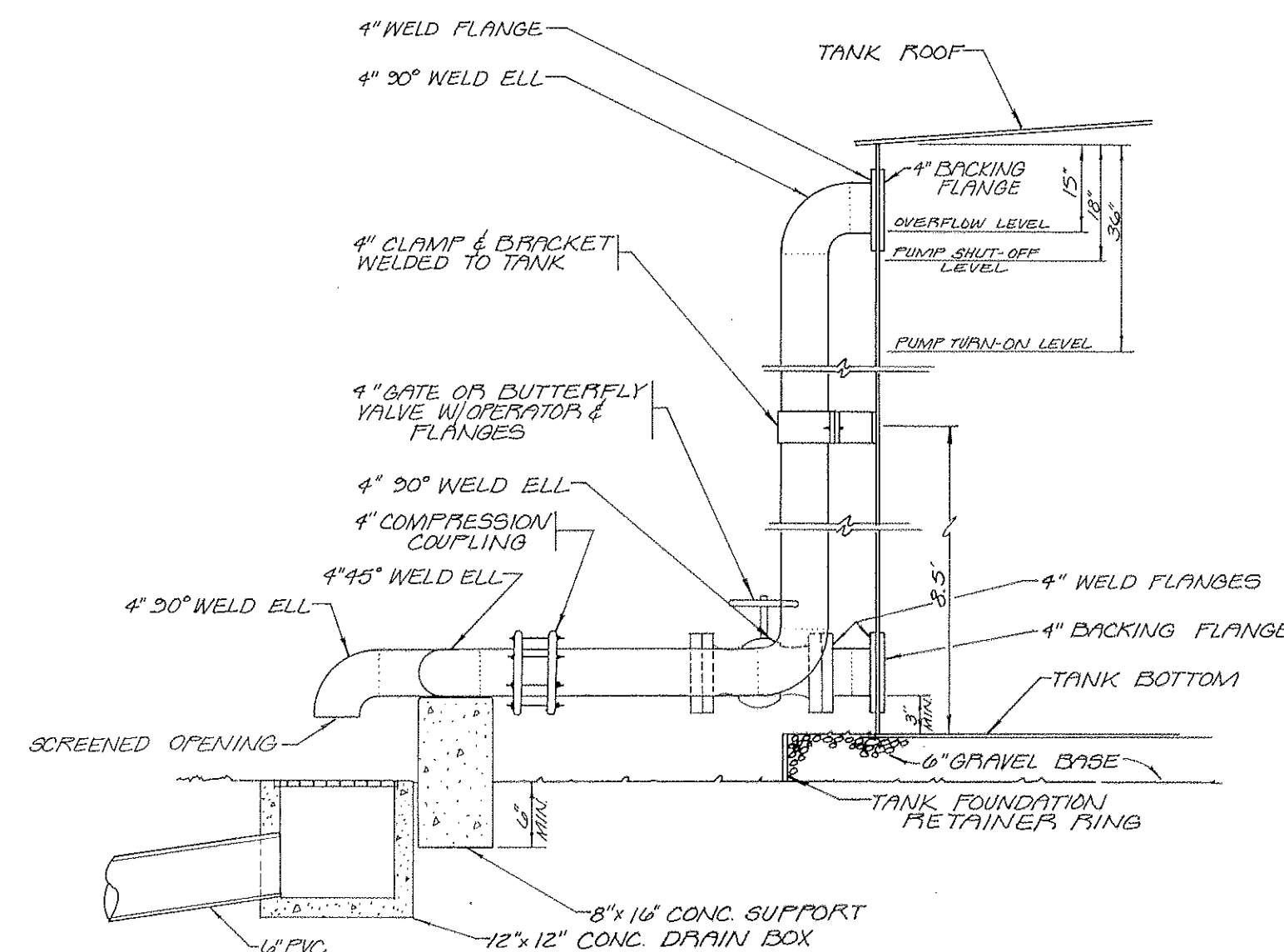
REVIEWED: RLB 3/15/81 END DATE 12-88 DATE 1/10/87

SHEET 6 OF 7



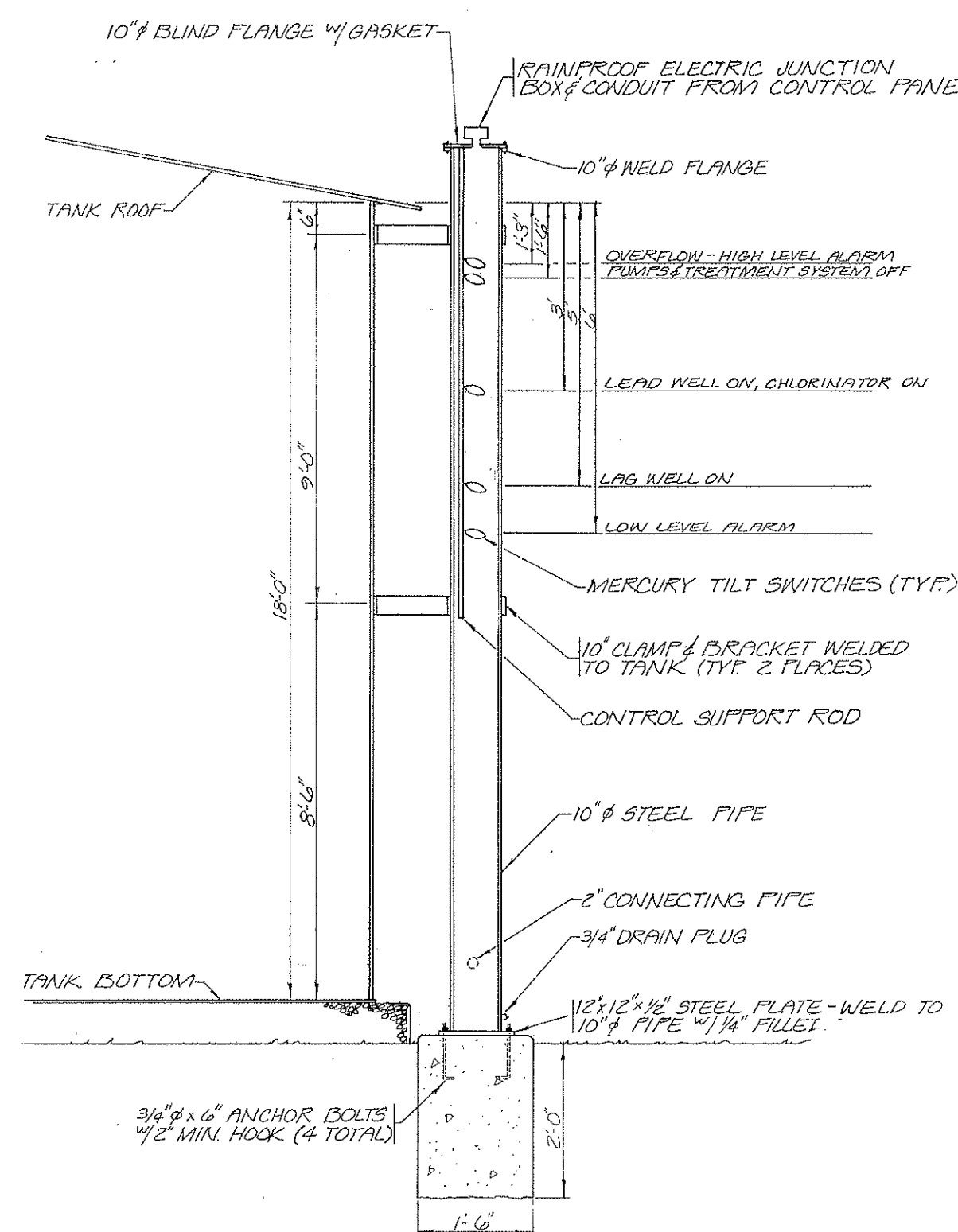
TANK INLET-OUTLET DETAIL

(TYPICAL 3 TANKS) (NO SCALE)



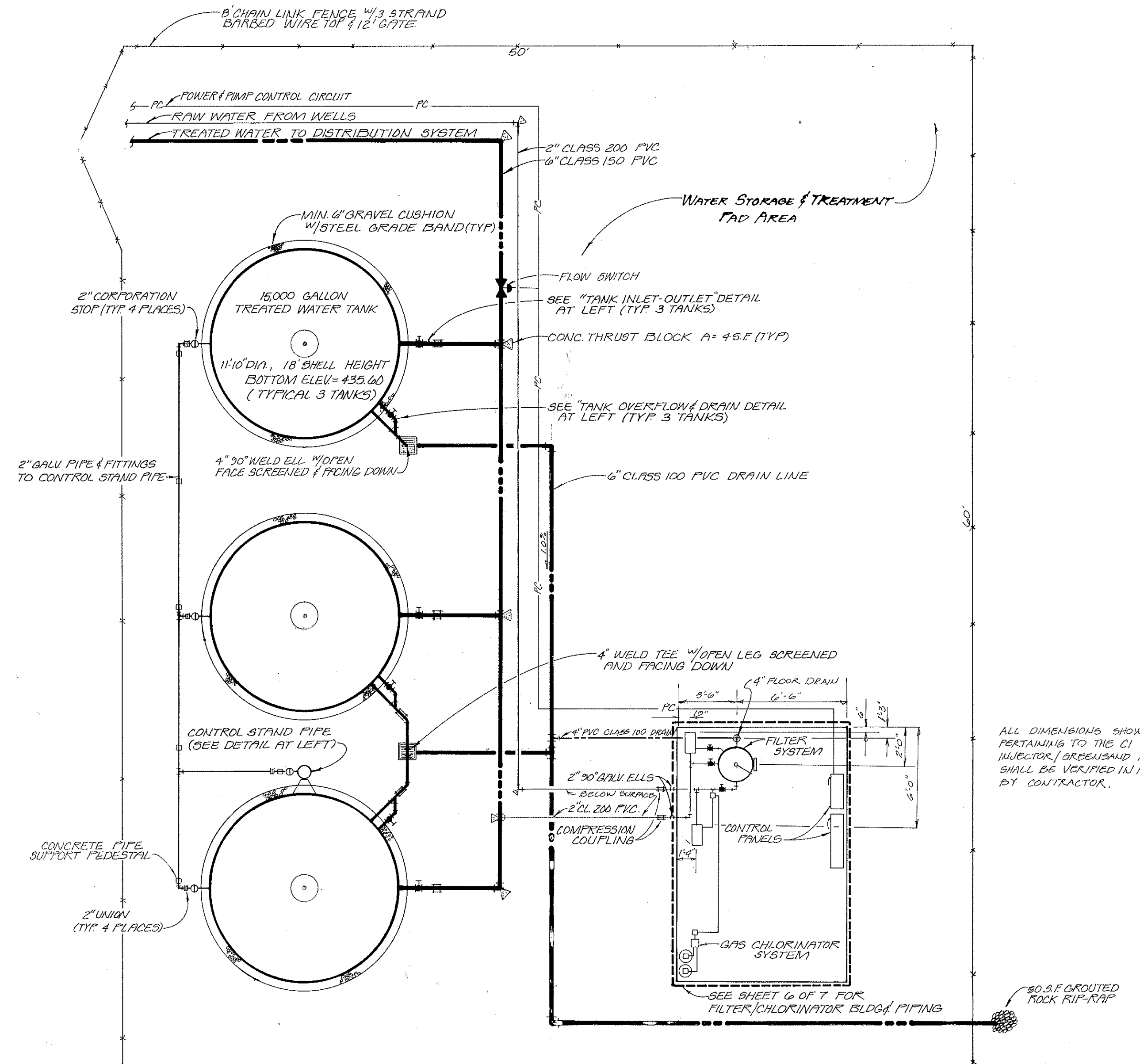
TANK OVERFLOW & DRAIN DETAIL

(NO SCALE)



CONTROL STAND PIPE

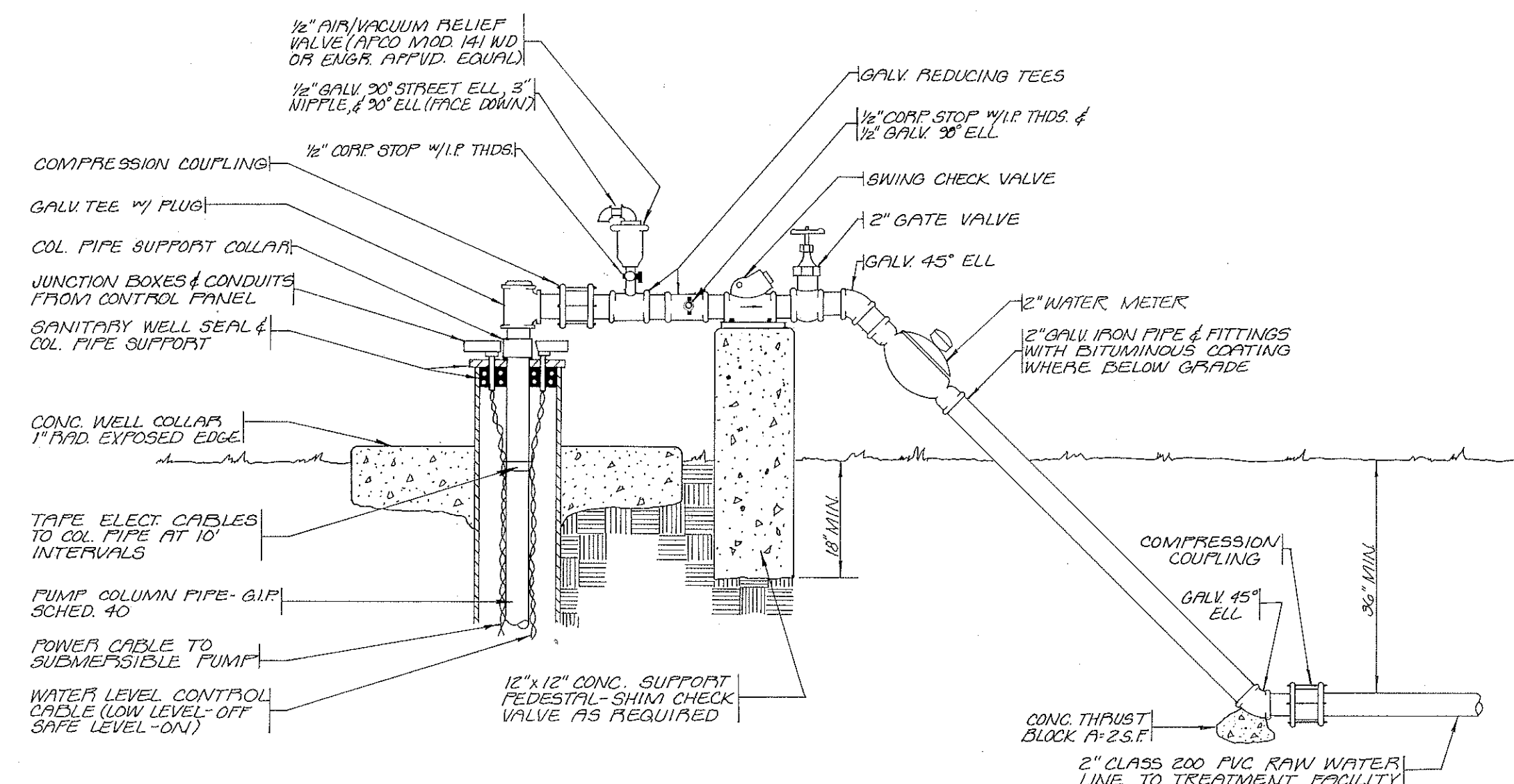
(NO SCALE)



STORAGE & TREATMENT AREA SITE PLAN

(SCALE 1\"/>

ALL DIMENSIONS SHOWN PERTAINING TO THE CI INJECTOR/CHLORINATOR FILTER SHALL BE VERIFIED IN FIELD BY CONTRACTOR.



WELLHEAD PIPING & CONNECTION DETAILS

(TYPICAL 2 WELLS) (NO SCALE)

ENGINEERING DEVELOPMENT ASSOCIATES			
1320 WILPOND STREET SAN LUIS OBISPO CA 93401 (805) 549 8658			
TRACT No. 1053			
WATER SYSTEM DETAILS			
DESIGNER:	CO. CHIEF:		
PRB	PRB 8/2/87		
DRAWN BY:	OFFICE ENGINEER:		
PRB			
LOG. #	CO. W.O. #		
86316	P. 110115		
SHEET 7			
Keith V. Crowe		RCE 3/1/91	EXP. DATE 12-88
DATE 1/20/97		OF 7	