

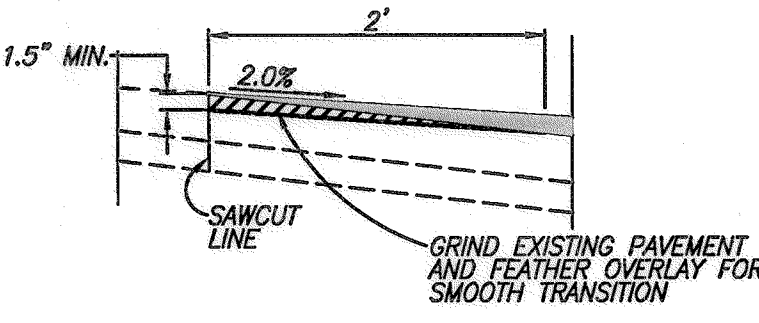
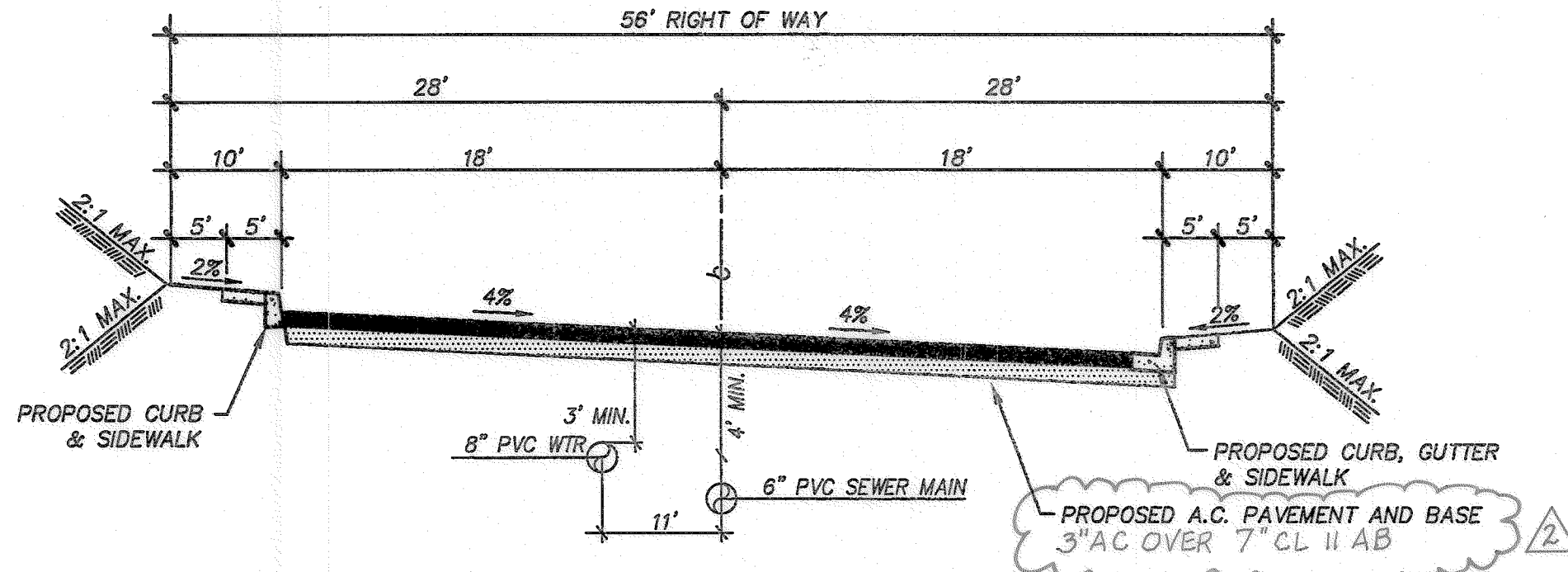
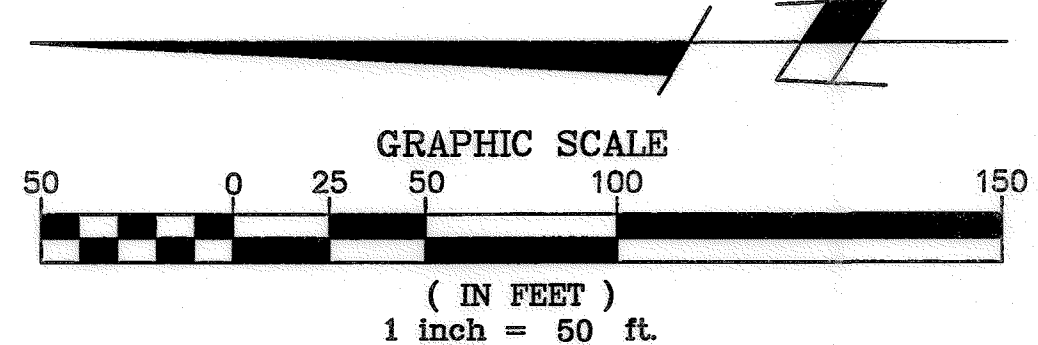
**POTABLE WATER AND SEWER NOTES**

- CONTRACTORS SHALL NOTIFY THE DISTRICT TWO WORKING DAYS PRIOR TO COMMENCING WORK. TELEPHONE (619) 448-3111.
- ALL UNDERGROUND UTILITIES AND LATERALS TO BE INSTALLED BEFORE CONSTRUCTION OF CURBS, OR CONCRETE CROSS GUTTERS, OR SURFACING OF STREETS.
- CONTRACTORS SHALL VERIFY LOCATIONS AND MAINTAIN ALL EXISTING WATER AND SEWER UTILITIES DURING CONSTRUCTION; BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING WATER OR SEWER MAINS ON SITE AS A RESULT OF THEIR OPERATIONS; AND HAVE ON SITE SUFFICIENT PIPELINE MATERIALS AND EQUIPMENT TO IMMEDIATELY REPAIR ANY DAMAGE TO THE EXISTING WATER, SEWER, OR RECYCLED WATER FACILITIES.
- CONTRACTOR SHALL UNCOVER LOCATION OF CONNECTIONS PRIOR TO BEGINNING INSTALLATION TO INSURE CONFORMANCE WITH LINES AND GRADES SHOWN ON THE PLANS. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE DIRECTOR OF ENGINEERING AND PLANNING PRIOR TO PROCEEDING.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR RELOCATION OR ADJUSTMENT OF ANY NEW OR EXISTING SEWER, RECYCLED WATER, OR POTABLE WATER SERVICE APPURTENANCES, MANHOLES, GATE VALVE COVERS, OR METER BOXES TO NEW FINISH GRADE.
- WORK IN ROADWAY SHALL COMPLY COMPLETELY WITH THE REQUIREMENTS OF THE COUNTY OR CITY. APPROPRIATE CONTRACTOR'S LICENSE REQUIRED.
- DEVELOPER SHALL PROVIDE, AT DEVELOPER'S EXPENSE, SUCH SOIL TESTING AND RETESTING AS DISTRICT MAY REQUIRE.
- VALVES THAT ARE DEEPER THAN 1.5M (5') MUST HAVE VALVE STEM RISERS.
- ALL FITTINGS ON PVC PIPE ARE TO BE MECHANICAL JOINT OR PUSH-ON TYPE.
- EXISTING VALVES (INCLUDING WET-TAP-VALVES) ARE TO BE OPERATED BY DISTRICT PERSONNEL ONLY.
- THE GENERAL CONTRACTOR SHALL KEEP AND MAINTAIN A SIGNED SET OF IMPROVEMENT PLANS ON-SITE AT ALL TIMES FOR REVIEW BY THE DIRECTOR OF ENGINEERING AND PLANNING OR HIS REPRESENTATIVES. THE GENERAL CONTRACTOR'S SUPERINTENDENT IS REQUIRED TO UPDATE SAID PLANS WITH "AS-BUILT" INFORMATION ON A DAILY BASIS AS WORK IS PERFORMED.
- ALL WATER MAINS SHALL BE CONSTRUCTED AS SHOWN ON PLANS. POTABLE WATER MAINS SHALL HAVE A MINIMUM COVER OF 0.9M (36").
- WHERE A POTABLE WATER MAIN CROSSES UNDER A RECYCLED WATER OR SEWER, THE POTABLE WATER MAIN SHALL HAVE NO JOINTS WITHIN 10' TO THE CROSSING.
- WARNING TAPE AND TRACER WIRE MUST BE INSTALLED OVER ALL POTABLE WATER MAINS, WATER SERVICES, B.O.S, AND AIR VALVES, PER DRAWINGS WP-01 AND WP-02.
- ALL POTABLE WATER LINE VALVE LIDS ARE TO BE PAINTED YELLOW. ALL FIRE HYDRANT VALVE LIDS ARE TO BE PAINTED WHITE. ALL NORMALLY CLOSED VALVE LIDS ARE TO BE PAINTED RED.
- EACH LOT SHALL RECEIVE A 25MM (1") MINIMUM SIZE COPPER POTABLE WATER AND/OR RECYCLED WATER SERVICE. THE LOCATION SHALL BE AS SHOWN ON THESE PLANS AND SHALL BE CONSTRUCTED PERPENDICULAR TO THE CENTERLINE OF THE STREET. "AS CONSTRUCTED" LOCATIONS WITH STATIONS SHALL BE SHOWN ON THESE PLANS BY THE ENGINEER OF WORK PRIOR TO NOTICE OF COMPLETION.
- WATER METERS SHALL NOT BE PLACED IN DRIVEWAYS OR SIDEWALK.
- BACKFLOW PREVENTION
  - A DISTRICT APPROVED REDUCED PRESSURE BACKFLOW PREVENTION DEVICE MUST BE INSTALLED ON THE CUSTOMER'S SIDE OF ALL IRRIGATION METERS SERVED WITH POTABLE WATER, METERS SERVING MEDICAL OFFICES, MULTI-FAMILY DWELLINGS, COMMERCIAL OR INDUSTRIAL BUILDINGS, PROPERTIES SERVED WITH A SECOND WATER SOURCE SUCH AS WELLS OR RECYCLED WATER, AND ANY OTHER LOCATIONS REQUIRING CROSS-CONNECTION PROTECTION AS OUTLINED IN "TITLE 17" (ISSUED BY THE STATE DEPARTMENT OF PUBLIC HEALTH)
  - ALL NEW BACKFLOW PREVENTION ASSEMBLIES SHALL BE INSTALLED AND TESTED. TEST REPORTS SHALL BE PROVIDED TO THE DISTRICT PRIOR TO WATER SERVICE BEING PROVIDED BY THE DISTRICT. PRIOR TO TESTING, CONTACT THE DISTRICT'S WATER CONTROL TECHNICIAN AT (619) 258-4654.
- THE SEWER LATERAL CONNECTION AT PROPERTY LINE IS TO BE INSPECTED AND APPROVED BY THE DISTRICT.
- EACH LOT WILL BE SERVED BY A 100MM (4") DIAMETER MINIMUM SIZE PVC SEWER LATERAL. LOCATION OF SEWER LATERAL SHALL BE AS SHOWN ON THESE PLANS.
- THE LETTER "S" SHALL BE STAMPED IN THE CURB AT ALL SEWER LATERAL LOCATIONS. THE LETTER "S" SHALL BE STAMPED IN THE GUTTER WHEN THERE IS NO TYPE "6" CURB.

**LEGEND**

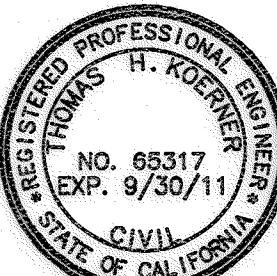
- SUBDIVISION BOUNDARY
- SEWER LINE
- WATER
- STORM DRAIN
- SHEET NO.
- EASEMENT LINE
- 6" FIRE HYDRANT
- STREET NAME SIGN
- STREET LIGHT
- GATE VALVE
- 2" BLOW OFF ASSY

**KEY MAP**



**LEGEND OF ABBREVIATIONS**

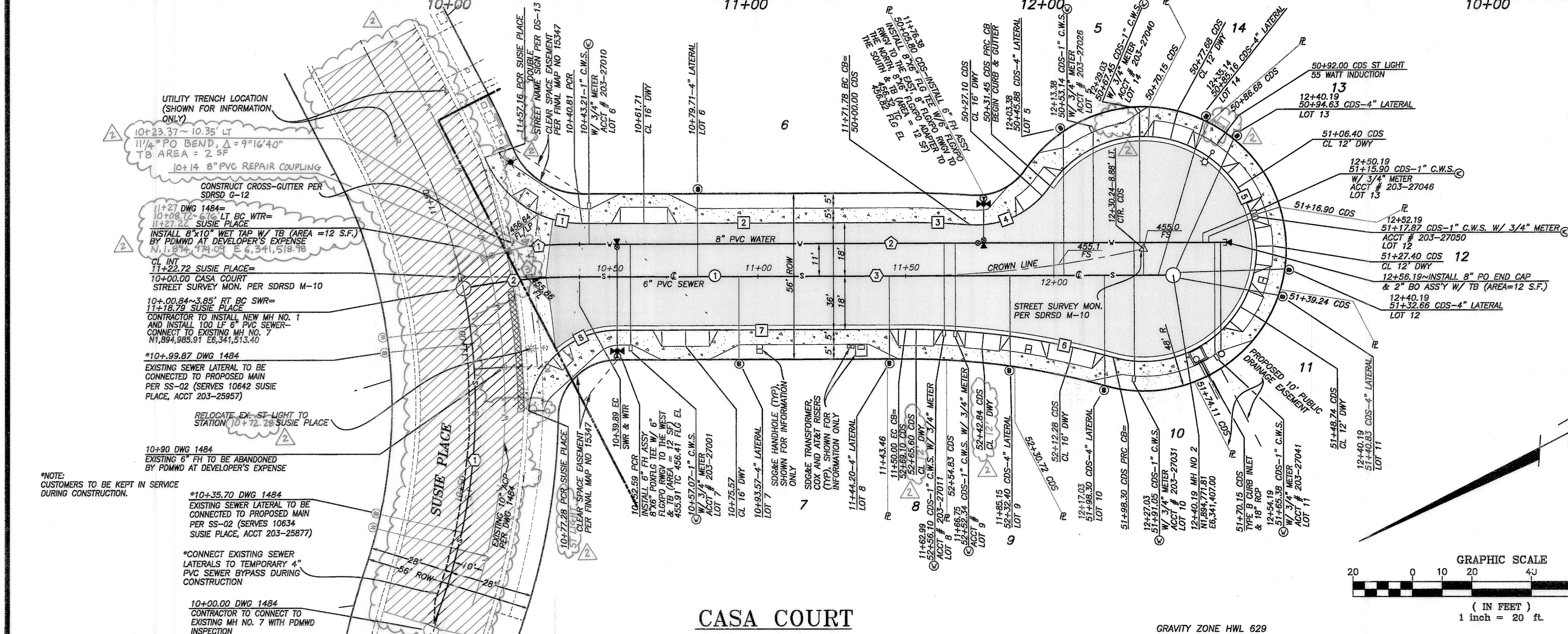
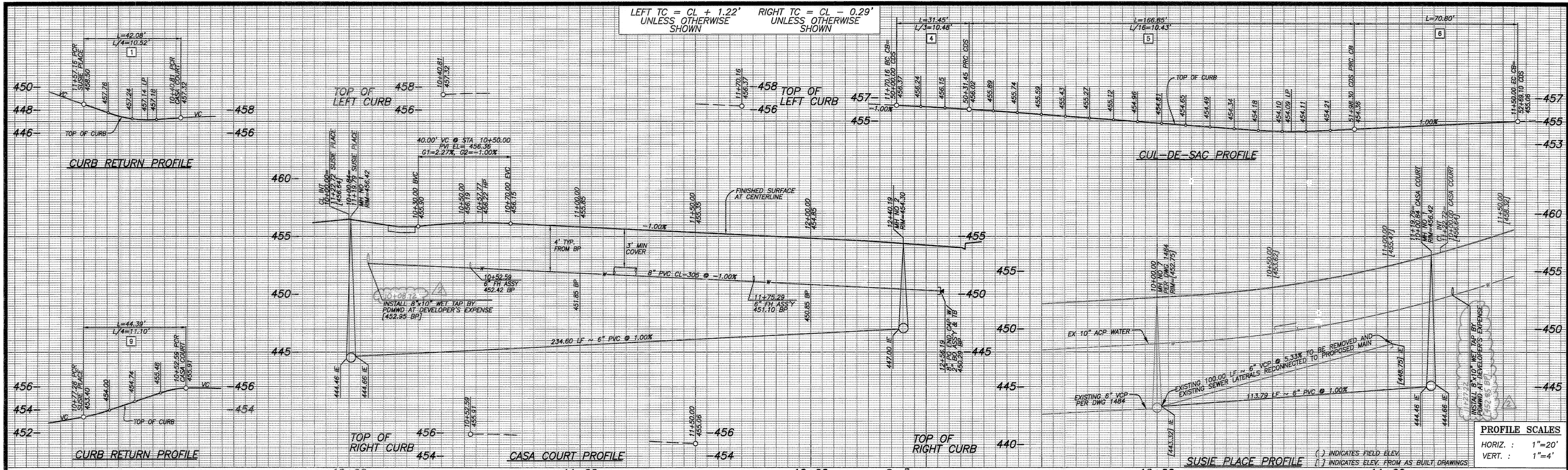
- |     |                         |        |                          |
|-----|-------------------------|--------|--------------------------|
| TC  | TOP OF CURB             | LT     | LEFT                     |
| GB  | GRADE BREAK             | TW     | TOP OF WALL              |
| BVC | BEGIN VERTICAL CURVE    | PCR    | POINT OF CURB RETURN     |
| EVC | END VERTICAL CURVE      | MVC    | MODIFIED VERTICAL CURVE  |
| PVI | POINT OF VERTICAL       | BW     | BOTTOM OF WALL           |
| INT | INTERSECTION            | N.T.S. | NOT TO SCALE             |
| BC  | BEGIN CURVE             | CTB    | CEMENT TREATED BASE      |
| EC  | END CURVE               | RP     | RADIUS POINT             |
| HP  | HIGH POINT              | EOP    | EDGE OF PAVEMENT         |
| LP  | LOW POINT               | CDS    | CUL-DE-SAC               |
| FL  | FLOW LINE               | KNU    | KNUCKLE                  |
| PRC | POINT OF REVERSE CURVE  | TEMP   | TEMPORARY                |
| BP  | BOTTOM OF PIPE          | FS     | FINISHED SURFACE         |
| PCC | POINT OF COMPOUND CURVE | AP     | ANGLE POINT              |
| CC  | CENTER OF CUL-DE-SAC    | MH     | MANHOLE                  |
| SF  | GROSS SQUARE FEET       | PL     | PROPERTY LINE            |
| IE  | INVERT ELEVATION        | FM     | SEWER FORCE MAIN         |
| R/W | RIGHT OF WAY            | SD     | STORM DRAIN              |
| RT  | RIGHT                   | RCP    | REINFORCED CONCRETE PIPE |
| ST  | STREET                  | CDS    | CUL-DE-SAC               |
|     |                         | CB     | CURB                     |



**KM KOERNER-MAGEE CONSULTING ENGINEERS**  
 5725 Kearny Villa Rd., Suite D • San Diego CA, 92123  
 phone: (858) 278-2446 • fax: (858) 571-0562

CONSTRUCTION RECORD	REFERENCES	DATE	BY	REVISIONS	ACPTD	BENCH MARK	SCALE	DESIGNED BY	DRAWN BY	CHECKED BY	REVIEWED	CITY OF SANTEE	DEPARTMENT OF DEVELOPMENT SERVICES	CITY W.O. NO.	DRAWING NO.
CONTRACTOR		8/16	KE	AS-BUILT	SA	BENCH MARK STATION NO. 2125	HORIZ. 1"=20'	TK	TB	TK	7/12/11	IMPROVEMENT PLAN FOR:		TM 2000-01	2011-119
INSPECTOR						CENTER LINE OF INTERSECTION	VERT: NONE	THOMAS H. KOERNER				<b>EL NOPAL ESTATES II</b>			SHEET 2 OF 3
DATE COMPLETED						OF EL NOPAL AND HOLBORN		RCE NO. 65317	EXPIRES. 09/30/11						

EL NOPAL ESTATES II - IMPROVEMENT PLAN



**SEWER LATERAL DATA**

LOT	STATION	IE@MAIN	DROP@ MAIN	SLOPE	I.E. @ R/W	F.G. @ R/W	DEPTH @ R/W	LENGTH
5	12+03.38	446.65	1.2'	6.5%	451.03	456.03	5.0'	48.65'
6	10+79.71	445.42	1.2'	20.9%	452.47	457.47	5.0'	28.00'
7	10+93.57	445.56	1.2'	14.5%	450.82	455.82	5.0'	28.00'
8	11+44.20	446.06	0.2'	2.0%	446.82	455.32	8.5'	28.00'
9	11+85.15	446.47	0.2'	2.0%	447.28	454.89	7.6'	30.51'
10	12+17.03	446.79	0.2'	2.0%	447.74	454.55	6.8'	37.27'
11	51+48.74 CDS	447.20	N/A	2.0%	447.87	454.62	6.7'	33.65'
12	51+36.40 CDS	447.20	N/A	2.0%	447.89	454.66	6.8'	34.49'
13	50+97.40 CDS	447.20	N/A	2.0%	448.21	455.31	7.1'	50.33'
14	12+35.14	446.97	1.2'	4.2%	450.45	455.45	5.0'	54.57'

**IMPROVEMENT CENTERLINE DATA**

BEARING/Delta	RADIUS	LENGTH	REMARKS
1 N 27°20'53" E		230.24'	

**CURB DATA**

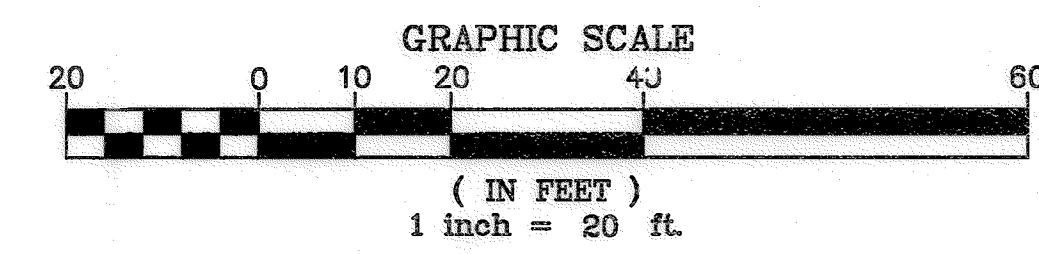
BEARING/Delta	RADIUS	LENGTH	REMARKS
1 68°53'01"	35.00'	42.08'	6" TYPE B-1 CURB
2 N 27°20'53" E		108.89'	6" TYPE B-1 CURB
3 4°15'42"	293.00'	21.79'	6" TYPE B-1 CURB
4 60°03'24"	30.00'	31.45'	6" TYPE B-1 CURB
5 25°13'44"	38.00'	166.85'	6" TYPE G C&G
6 15°47'02"	257.00'	70.80'	6" TYPE G C&G
7 N 27°20'53" E		97.11'	6" TYPE G C&G
8 84°46'30"	30.00'	44.39'	6" TYPE G C&G

**WATER DATA**

BEARING/Delta	RADIUS	LENGTH	REMARKS
1 27°29'24" E	211.00'	16.54'	8" PVC CL-305
2 N 27°20'53" E		218.00'	8" PVC CL-305
3 N 13°34'44" E		15.08'	8" PVC CL-305

**SEWER DATA**

BEARING/Delta	RADIUS	LENGTH	REMARKS
1 33°19'42"	200.00'	118.79'	6" PVC SDR 35
2 11°15'31"	200.00'	39.30'	6" PVC SDR 35
3 N 27°20'53" E		200.30'	6" PVC SDR 35



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CONSTRUCTION RECORD		DATE	BY	REVISIONS	ACPTD	BENCH MARK	SCALE	DESIGNED BY	DRAWN BY	CHECKED BY	REVIEWED	CITY OF SANTEE	DEPARTMENT OF DEVELOPMENT SERVICES	CITY W.O. NO.	DRAWING NO.
CONTRACTOR	INSPECTOR	8/16	KE	AS-BUILT	508	BENCH MARK STATION NO. 2125 PER ROS NO. 11252, ELEV. 448.85 CENTER LINE OF INTERSECTION OF EL NOPAL AND HOLBORN	HORIZ: 1"=20' VERT: NONE	TK	TB	TK	7/12/11	IMPROVEMENT PLAN FOR: <b>EL NOPAL ESTATES II</b>			
DATE COMPLETED								PLANS PREPARED UNDER THE SUPERVISION OF Thomas H. Koerner RCE NO. 65317		DATE 7/12/11		EXP. 09/30/11		CITY W.O. NO. TM 2000-01 DRAWING NO. 2011-120 SHEET 3 OF 3	