

**Appendix M**  
**Sewer Report**  
**(November 12, 2020)**



# SEWER REPORT

For

Encompass Health Hospital

517 Shinohara Lane

Chula Vista, CA 91911

Prepared for:

**Encompass Health**

9001 Liberty Parkway

Birmingham, Alabama 35242

Prepared by:

Boulder Associates, Inc.

26 O'Farrell Street, Seventh Floor

San Francisco, CA 94108

(415) 796-6720

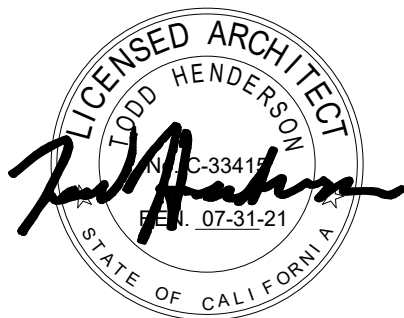
&

Nexus Engineering

1400 Lone Palm Avenue, Suite A

Modesto, CA 95351

(209) 572-7399



Prepared date: 08/03/2020

Revision Date: November 12, 2020

## Section 1 – Executive Summary

### 1.1 Project Description

Encompass is proposing a single story 80-bed, 72,768 sq ft inpatient rehabilitation hospital to be constructed in two phases, the first phase includes the construction of a 55,579 sqft structure (building 1) with 30 beds. The second phase includes the demolition of a portion of building 1 (1,040 sf) to add an 18,228 sqft addition, resulting in the ultimate building of the 80-bed, 72,768 sf structure.

Site development will include a landscaped therapy courtyard, enclosures for trash and recycling, an emergency power generator, and a bulk oxygen system, along with 143 parking spaces for staff and visitors during the construction of building 1 and 144 parking spaces when the addition is constructed. This will be a licensed acute care hospital under OSHPD-1 jurisdiction.

### 1.2 Summary of Existing Condition

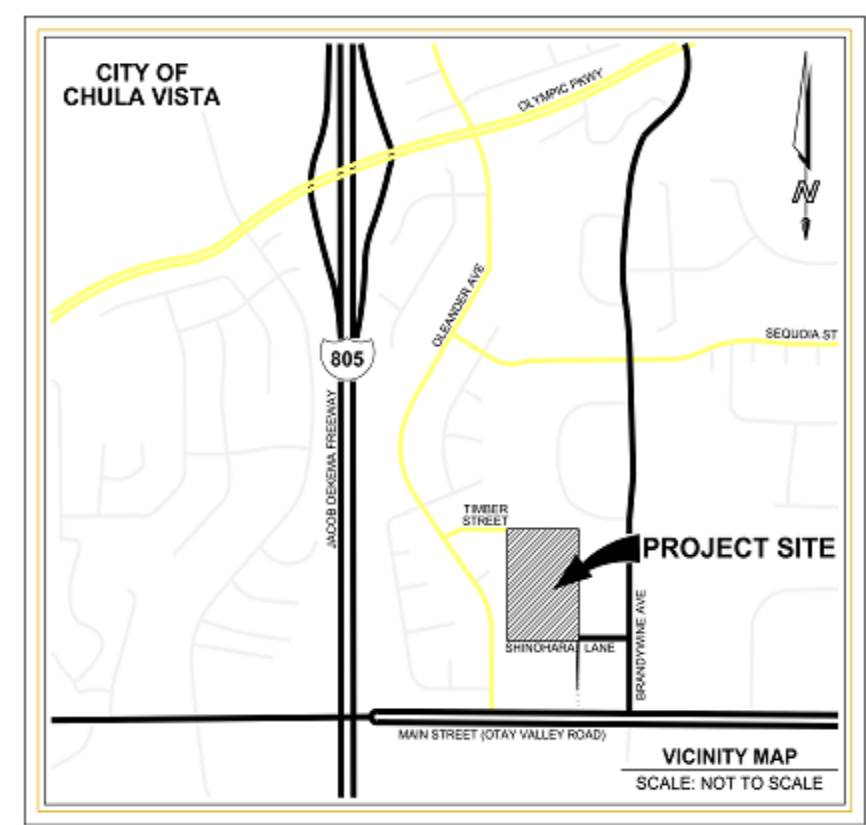
Project site is undeveloped. Figure 1 presents the project site and location of the site. Figure 2 presents the existing condition of the site and the existing site condition surrounding the project site.

Existing 8" VCP sewer line is located in a 10' wide sewer and drainage easement at the end of Shinohara Lane going south towards Main Street.

Proposed 8" PVC sewer line will be connected to an existing sewer manhole located at the upstream end of the existing 8" sewer line just southeast of the property line. See attached Sheet C-13, Sewer and Water Plan, in the Preliminary Grading set, and as-built City of Chula Vista plans 86-481.



Figure 1



Vicinity Map

Figure 2



### 1.3 Summary of Proposed Condition

Attached calculations, d/D ratio calculations for existing 8" VCP pipe and proposed 8" PVC pipe, Table 702.1 (Drainage Fixture Unit Values, DFU), and Table 702.2 (Maximum Unit Loading and Maximum Length of Drainage And vent piping) show proposed 8" PVC sewer line is sufficient to handle future demand of the proposed building for Phase 1 and Phase 2 construction.

Attached d/D ratio calculations show that existing 8" VCP sewer line and proposed 8" PVC line meet City of Chula Vista Gravity Main Design Criteria, as mentioned in Chapter 4 of the Wastewater Collection System Master Plan, by having d/D ratio less than 0.50 and minimum velocity above 2 ft/sec.

The City's collection facilities convey wastewater flow generated within 8 main drainage basins to connections to regional sewerage facilities located along San Diego Bay to the west and Sweetwater River to the north. This project is located in Main Street Basin Area 27.

Per Chapter 6 of the City of Chula Vista Wastewater Collection System Master Plan "Hydraulic Analysis and Results", some of the existing gravity mains are unable to satisfy the City's design and accommodate peak flows by 2050 and will be part of a CIP gravity main replacement projects at a later date and time. See attached portion of Table 6-6 for segments of the existing 10" VCP sewer lines on Main Street to be upsized to 12" diameter mains. Attached also for reference, "Tech Memo for Area 27" showing manholes and pipe ID numbers along Main Street and Figure 6-1 showing Recommended Manhole/Pipeline Improvements by Year.

Encompass Health Chula Vista

Equivalent Dwelling Unit Calculation (EDU)	46.6 EDU	
Per City of Chulca Vista Code (Form 5509)	230 GPD / EDU	
Total Sewage Generated	10,718 GPD	= 0.017 CFS
Peaking Factor per City Peak to Average Sewer Flow (CVD-SW01) =	2.5	
Total Peak Flow Generated		= 0.0425 CFS
existing sewer = 8" VCP (n=0.014)		
slope = 0.0259		
normal depth of flow, d (in)		0.07
d/D =		0.07 / 0.67 = 0.1045
proposed sewer = 8" PVC (n=0.013)		
slope = 0.0304		
normal depth of flow, d (in)		0.07
d/D =		0.07 / 0.67 = 0.1045

\*\*\*\*\*

HYDRAULIC ELEMENTS - I PROGRAM PACKAGE  
(C) Copyright 1982-2016 Advanced Engineering Software (aes)  
Ver. 23.0 Release Date: 07/01/2016

-----  
TIME/DATE OF STUDY: 11:46 11/08/2020  
=====

Problem Descriptions:  
Encompass Health  
existing 8" VCP sewer

\*\*\*\*\*

>>>>PIPEFLOW HYDRAULIC INPUT INFORMATION<<<<

-----  
PIPE DIAMETER(FEET) = 0.670  
PIPE SLOPE(FEET/FEET) = 0.0259  
PIPEFLOW(CFS) = 0.04  
MANNINGS FRICTION FACTOR = 0.014000  
=====

CRITICAL-DEPTH FLOW INFORMATION:

-----  
CRITICAL DEPTH(FEET) = 0.09  
CRITICAL FLOW AREA(SQUARE FEET) = 0.030  
CRITICAL FLOW TOP-WIDTH(FEET) = 0.463  
CRITICAL FLOW PRESSURE + MOMENTUM(POUNDS) = 0.19  
CRITICAL FLOW VELOCITY(FEET/SEC.) = 1.435  
CRITICAL FLOW VELOCITY HEAD(FEET) = 0.03  
CRITICAL FLOW HYDRAULIC DEPTH(FEET) = 0.06  
CRITICAL FLOW SPECIFIC ENERGY(FEET) = 0.12  
=====

NORMAL-DEPTH FLOW INFORMATION:

-----  
NORMAL DEPTH(FEET) = 0.07  
FLOW AREA(SQUARE FEET) = 0.02  
FLOW TOP-WIDTH(FEET) = 0.411  
FLOW PRESSURE + MOMENTUM(POUNDS) = 0.21  
FLOW VELOCITY(FEET/SEC.) = 2.150  
FLOW VELOCITY HEAD(FEET) = 0.072  
HYDRAULIC DEPTH(FEET) = 0.05  
FROUDE NUMBER = 1.728  
SPECIFIC ENERGY(FEET) = 0.14  
=====

\*\*\*\*\*

HYDRAULIC ELEMENTS - I PROGRAM PACKAGE  
(C) Copyright 1982-2016 Advanced Engineering Software (aes)  
Ver. 23.0 Release Date: 07/01/2016

-----  
TIME/DATE OF STUDY: 11:44 11/08/2020  
=====

Problem Descriptions:  
Encompass Health  
proposed 8" PVC sewer

\*\*\*\*\*

>>>>PIPEFLOW HYDRAULIC INPUT INFORMATION<<<<

-----  
PIPE DIAMETER(FEET) = 0.670  
PIPE SLOPE(FEET/FEET) = 0.0304  
PIPEFLOW(CFS) = 0.04  
MANNINGS FRICTION FACTOR = 0.013000  
=====

CRITICAL-DEPTH FLOW INFORMATION:

-----  
CRITICAL DEPTH(FEET) = 0.09  
CRITICAL FLOW AREA(SQUARE FEET) = 0.030  
CRITICAL FLOW TOP-WIDTH(FEET) = 0.463  
CRITICAL FLOW PRESSURE + MOMENTUM(POUNDS) = 0.19  
CRITICAL FLOW VELOCITY(FEET/SEC.) = 1.435  
CRITICAL FLOW VELOCITY HEAD(FEET) = 0.03  
CRITICAL FLOW HYDRAULIC DEPTH(FEET) = 0.06  
CRITICAL FLOW SPECIFIC ENERGY(FEET) = 0.12  
=====

NORMAL-DEPTH FLOW INFORMATION:

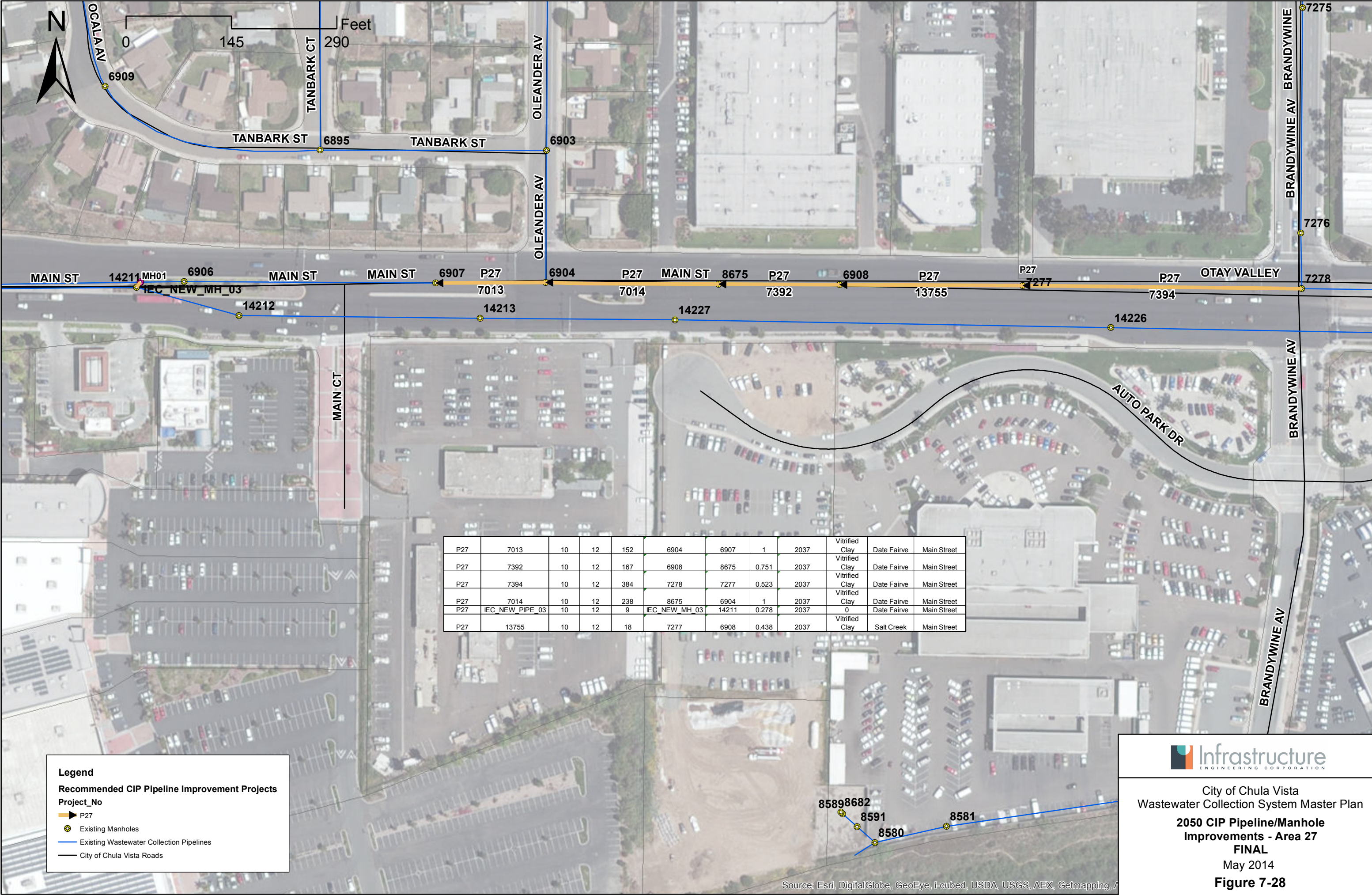
-----  
NORMAL DEPTH(FEET) = 0.07  
FLOW AREA(SQUARE FEET) = 0.02  
FLOW TOP-WIDTH(FEET) = 0.398  
FLOW PRESSURE + MOMENTUM(POUNDS) = 0.23  
FLOW VELOCITY(FEET/SEC.) = 2.395  
FLOW VELOCITY HEAD(FEET) = 0.089  
HYDRAULIC DEPTH(FEET) = 0.04  
FROUDE NUMBER = 1.998  
SPECIFIC ENERGY(FEET) = 0.15  
=====



Table 6-6 Cont'd

Pipe ID	Existing Diameter (in)	Pipe Length (ft)	Slope	Upstream Manhole ID	Downstream Manhole ID	Average Dry Weather Flow (gpm)	Peak Dry Weather Flow (gpm)	Peak Dry Weather d/D	Peak Wet Weather Flow (gpm)	Peak Wet Weather d/D	Replacement Diameter (in)	Replacement 2050 Peak Wet Weather d/D
7013	10	152	0.001	6904	6907	219.2	302.8	0.605	450.4	1	12	0.611
7392	10	167	0.007	6908	8675	191.6	265.0	0.472	390.3	0.747	12	0.453
7394	10	384	0.004	7278	7277	190.7	263.8	0.404	387.5	0.512	12	0.550
7014	10	238	0.002	8675	6904	193.3	267.3	0.624	394.4	1	12	0.593
IEC_NEW_PIPE_03	10	9	0	IEC_NEW_MH_03	14211	169.9	218.5	0.215	304.6	0.272	12	0.221
13755	10	18	0.019	7277	6908	191.6	265.0	0.348	389.6	0.43	12	0.515





City of Chula Vista  
Wastewater Collection System Master Plan

**2050 CIP Pipeline/Manhole  
Improvements - Area 27  
FINAL**

May 2014

**Figure 7-28**





0 4,850 9,700 Feet

### Legend

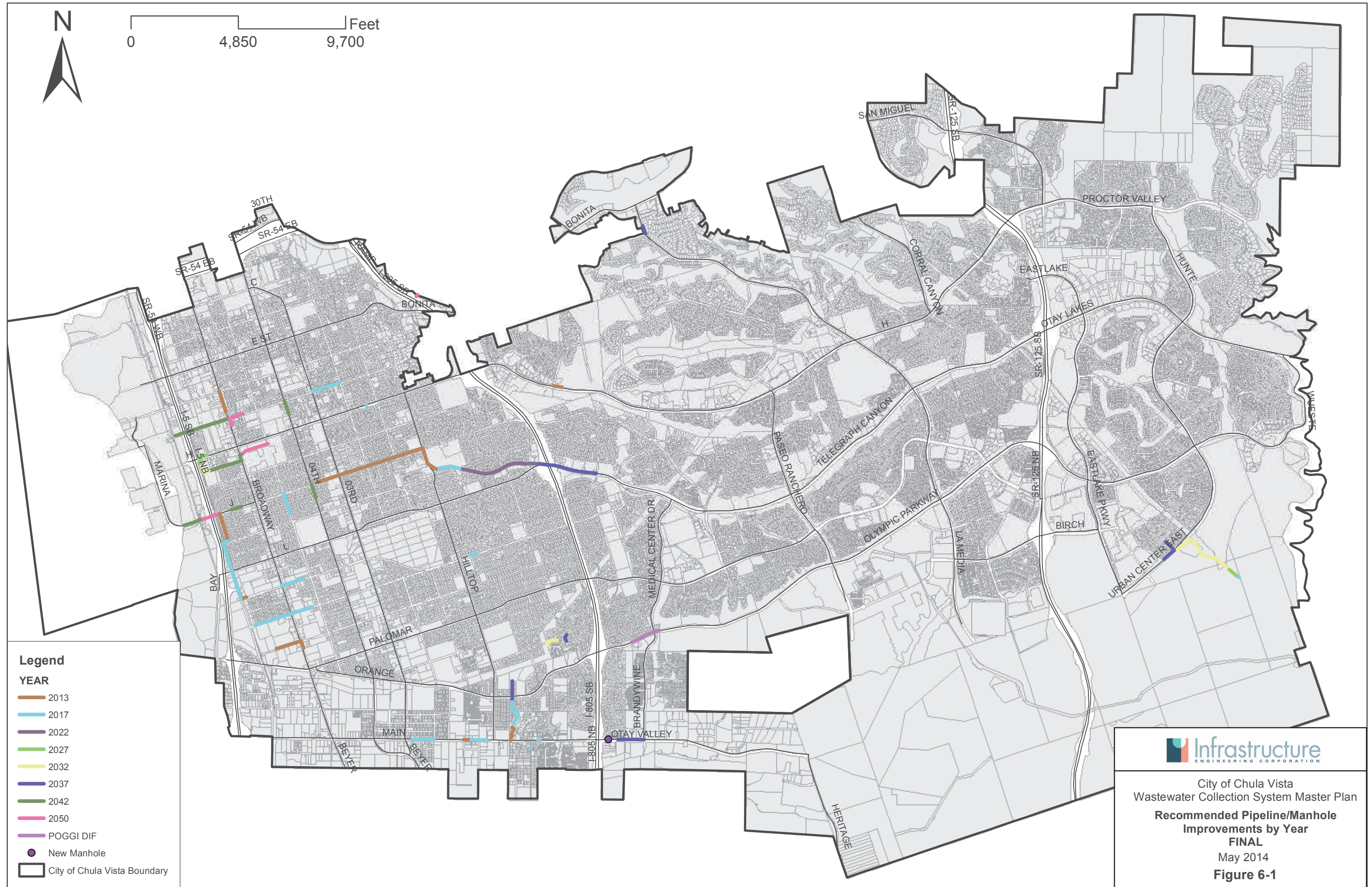
#### YEAR

- 2013
- 2017
- 2022
- 2027
- 2032
- 2037
- 2042
- 2050

POGGI DIF

New Manhole

City of Chula Vista Boundary



City of Chula Vista  
Wastewater Collection System Master Plan

**Recommended Pipeline/Manhole  
Improvements by Year  
FINAL**

May 2014

**Figure 6-1**



# ENCOMPASS HEALTH

## CHULA VISTA REHABILITATION HOSPITAL - SEWER STUDY

DR 19-0028 CUP-19\_ \_ \_



### PROJECT DIRECTORY

<b>OWNER</b> ENCOMPASS HEALTH CORPORATION 9001 LIBERTY PARKWAY BIRMINGHAM, AL 35242 PHONE: 205.970.5677	<b>STRUCTURAL ENGINEER</b> MARTIN/MARTIN, INC. 244 MAGNOLIA AVE. LARKSPUR, CA 94939 PHONE: 415.814.0030 FAX: 303.431.6866
<b>ARCHITECT</b> BOULDER ASSOCIATES, INC. 26 O'FARRELL STREET, 7 FL. SAN FRANCISCO, CA 94108 PHONE: 415.796.6720 FAX: 415.796.6721	<b>MECH/PLUMBING ENGINEER</b> NEXUS ENGINEERING 1400 LONE PALM AVE. SUITE A MODESTO, CA 95351 PHONE: 209.572.7399 FAX: 209.942.0214
<b>LANDSCAPE ARCHITECT</b> RIDGE LANDSCAPE ARCHITECTS 8841 RESEARCH DRIVE, SUITE 200 IRVINE, CA 92618 PHONE: 949.387.1323	<b>CIVIL ENGINEER</b> APD CONSULTANTS, INC. 188 TECHNOLOGY DR. - SUITE B IRVINE, CA 92618 PHONE: 949.336.6336
<b>CONTRACTOR</b> M.J. HARRIS CONSTRUCTION SERVICES ONE RIVERCHASE RIDGE, SUITE 300 BIRMINGHAM, AL 35244 PHONE: 205.380.6800	<b>ELECTRICAL ENGINEER</b> WSP 425 MARKET STREET, 17 FL. SAN FRANCISCO, CA 94105 PHONE: 415.402.2727

### SHEET INDEX

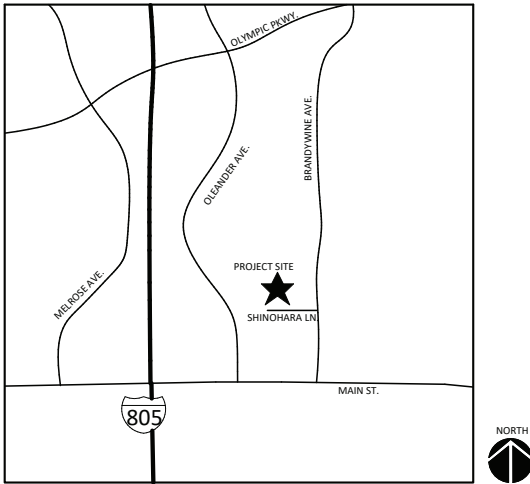
1	----	SEWER STUDY COVER SHEET
2	C-12	SEWER AND WATER PLAN
3	1 OF 3	STREET IMPROVEMENT PLANS FOR NW CORNER OF BRANDYWINE & OTAY VALLEY ROAD
4	2 OF 3	GRADING PLAN FOR PARCEL 1, T.P.M. 86-2 1670 BRANDYWINE AVE
5	3 OF 3	GRADING PLAN FOR PARCEL 2, T.P.M. 86-2 1690 BRANDYWINE AVE
6	1 OF 3	GRADING PLANS FOR T.P.M. 86-2 1570 AND 1690 BRANDYWINE AVE
7	2 OF 3	STREET IMPROVEMENT PANS OTAY VALLEY ROAD - NS@ BRANDYWINE & SHINOHARA LN.
8	3 OF 3	8" SEWER MAIN OTAY VALLEY RD TO SHINOHARA LANE
9	P2.0	OVERALL UNDERGROUND PLAN
10	----	PROJECT PLUMBING AND LOAD INFORMAITON

### PROJECT DATA

BUILDING ADDRESS:	517 SHINOHARA LANE CHULA VISTA, CA 91911
APN:	PARCEL 1: APN: 644-040-01-00
LEGAL DESCRIPTION:	THAT PORTION OF LOT 1 IN SECTION 19, TOWNSHIP 18 SOUTH, RANGE 1 WEST, SAN BERNARDINO MERIDIAN, IN THE CITY OF CHULA VISTA, COUNTY OF SAN DIEGO, STATE OF CALIFORNIA, ACCORDING TO OFFICIAL PLAT THEREOF, DESCRIBED AS FOLLOWS:  BEGINNING AT THE NORTHWEST CORNER OF SAID SECTION 19; THENCE SOUTH ALONG THE WEST LINE OF SAID SECTION, 812 FEET; THENCE EASTERLY AT RIGHT ANGLES TO SAID WEST LINE, 515 FEET; THENCE SOUTHERLY PARALLEL WITH SAID WEST LINE 508 FEET; THENCE EASTERLY AT RIGHT ANGLES 13 FEET; THENCE NORTHERLY PARALLEL WITH THE WEST LINE OF SAID SECTION, 1320 FEET TO THE NORTH LINE OF SAID SECTION; THENCE WEST ALONG SAID NORTH LINE, 528 FEET TO THE POINT OF BEGINNING  PROJECT DESCRIPTION: ENCOMPASS IS PROPOSING A SINGLE STORY 80-BED, 72,768 SQ. FT. INPATIENT REHABILITATION HOSPITAL TO BE CONSTRUCTED IN TWO PHASES, THE FIRST PHASE INCLUDES THE CONSTRUCTION OF A 55,579 SQFT STRUCTURE (BUILDING 1) WITH OF 30 BEDS. THE SECOND PHASE INCLUDES THE DEMOLITION OF A PORTION OF BUILDING 1 (1,040 SF) TO ADD AN 18,228 SQFT ADDITION, RESULTING IN THE ULTIMATE BUILDING OF THE 80-BED, 72,768 SF STRUCTURE. SITE DEVELOPMENT WILL INCLUDE A LANDSCAPED THERAPY COURTYARD, ENCLOSURES FOR TRASH AND RECYCLING, AN EMERGENCY POWER GENERATOR, AND A BULK OXYGEN SYSTEM, ALONG WITH 143 PARKING SPACES FOR STAFF AND VISITORS DURING THE CONSTRUCTION OF BUILDING 1 AND 143 PARKING SPACES WHEN THE ADDITION IS CONSTRUCTED. THIS WILL BE A LICENSED ACUTE CARE HOSPITAL UNDER OSHPD-1 JURISDICTION. -INCLUDED IN THIS SCOPE IS A REQUEST FOR A WAIVER REGARDING ZONING CODE §19.58.360, A SITE WALL REQUIREMENT; THIS SITE'S GRADING AND LANDSCAPE FORM SUFFICIENT SCREENING AND PROTECTION BETWEEN THE PROPERTY AND THE NEIGHBORS.  AUTHORITIES HAVING JURISDICTION: PERMITTING & CODE ENFORCEMENT BY OSHPD UNDER OSHPD-1 CRITERIA WITH LOCAL APPROVAL OF ENVIRONMENTAL IMPACT, LAND USE, ZONING, PARKING, LANDSCAPING, SITE GRADING, SITE DRAINAGE & PAVING (HEALTH & SAFETY CODE, DIVISION 107, SECTION 129680) LICENSED TO TREAT PATIENTS BY THE  APPLICABLE CODES: 2016 CALIFORNIA BUILDING CODE (CBC) 2016 CALIFORNIA MECHANICAL CODE (CMC) 2016 CALIFORNIA PLUMBING CODE (CPC) 2016 CALIFORNIA ELECTRICAL CODE (CEC) 2016 CALIFORNIA FIRE CODE (CFC) 2016 CALIFORNIA ENERGY CODE 2016 CALIFORNIA GREEN BUILDING STANDARDS

**PARCEL INFORMATION**  
PARCEL 1 - THAT PORTION OF LOT 1 IN SECTION 19, TOWNSHIP 18 SOUTH, RANGE 1 WEST, SAN BERNARDINO MERIDIAN  
APN: 644-040-01-00  
GROSS SQ. FT. = 423,846.091 / 9.730 AC  
NET SQ. FT. = 416,137.292 / 9.553 AC  
ZONE: ILP (LIMITED INDUSTRIAL ZONE - PRECISE PLAN MODIFYING DISTRICT)

### VICINITY MAP



PROJECT NUMBER	184048.00	
DRAWN BY	Author	
DATE	9/20/2019	
<hr/>		
REVISIONS		
REV	DESCRIPTION	DATE

**BOULDER ASSOCIATES**

**ARCHITECTS**

Boulder Associates, Inc.  
Architecture + Interior Design  
26 O'Farrell Street, Seventh Floor  
San Francisco, California 94108  
415.796.6720 F 415.796.6721  
www.boulderassociates.com

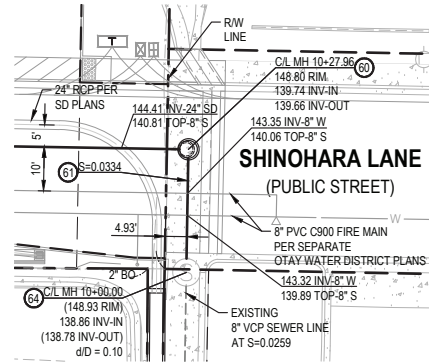


PROJECT  
**ENCOMPASS HEALTH CHULA VISTA**

517 SHINOHARA LANE  
CHULA VISTA, CA 91911

SHEET TITLE  
**COVER SHEET**

SHEET NUMBER



DETAIL A  
SCALE: 1" = 20'

SEWER CONSTRUCTION NOTES:

- 60- INSTALL 48" DIAMETER PRECAST SEWER MANHOLE PER SDRSD NO. SM-01.
- 61- INSTALL 8" SDR-35 PVC SEWER LINE PER SDRSD NO. SP-02.
- 62- INSTALL 6" SDR-35 PVC SEWER LINE PER SDRSD NO. SP-02.
- 63- INSTALL 4" SDR-35 PVC SEWER LINE PER SDRSD NO. SP-02.
- 64- CONNECT NEW 8" SDR-35 PVC PIPE INTO EXISTING MANHOLE PER SDRSD NO. SM-04.
- 65- INSTALL 8" SEWER CLEANOUT PER SDRSD NO. SC-01.
- 66- INSTALL 8" SHUTOFF VALVE PER CITY OF CHULA VISTA REQUIREMENTS AND APPROVED MANUFACTURERS.

DOMESTIC WATER NOTES:

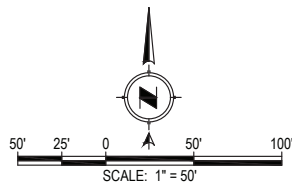
- 70- INSTALL 6" PVC C-900, CLASS 200, DOMESTIC WATER LINE PER SDRSD NO. WP-02.
- 71- INSTALL 6" BACKFLOW PREVENTER PER SDRSD NO. WR-02 AND APPROVED MANUFACTURER.
- 72- INSTALL 6" 22.50" PVC C-900, CLASS 200, BEND WITH A THRUST BLOCK PER SDRSD NO. WT-01.
- 73- INSTALL 6" 90" PVC C-900, CLASS 200, BEND WITH A THRUST BLOCK PER SDRSD NO. WT-01.

IRRIGATION WATER NOTES:

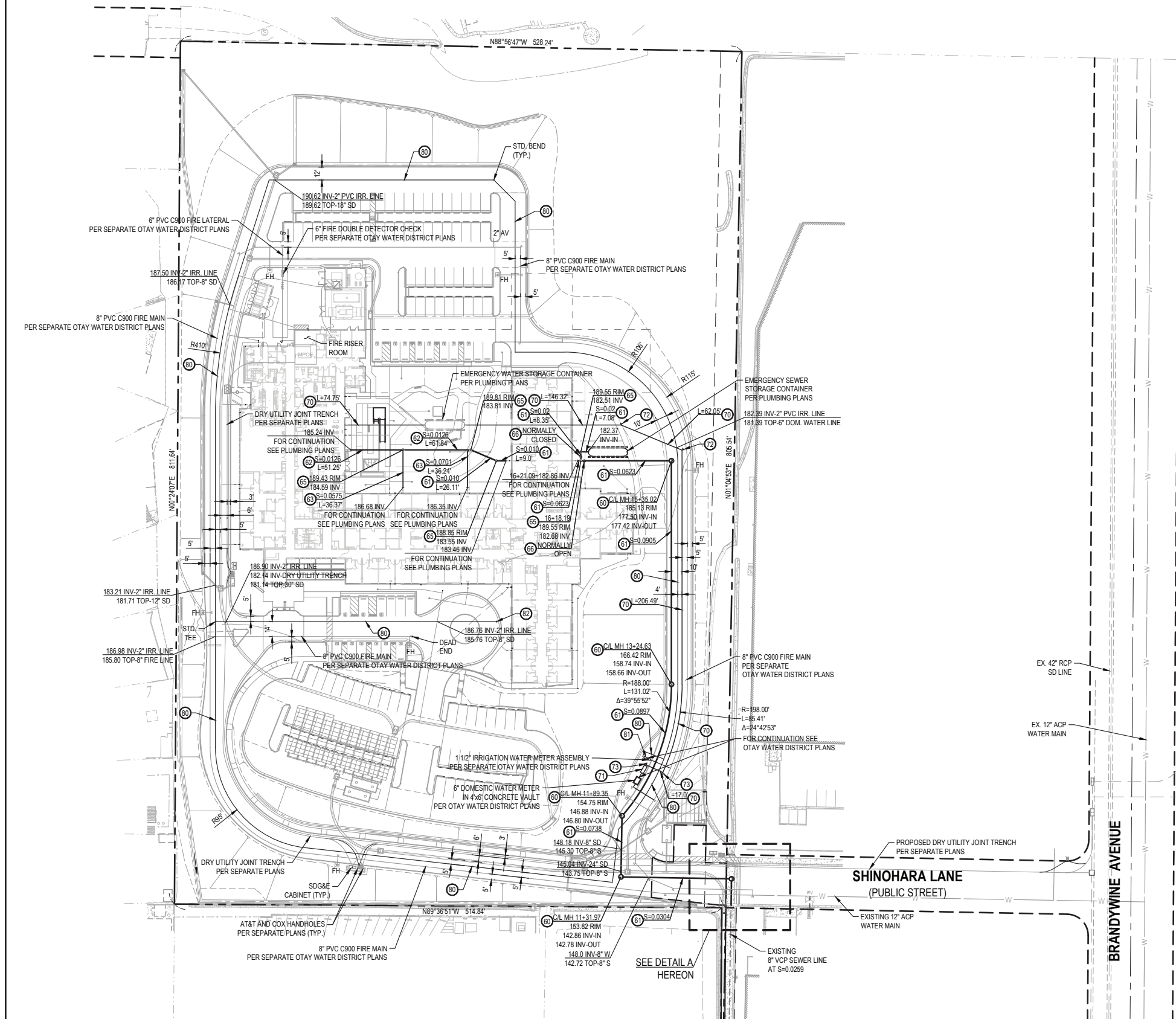
- 80- INSTALL 2" PVC, SCHEDULE 80, IRRIGATION WATER LINE PER SDRSD NO. WP-02.
- 81- INSTALL 2" BACKFLOW PREVENTOR PER SDRSD NO. WR-01.
- 82- INSTALL DEAD END CAP PER SDRSD NO. WT-01.

ABBREVIATIONS:

AV	AIR AND VACUUM VALVE
BO	BLOWOFF VALVE
FH	FIRE HYDRANT
INV	INVERT
MH	MANHOLE
S	SEWER
SD	STORM DRAIN
SDRSD	SAN DIEGO REGIONAL STANDARD DRAWING
TG	TOP OF GRATE
W	WATER



**APD**  
CONSULTANTS, INC.  
PLANNING • ENGINEERING • CONSTRUCTION MANAGEMENT  
23562 GILBERTO, SUITE 245, RANCHO SANTA MARGARITA, CA 92688  
TEL: (949) 336-6336 ; (949) 336-6337 www.apdcon.com



CONSTRUCTION RECORD		REFERENCES		By	REVISIONS		Date	App'd	DATUM		SCALE	Designed By:	Drawn By:	Checked By:	Submitted:		Approved:		CITY OF CHULA VISTA DEVELOPMENT SERVICES DEPARTMENT		DRAWING NO.	
CONTRACTOR:									VERTICAL DATUM: NAVD88		HORIZONTAL	V.B.	V.B.	R.M.	By:		By:		ENCOMPASS HEALTH CHULA VISTA		C-13	
INSPECTOR:									HORIZONTAL DATUM: NAD83		AS SHOWN	Plans Prepared Under Supervision Of:		Date:	Planning:		For the City Engineer		SEWER AND WATER PLAN		W.O. No.	
DATE COMPLETED:											VERTICAL	ROBBIE MAHMOOD, P.E.		R.C.E. No. 60421	Landscape:							



# CHULA VISTA T.P.M. 86-2

## BRANDYWINE DISTRIBUTION CENTER

### WORK TO BE DONE

THE IMPROVEMENTS CONSIST OF THE FOLLOWING WORK TO BE DONE IN ACCORDANCE WITH THESE PLANS, THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, THE SAN DIEGO AREA REGIONAL STANDARD DRAWINGS, AND THE DESIGN AND CONSTRUCTION STANDARDS OF THE CITY OF CHULA VISTA.

### LEGEND

STD. DWG.	SYMBOL
A.C. PAVEMENT	SDG-104,105
A.C. OVERLAY	SDG-104,105
6 TYPY G CURB & GUTTER	G-2
P.C.C. SIDEWALK ONLY	G-7, G-9
CURB, GUTTER & SIDEWALK	G-3
PEDESTRIAN RAMP	SDG-101
GROSS GUTTER	C.V.C.S. 2
GUARD POST AND BARRICADE	M-9
CURB OUTLET TYPE A	D-25
WATER MAIN	W
WATER SERVICE	W
SEWER MANHOLE	CVDS 19
SEWER MAIN	S-5.1
SEWER LATERALS	S-13
MID BLOCK CROSS GUTTER	G-13
STREET LIGHT, 250 WATT HBSV CUTOFF	CV 6, 7

### GENERAL NOTES

- ALL UNDERGROUND UTILITIES AND LATERALS TO BE INSTALLED BEFORE CONSTRUCTION OF CURB OR SURFACING OF STREETS.
- SIDEWALK IS TO BE 6" THICK THROUGH ALL DRIVEWAYS.
- ALL WORK SHALL BE COMPLETED PER THESE PLANS AND APPROVED REVISIONS. ALL CHANGES OR REVISIONS THEREFROM MUST BE APPROVED BY THE CITY ENGINEER PRIOR TO ANY REQUEST FOR INSPECTION.
- CITY OF CHULA VISTA INSPECTION NOTICE:
  - IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO INFORM THE CITY ENGINEER 48 HOURS IN ADVANCE OF COMMENCING WORK. PHONE 691-0228
  - THE CONTRACTOR SHALL GIVE 24 HOURS NOTICE ON CALL FOR INSPECTION. PHONE 691-5028
  - ANY WORK PERFORMED WITHOUT BENEFIT OF INSPECTION SHALL BE SUBJECT TO REJECTION AND REMOVAL.
- IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO DETERMINE THE LOCATION AND ELEVATION OF EXISTING UNDERGROUND WORK PRIOR TO EXCAVATION FOR INSTALLATION OF NEW UNDERGROUND WORK.
- STREET LIGHT NOTE:

THE STREET LIGHT SERVICE POINTS SHOWN HEREON ARE APPROXIMATE ONLY, SUBJECT TO REVISION BY FINAL SAN DIEGO GAS AND ELECTRIC COMPANY PLANS. IT SHALL BE THE SUBDIVIDERS RESPONSIBILITY TO PROVIDE THE PROPER SERVICE TO THE STREET LIGHTS SHOWN ON THIS PLAN, ACCORDING TO THE APPLICABLE CITY OF CHULA VISTA PLANS AND SPECIFICATIONS. DEVELOPER SHALL BE RESPONSIBLE FOR PROVIDING CONDUIT AND CONDUCTORS FROM STREET LIGHTS TO APPROPRIATE SERVICE POINTS FURNISHED BY SAN DIEGO GAS AND ELECTRIC. CONDUIT RUNS AND CONDUCTOR SIZE FROM STREET LIGHTS TO SERVICE POINTS WILL BE SHOWN ON THESE PLANS AND MAINTAIN ALL SAFETY DEVICES, INCLUDING SHORING AND SHALL BE SOLELY RESPONSIBLE FOR CONFORMING TO ALL LOCAL, STATE AND FEDERAL SAFETY AND HEALTH STANDARDS, LAWS AND REGULATIONS DURING CONSTRUCTION OPERATIONS.
- NEITHER THE OWNER NOR THE ENGINEER OF WORK WILL ENFORCE SAFETY MEASURES OR REGULATIONS. THE CONTRACTOR SHALL DESIGN, CONSTRUCT AND MAINTAIN ALL SAFETY DEVICES, INCLUDING SHORING, AND SHALL BE RESPONSIBLE FOR CONFORMING TO ALL LOCAL, STATE AND FEDERAL SAFETY AND HEALTH STANDARDS, LAWS AND REGULATIONS DURING CONSTRUCTION OPERATIONS.

### NOTIFICATIONS

- THE EXISTENCE AND LOCATION OF UNDERGROUND UTILITY PIPES AND STRUCTURES SHOWN ON THESE PLANS WERE OBTAINED BY A SEARCH OF AVAILABLE RECORDS. TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO EXISTING UTILITIES EXCEPT AS SHOWN ON THESE PLANS. HOWEVER, THE CONTRACTOR IS REQUIRED TO TAKE DUE PRECAUTIONARY MEASURES TO PROTECT EXISTING UTILITIES OR STRUCTURES LOCATED AT THE WORK SITE. IT IS THE CONTRACTORS RESPONSIBILITY TO CONTACT UNDERGROUND SERVICE ALERT (PHONE: 1-800-422-4133) 48 HOURS IN ADVANCE OF ANY EXCAVATION FOR THE MARK OUT OF THE LOCATION OF UTILITIES AND NOTIFICATION OF COMMENCEMENT OF WORK.
- FOR ANY QUESTIONS REGARDING THE MARK OUT OF UNDERGROUND UTILITIES, THE CONTRACTOR SHOULD CONTACT THE RESPECTIVE UTILITY COMPANY:

STREET LIGHT OR SIGNAL LIGHT CONDUIT - CITY OF CHULA VISTA 691-5045  
SEWER OR STORM DRAIN - CITY OF CHULA VISTA 691-5027  
GAS AND ELECTRIC - SAN DIEGO GAS & ELECTRIC 425-3060  
WATER - OTAY WATER DISTRICT 462-2222

TELEPHONE - PACIFIC BELL 697-5497  
TELEVISION - COX CABLE OF SAN DIEGO 263-5793

### PAVING NOTE

THE OFFICE OF THE CITY ENGINEER SHALL DESIGN ALL STRUCTURAL STREET SECTIONS BASED ON THE R VALUE METHOD SPECIFIED BY THE CITY ENGINEER. THE SOIL TESTS SHALL BE PERFORMED BY A REGISTERED CIVIL ENGINEER WHOSE PRIMARY PROFESSIONAL ACTIVITY IS PERFORMING SUCH TEST RESULTS SHALL BE PROVIDED TO THE CITY BY THE DEVELOPER IN THE NUMBER AND AT SUCH LOCATIONS AND TIMES AS DETERMINED BY THE CITY ENGINEER. WHERE HEAVY GRADING IS PROPOSED, GATHERING OF SAMPLES SHALL BE DELAYED UNTIL ROUGH SURGRADE IS MADE. MINIMUM BASE THICKNESS ON ALL STREET CLASSIFICATIONS SHALL BE 4-INCHES. BASE MATERIAL SHALL CONFORM TO TO FINE PROCESSED MISCELLANEOUS BASE, 3/4 MINIMUM, AS SET FORTH IN THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, SECTION 200-2.5 1985 EDITION. ALL ASPHALT CONCRETE SURFACES SHALL BE SEAL COATED IN ACCORDANCE WITH SECTION 302-5.9 OF THE 1982 STANDARD SPECIAL PROVISIONS.

### WATER NOTES

- WATER MAINS AND APPURTENANCES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THESE PLANS AND CURRENT SPECIFICATIONS OF THE OTAY WATER DISTRICT.
- WATER MAINS SHALL HAVE A MINIMUM COVER OF 42 INCHES TO TOP OF PIPE. ALL WATER MAINS SHALL BE OF A CLASS AS SHOWN ON PLANS.
- THE DISTRICT SHALL RECEIVE THE CONSTRUCTION SCHEDULE 48 HOURS IN ADVANCE OF START OF CONSTRUCTION. WORK DONE WITHOUT DISTRICT INSPECTION SHALL BE SUBJECT TO REMOVAL. TELEPHONE NUMBER OF OTAY WATER DISTRICT IS (619) 462-2222
- CONSTRUCTION OF WATER WORK SHALL NOT START UNTIL THE SUBDIVISION AGREEMENT HAS BEEN EXECUTED BY THE DISTRICT AND THE DEVELOPER.
- APPROVAL OF PLANS BY OTAY WATER DISTRICT DOES NOT CONSTITUTE RESPONSIBILITY FOR ACCURACY OF INFORMATION NOR LOCATIONS OF OTHER EXISTING UTILITIES
- NO WATER METERS SHALL BE INSTALLED BY OTAY WATER DISTRICT UNTIL NEW FACILITIES HAVE BEEN ACCEPTED BY THE DISTRICT BOARD OF DIRECTORS.
- FIRE HYDRANT PROTECTOR POSTS MUST BE INSTALLED IN AREAS AS DEEMED NECESSARY BY DISTRICT ENGINEER.
- THE CONTRACTOR SHALL POTHOLE ALL TIE IN LOCATIONS BEFORE PIPE INSTALLATION TO DETERMINE: (A) PIPE SIZE AND TYPE; (B) ELEVATION; AND (C) IF TIE IN CAN BE MADE AT LOCATION INDICATED. (1) POT HOLE EXISTING UTILITIES THAT MAY INTERFERE WITH TIE-INS; AND (2) PIPE SHOULD BE EXPOSED A MINIMUM OF THREE FEET EITHER SIDE OF CONNECTION POINT TO ASSURE NO COLLARS ARE IN THE TAP AREA. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE DISTRICT ENGINEER PRIOR TO PROCEEDINGS.
- CONTRACTOR SHOULD NOT LAY ANY PIPE CLOSER THAN 13 FEET TO TIE-IN LOCATIONS OR 26 FEET WHERE WET-TAPS ARE TO BE MADE.
- NO TAPS OR TIE-INS WILL BE SCHEDULED UNTIL AFTER PRESSURE TESTS AND HEALTH TESTS HAVE PASSED. TIE-INS WILL BE COMPLETED AFTER THE CONTRACTOR DRAINS THE LINE.
- OTAY WATER DISTRICT WILL CUT IN TEES AND VALVES AT CONNECTIONS ON EXISTING MAINS; INSTALL SADDLES, TAPPING VALVES AND OR MAKE WET-TAPS; AND MAKE CLOSURES BETWEEN END CAPS WHERE AN EXISTING LINE IS AFFECTED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PHASES OF WORK NOT PERFORMED BY OTAY WATER DISTRICT: HAND AND MACHINE EXCAVATION FOR TAPS, INSTALL THRUST BLOCKS, PAINT AND WRAP FITTINGS, BACKFILL AND COMPACT TRENCH AREA, INSTALL THRUST BLOCKS, INSTALL GATE CASTINGS, MAKE NECESSARY PAVING REPAIRS, ETC.
- CONTRACTOR TO FURNISH ALL MATERIALS TO COMPLETE THE WORK OTHER THAN THAT SPECIFICALLY CALLED FOR ON THE PLANS TO BE FURNISHED BY THE DISTRICT.
- WHEN WATER FACILITIES HAVE BEEN INSTALLED, CHLORINATED, TESTED AND THE DEVELOPMENT LIES DORMANT FOR A THREE MONTH PERIOD WITHOUT ADDITIONAL WORK TAKING PLACE OR IMPROVEMENTS ACCEPTED INTO THE OTAY SYSTEM, THE VALVES AT THE SOURCE OR SOURCES WILL BE CLOSED, LOCKED AND WILL NOT BE REOPENED UNTIL THE FACILITIES HAVE BEEN RETESTED FOR BACTERIA AND ARE READY FOR ACCEPTANCE.
- WATER PRESSURE REGULATORS WILL BE REQUIRED, INSTALLATION AND MAINTENANCE OF REGULATORS IS THE RESPONSIBILITY OF THE DEVELOPER.
- 2" COPPER SERVICE LATERALS SHALL BE INSTALLED PERPENDICULAR TO THE CENTERLINE OF THE MAIN AND AT A LOCATION DETERMINED BY THE ENGINEER OF WORK. METER BOXES SHALL BE PROVIDED AND INSTALLED TO FINISHED GRADE.
- EACH LOT SHALL RECEIVE A 2-INCH COPPER SERVICE LATERAL, INSTALLED PERPENDICULAR TO THE CENTERLINE AND AT A LOCATION DETERMINED BY THE ENGINEER OF WORK. METER BOXES SHALL BE PROVIDED AND INSTALLED TO FINISHED GRADE BY THE CONTRACTOR.
- ALL CAST IRON AND NON-COATED STEEL PIPE AND APPURTENANCES BURIED IN THE GROUND SHALL BE PROTECTED WITH AN 8-MIL THICK POLYETHYLENE SLEEVE OR SHEET.
- METER BOXES SHALL NOT BE LOCATED IN SIDEWALKS OR DRIVEWAYS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR RELOCATION OF ANY EXISTING WATER APPURTENANCES.

### SEWER NOTES

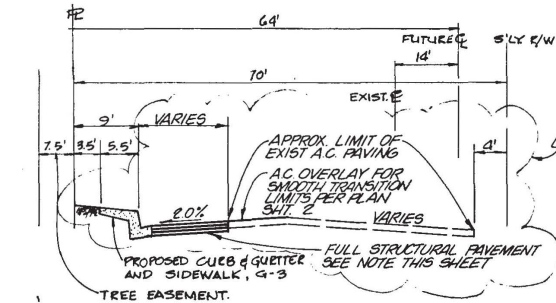
- AN APPROVED ALTERNATE FOR THE 8" V.C. SEWER SHOWN ON PLANS IS P.V.C. SEWER PIPE PER A.S.T.M. D3034 TYPE PSM SDR-35 WITH MINIMUM PIPE STIFFNESS OF 46 WHEN TESTED AT 5% DEFLECTION. GRAVITY P.V.C. SEWER SHALL HAVE A 3/4" MAXIMUM CRUSHED ROCK BACKFILL TO 1-FOOT ABOVE THE PIPE.
- SEWER CONTRACTOR SHALL MAKE CERTAIN THAT ALL MANHOLES ARE CONSTRUCTED IN EXACT LOCATION SHOWN, AND WITH THE OFFSET CONE POSITIONED AWAY FROM SURVEY MONUMENT LOCATIONS ADJACENT THERETO.
- ALL V.C. SEWER PIPES CONNECTING TO MANHOLES SHALL HAVE A FLEXIBLE JOINT WITHIN 12" OF THE INSIDE FACE OF THE MANHOLE. THESE FLEXIBLE JOINTS ARE CONSIDERED TO BE INCLUDED IN THE UNIT PRICE BID FOR MANHOLES.
- P.V.C. PIPE CONNECTION TO MANHOLES SHALL COMPLY WITH REGINAL STANDARD.

### FIRE NOTES

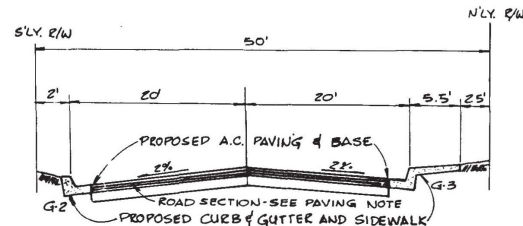
- THE FIRE FLOW REQUIREMENT SHALL BE A MINIMUM 1000 GPM FOR TWO (2) HOURS DURATION BASED ON A MINIMUM OF 20 P.S.I. RESIDUAL OPERATION PRESSURE IN THE STREET MAIN FROM WHICH THE FLOW IS MEASURED AT THE TIME OF MEASUREMENT. NOTE: IN THE EVENT WOOD SHINGLES ARE USED AS ROOF COVERING, THE FIREFLOW REQUIREMENT SHALL BE INCREASED TO A TOTAL FIREFLOW OF 1500 GPM.
- TYPE OF FIRE HYDRANT SHALL HAVE ONE (1) 4" OUTLET AND TWO (2) 2 1/2" OUTLET. INSTALLATION SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.
- PROTECTION OF FIRE HYDRANTS TO BE PROVIDED AND MAINTAINED AT ALL TIMES.
- WATER SUPPLIES FOR FIRE PROTECTION TO BE PROVIDED PRIOR TO ANY COMBUSTIBLE CONSTRUCTION MATERIAL BEING PLACED ON THE SITE.
- ACCESS FOR FIRE APPARATUS TO BE PROVIDED AND MAINTAINED TO WITHIN 150 FEET OF COMBUSTIBLE CONSTRUCTION MATERIAL.
- ACCESS TO FIRE HYDRANTS TO BE PROVIDED AND MAINTAINED AT ALL TIMES. HYDRANTS SHALL NOT BE OBSTRUCTED IN ANY MANNER.

ALL WATER SYSTEMS SHALL BE DESIGNED TO PERMIT CIRCULATION WATER FLOW EXCEPT WHERE IMPRACTICAL BECAUSE OF CUL-DE-SACS AND LIKE CONDITIONS OR THE INCOMPLETE DEVELOPMENT OF THE GRID SYSTEM.

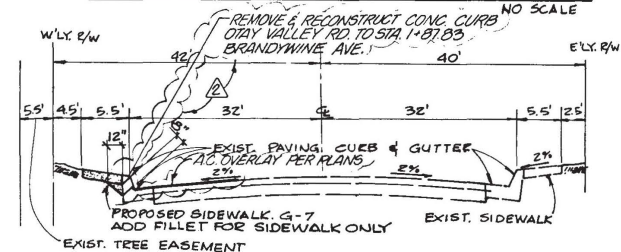
CITY OF CHULA VISTA ENGINEERING DEPARTMENT  
STREET IMPROVEMENT PLANS  
FOR NW CORNER OF BRANDYWINE & OTAY VALLEY ROAD  
Drawing No. 86-483  
Sheet 1 of 3



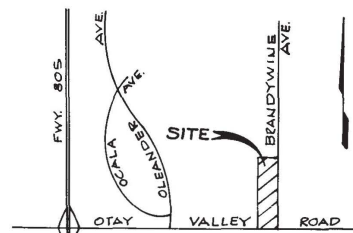
TYPICAL SECTION OTAY VALLEY RD.  
NO SCALE



TYPICAL SECTION SHINOHARA LN.  
NO SCALE



TYPICAL SECTION BRANDYWINE AVE.  
NO SCALE



VICINITY MAP  
NO SCALE

Church Engineering, Inc.

Consulting Engineers 225 Broadway Suite 700  
Planners San Diego, CA 92101  
Surveyors Telephone (619) 237-0722

ENGINEER OF WORK

MANUEL E. NIETO R.C.E. 30724 DATE 3/31/88

CONSTRUCTION RECORD

Contractor: Cardon Meadows  
Inspector: Jim Biasi  
Date Completed: 5-19-88

REFERENCES

By: WIDEN IMPROVEMENT

REVISIONS  
1. REVISE TO: WLY BORY TO 1+87.83 BRANDYWINE  
2. AS-BUILT

WALDEN & ASSOCIATES, INC.  
9245 SKYPARK COURT, SUITE 110  
SAN DIEGO, CA 92123  
TEL. (619) 571-9035

DAVID L. WALDEN R.C.E. DATE 10-22-86

DAVID L. WALDEN R.C.E. DATE 10-22-86

OTAY WATER DISTRICT  
W.O. 1768 I.D. 10

APPROVED BY: R.C.E. 22872 DATE 5-12-87

DESIGNED BY: MB DRAWN BY: PS CHECKED BY: MB

Submitted: 6/9/87 Approved: 6/9/87  
By: David L. Walden Senior Civil Engineer City Engineer



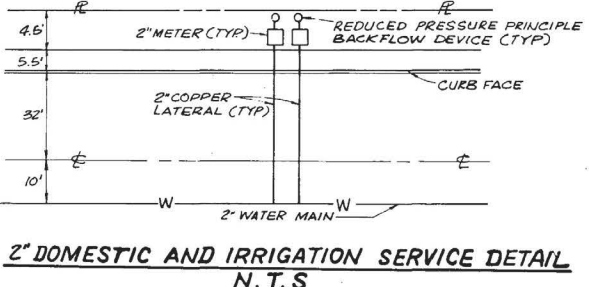
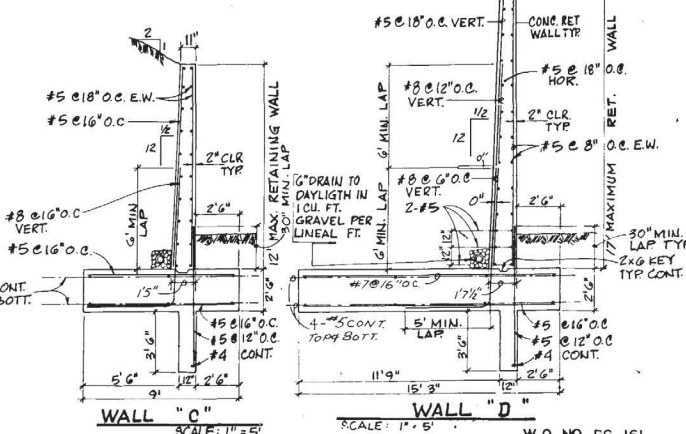
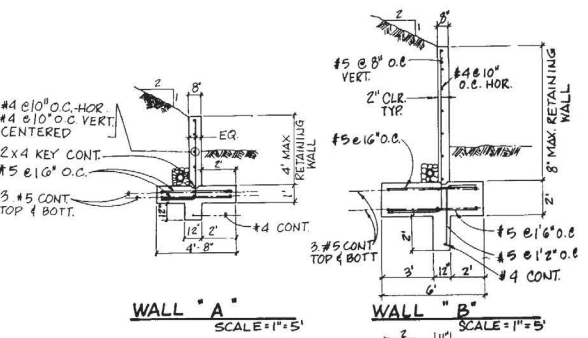
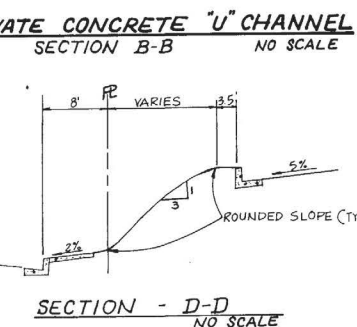
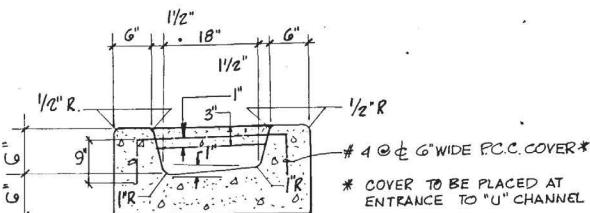
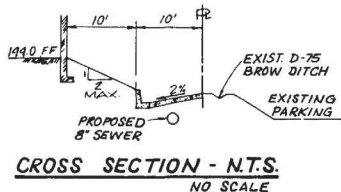
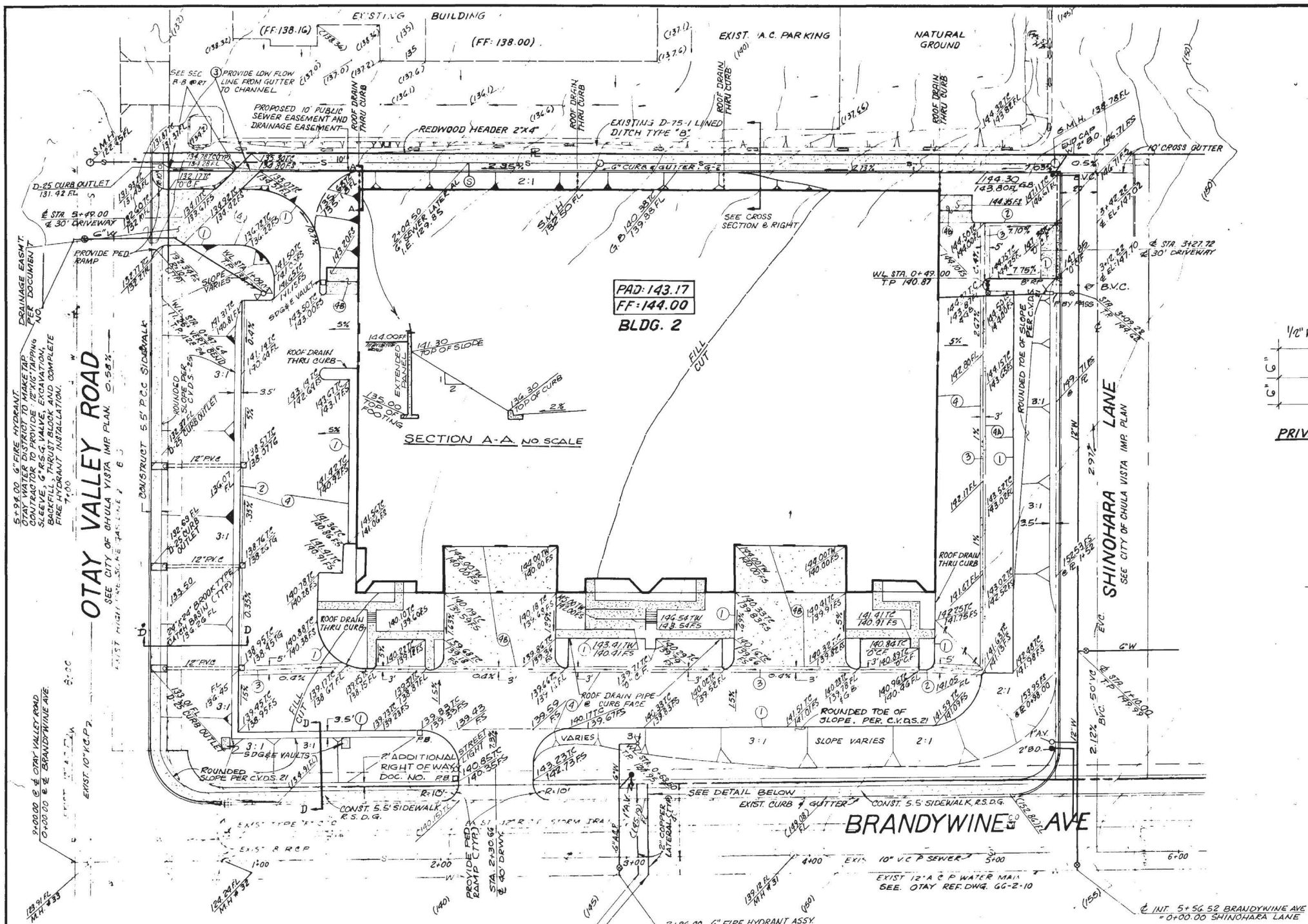
DESIGNED BY: MB DRAWN BY: PS CHECKED BY: MB

Submitted: 6/9/87 Approved: 6/9/87  
By: David L. Walden Senior Civil Engineer City Engineer



PAGE 4





CONSTRUCTION RECORD	REFERENCES	By	REVISIONS	Date	App'd	BENCH MARK	SCALE	Office	Designed By	Drawn By	Checked By	Submitted	Approved	CITY OF CHULA VISTA ENGINEERING DEPARTMENT	Drawing No.
Contractor: <i>Cardan Meadows</i>		WD	REVISE (SECTION D-D)	11/19/86		BM # 045	Horizontal	Field	<i>David L. Walden</i>	<i>David L. Walden</i>	<i>David L. Walden</i>	11/19/86	11/19/86	GRADING PLAN FOR PARCEL 2, T.P.M. 86-2	86-478
Inspector: <i>Jim Biasi</i>		WD	ADD Retaining Wall Details	11/19/86		L & T E/SIDE LT. STD AT N.W. COR. OLEANDER AVE AND OTAY VALLEY RD. ELEV. 128.746	Vertical	Traffic	<i>David L. Walden</i>	<i>David L. Walden</i>	<i>David L. Walden</i>	11/19/86	11/19/86	1690 BRANDYWINE AVE.	Sheet 3 of 3
Date Completed: 11-19-86		CE	REMOVE RET. WALL REAR BLDG. 2	11/19/86											
		CE	AS-BUILT	11/19/86											



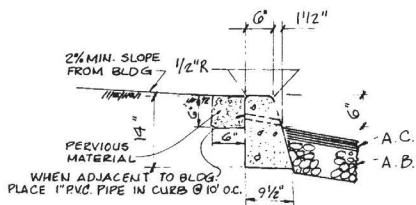
# BRANDYWINE DISTRIBUTION CENTER

## CONSTRUCTION NOTES

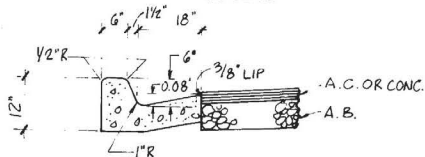
- 1) CONST. CURB-SEE DETAIL
- 2) CONST. CURB & GUTTER-SEE DETAIL
- 3) CONST. "V" GUTTER-SEE DETAIL
- 4) CONST. 4" A.C./6" CL II BASE (TRUCK PARKING AND ACCESS)
- 5) CONST. 3" A.C./4" CL II BASE (AUTO PARKING AND ACCESS)
- 6) CONST. 6" P.C.C. CL "A" (TRUCK RAMP & SLAF AND TRASH AREA)

## LEGEND

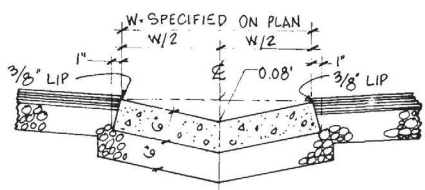
- FL — FLOWLINE  
FG — FINISH GRADE  
FS — FINISH SURFACE  
TW — TOP OF WALL  
TC — TOP OF CURB  
CF — CURB FACE  
— RETAINING WALL  
— P.C.C. DRAINAGE DITCH  
— CUT SLOPE  
— FILL SLOPE



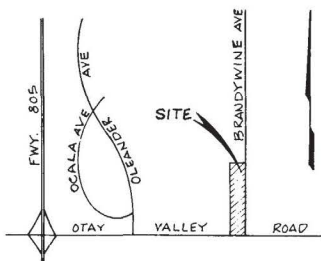
1 PRIVATE CURB DETAIL  
NO SCALE



2 PRIVATE CURB & GUTTER DETAIL  
NO SCALE



3 PRIVATE P.C.C. "V" GUTTER  
NO SCALE



VICINITY MAP  
NO SCALE

ORIGINAL TO CITY/COUNTY  
FOR SIGNATURES  
X RECORDED 3-20-88

## SOILS ENGINEER'S STATEMENT

I, Richard L. Walden, a registered civil engineer of the State of California, principally doing business in the field of applied soil mechanics, hereby verify that a sampling and study of the soil conditions prevalent within this site was made by me or under my direction between the dates September 11, 1985 and August 16, 1986. One complete copy of the soils report compiled from this study with my recommendations, has been submitted to the Office of the City Engineer.

THESE GRADING PLANS HAVE BEEN REVIEWED BY ME OR UNDER MY DIRECTION AND CONFORM TO THE RECOMMENDATIONS MADE IN THE SOILS REPORT MENTIONED ABOVE.

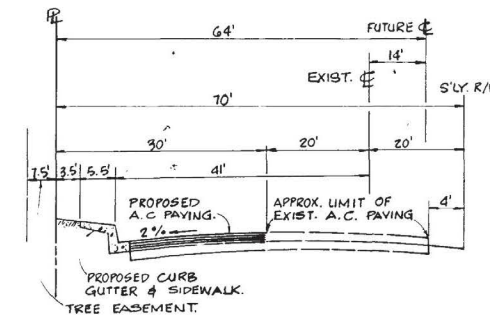
SIGNED: Richard L. Walden R.C.E. 19402  
DATE: 10/7/86

I HEREBY DECLARE THAT I AM THE ENGINEER OF WORK FOR THIS PROJECT. THAT I HAVE EXERCISED RESPONSIBLE CHARGE OVER THE DESIGN OF THE PROJECT AS DEFINED IN SECTION 6703 OF THE BUSINESS AND PROFESSIONS CODE, AND THAT THE DESIGN IS CONSISTANT WITH CURRENT STANDARDS.

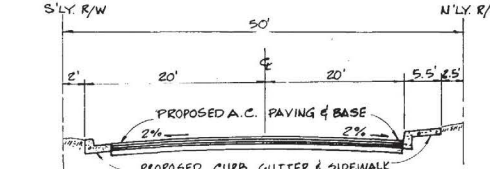
I UNDERSTAND THAT THE CHECK OF THE PROJECT DRAWINGS AND SPECIFICATIONS BY THE CITY OF CHULA VISTA IS CONFINED TO A REVIEW ONLY AND DOES NOT RELIEVE ME, AS ENGINEER OF WORK, OF MY RESPONSIBILITIES FOR PROJECT DESIGN.

WALDEN & ASSOCIATES, INC.  
9245 SKYPARK COURT, STE. 110  
SAN DIEGO, CA 92123  
(619) 571-9035

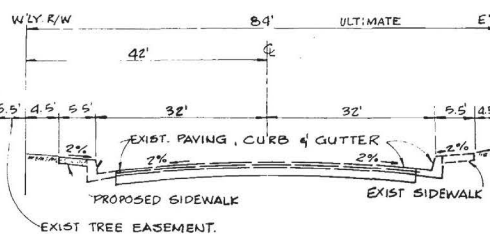
David L. Walden 10-22-86  
DAVID L. WALDEN, R.C.E. 19402 DATE



TYPICAL SECTION OTAY VALLEY ROAD



TYPICAL SECTION SHINOZAKI LANE



TYPICAL SECTION BRANDYWINE AVE.

EARTHWORK QUANTITIES  
CUT 61,000 CB. YDS.  
FILL 52,000 CB. YDS.  
EXPORT 9,000 CB. YDS.

## GENERAL WORK TO BE DONE

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THESE PLANS, THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, THE DESIGN AND CONSTRUCTION STANDARDS OF CHULA VISTA AND THE SAN DIEGO AREA REGIONAL STANDARD DRAWINGS. ANY CHANGES OR REVISIONS THEREFROM SHALL BE APPROVED BY THE CITY ENGINEER PRIOR TO ANY REQUEST FOR INSPECTION.
2. THE SOILS REPORT TITLED "RACO WAREHOUSE", PREPARED BY WOODWARD & CLYDE, DATED 9-26-86, ADDENDUM REPORTS DATED 9-10-86 AND 10-3-86 SHALL BE CONSIDERED AS PART OF THIS GRADING PLAN. ALL GRADING SHALL BE DONE IN ACCORDANCE WITH THE RECOMMENDATIONS AND SPECIFICATIONS CONTAINED IN SAID REPORT.
3. APPROVAL OF THIS PLAN DOES NOT CONSTITUTE APPROVAL OF SIZES, LOCATION AND TYPE OF DRAINAGE FACILITIES, NOR OF IMPROVEMENTS WITHIN STREET RIGHT-OF-WAYS. SEPARATE APPROVALS AND PERMITS FOR THESE SHALL BE REQUIRED IN CONJUNCTION WITH IMPROVEMENT PLANS.
4. EXISTING DRIVEWAYS TO BE ABANDONED WILL BE REMOVED AND REPLACED WITH CURB, GUTTER, AND SIDEWALK.
5. WRITTEN PERMISSION SHALL BE OBTAINED FOR ANY OFF-SITE GRADING.
6. CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS REQUIRED TO PROTECT ADJACENT PROPERTIES DURING GRADING OPERATIONS. ANYTHING DAMAGED OR DESTROYED SHALL BE REPLACED OR REPAIRED TO CONDITION EXISTING PRIOR TO GRADING.
7. THE DEVELOPER SHALL BE RESPONSIBLE THAT ANY MONUMENT OR BENCH MARK WHICH IS DISTURBED OR DESTROYED SHALL BE REESTABLISHED AND REPLACED BY A REGISTERED CIVIL ENGINEER OR A LICENSED LAND SURVEYOR.
8. THE CONTRACTOR SHALL DESIGN, CONSTRUCT AND MAINTAIN ALL SAFETY DEVICES, INCLUDING SHORING, AND SHALL BE RESPONSIBLE FOR CONFORMING TO ALL LOCAL, STATE, AND FEDERAL SAFETY AND HEALTH STANDARDS, LAWS AND REGULATIONS.

## NOTIFICATIONS

1. THE EXISTENCE AND LOCATION OF UNDERGROUND UTILITY PIPES AND STRUCTURES SHOWN ON THESE PLANS WERE OBTAINED BY A SEARCH OF AVAILABLE RECORDS, TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO EXISTING UTILITIES EXCEPT AS SHOWN ON THESE PLANS, HOWEVER, THE CONTRACTOR IS REQUIRED TO TAKE DUE PRECAUTIONARY MEASURES TO PROTECT ANY EXISTING UTILITIES OR STRUCTURES LOCATED AT THE WORK SITE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT UNDERGROUND SERVICE ALERT (PHONE: 1-800-422-4133) 48 HOURS IN ADVANCE OF ANY EXCAVATION FOR THE MARK-OUT OF THE LOCATION OF UTILITIES AND NOTIFICATION OF COMMENCEMENT OF WORK.
2. FOR ANY QUESTIONS REGARDING THE MARK-OUT OF UNDERGROUND UTILITIES, THE CONTRACTOR SHOULD CONTACT THE RESPECTIVE COMPANY:  
  
STREET LIGHT OR SIGNAL LIGHT CONDUIT - CITY OF CHULA VISTA 691-5045  
SEWER OR STORM DRAIN - CITY OF CHULA VISTA 691-5027  
GAS AND ELECTRIC - SAN DIEGO GAS & ELECTRIC 425-3060  
WATER - OTAY WATER DISTRICT 462-2222  
  
TELEPHONE - PACIFIC BELL 637-5497  
TELEVISION - COX CABLE OF SAN DIEGO 267-5733
3. CONTRACTOR SHALL NOTIFY THE CITY ENGINEER'S OFFICE 48 HOURS PRIOR TO BEGINNING ANY WORK ON THIS PROJECT. PHONE: 691-5028
4. THE CONTRACTOR SHALL GIVE 24 HOURS NOTICE ON CALLS FOR INSPECTION. PHONE: 691-5028. ALL WORK PERFORMED WITHOUT BENEFIT OF INSPECTION WILL BE SUBJECT TO REJECTION AND REMOVAL.

## GRADING

1. ALL GRADING SHALL BE OBSERVED AND TESTED BY A QUALIFIED SOILS ENGINEER OR HIS REPRESENTATIVE. HE SHALL OBSERVE AND TEST THE EXCAVATION, PLACEMENT, AND COMPACTION OF FILLS AND BACKFILLING AND COMPACTION OF TRENCH BACKFILL. HE SHALL SUBMIT SOILS REPORTS AS REQUIRED AND WILL EVALUATE THE SUITABILITY OF ANY FILL MATERIAL. UPON COMPLETION OF GRADING OPERATIONS, HE SHALL STATE THAT OBSERVATIONS AND TESTS WERE MADE BY HIM OR UNDER HIS SUPERVISION AND THAT, IN HIS OPINION, ALL EMBANKMENTS AND EXCAVATIONS WERE CONSTRUCTED IN ACCORDANCE WITH THE APPROVED GRADING PLANS, ANY APPROVED REVISIONS THEREOF, SUBJECT LAND DEVELOPMENT PERMIT AND ORDINANCE NO. 1797 AS AMENDED AND THAT ALL EMBANKMENTS AND EXCAVATIONS ARE ACCEPTABLE FOR THEIR INTENDED USE.
2. THE CONTRACTOR SHALL PROPERLY GRADE ALL EXCAVATED SURFACES TO PROVIDE POSITIVE DRAINAGE AND PREVENT PONDING OF WATER. HE SHALL CONTROL SURFACE WATER TO AVOID DAMAGE TO ADJACENT PROPERTIES OR TO FINISHED WORK ON THE SITE AND SHALL TAKE REMEDIAL MEASURES TO PREVENT EROSION OF FREELY GRADED AREAS UNTIL SUCH TIME AS PERMANENT DRAINAGE AND EROSION CONTROL MEASURES HAVE BEEN INSTALLED.
3. ALL AREAS TO BE FILLED SHALL BE PREPARED TO BE FILLED AND FILL SHALL BE PLACED IN ACCORDANCE WITH EARTHWORK SPECIFICATIONS. ALL VEGETABLE MATTER AND OBJECTIONABLE MATERIAL SHALL BE REMOVED BY THE CONTRACTOR FROM THE SURFACE UPON WHICH THE FILL IS TO BE PLACED PRIOR TO CUT AND FILL OPERATIONS. LOOSE FILL AND ALLUVIAL SOILS SHALL BE REMOVED TO SUITABLE FIRM NATURAL GROUND. THE EXPOSED SOILS SHALL BE SCARIFIED TO A DEPTH OF 6" AND THEN COMPACTED TO AN INDICATED MINIMUM OF 90 PERCENT RELATIVE COMPACTION OF ASTM, D-155778.
4. CUT AND FILL SLOPES SHALL BE CUT AND TRIMMED TO THE FINISH GRADE TO PRODUCE SMOOTH SURFACE AND UNIFORM CROSS SECTIONS. THE SLOPES OF EXCAVATIONS AND EMBANKMENTS SHALL BE SHAPED, PLANTED AND TRIMMED AS DIRECTED BY THE ENGINEER OF WORK AND LEFT IN A NEAT AND ORDERLY CONDITION. ALL STONES, ROOTS AND OTHER WASTE MATTER EXPOSED ON EXCAVATION OR EMBANKMENT SLOPES WHICH ARE LIABLE TO BECOME LOOSENED SHALL BE REMOVED AND DISPOSED OF THE TOP AND TOP OF ALL SLOPES SHALL BE ROUNDED IN ACCORDANCE WITH CVDS 21 & 22.
5. EXISTING SLOPES WHICH ARE TO REMAIN ARE TO BE TRIMMED AND FINE GRADED TO ELIMINATE EROSION SCARS.
6. ALL TREES, BRUSH, GRASS, AND OTHER OBJECTIONABLE MATERIAL SHALL BE COLLECTED, PILED OR OTHERWISE DISPOSED OF OFF THE SITE BY THE CONTRACTOR SO AS TO LEAVE THE AREAS THAT HAVE BEEN CLEARED WITH A NEAT AND FINISHED APPEARANCE FREE FROM UNSIGHTLY DEBRIS.

## LANDSCAPING

1. ALL SLOPES SHALL BE PLANTED AND IRRIGATED IN ACCORDANCE WITH PLANS APPROVED BY THE CITY OF CHULA VISTA LANDSCAPE ARCHITECT AND CITY ENGINEER. PLANS SHALL CONFORM TO THE CITY OF CHULA VISTA LANDSCAPE MANUAL AND ORDINANCE NO. 1797, BOTH AS AMENDED.
2. FINISH GRADING AND PLANTING SHALL BE ACCOMPLISHED ON ALL SLOPES PRIOR TO OCTOBER 1 OR IMMEDIATELY UPON COMPLETION OF ANY SLOPES GRADED BETWEEN OCTOBER 1 AND APRIL 1 PADS OR OTHER RELATIVELY LEVEL AREAS SHALL BE PLANTED AS DIRECTED BY THE CITY'S LANDSCAPE ARCHITECT.

## WATER NOTE

WATER MAINS AND APPURTENANCES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THESE PLANS AND THE CURRENT SPECIFICATIONS OF THE OTAY WATER DISTRICT.

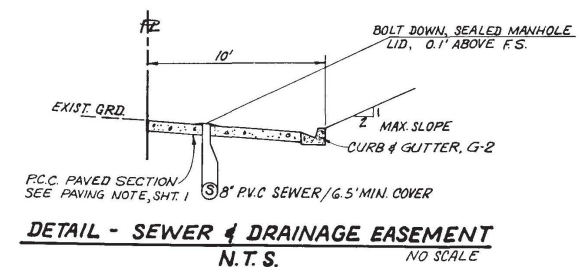
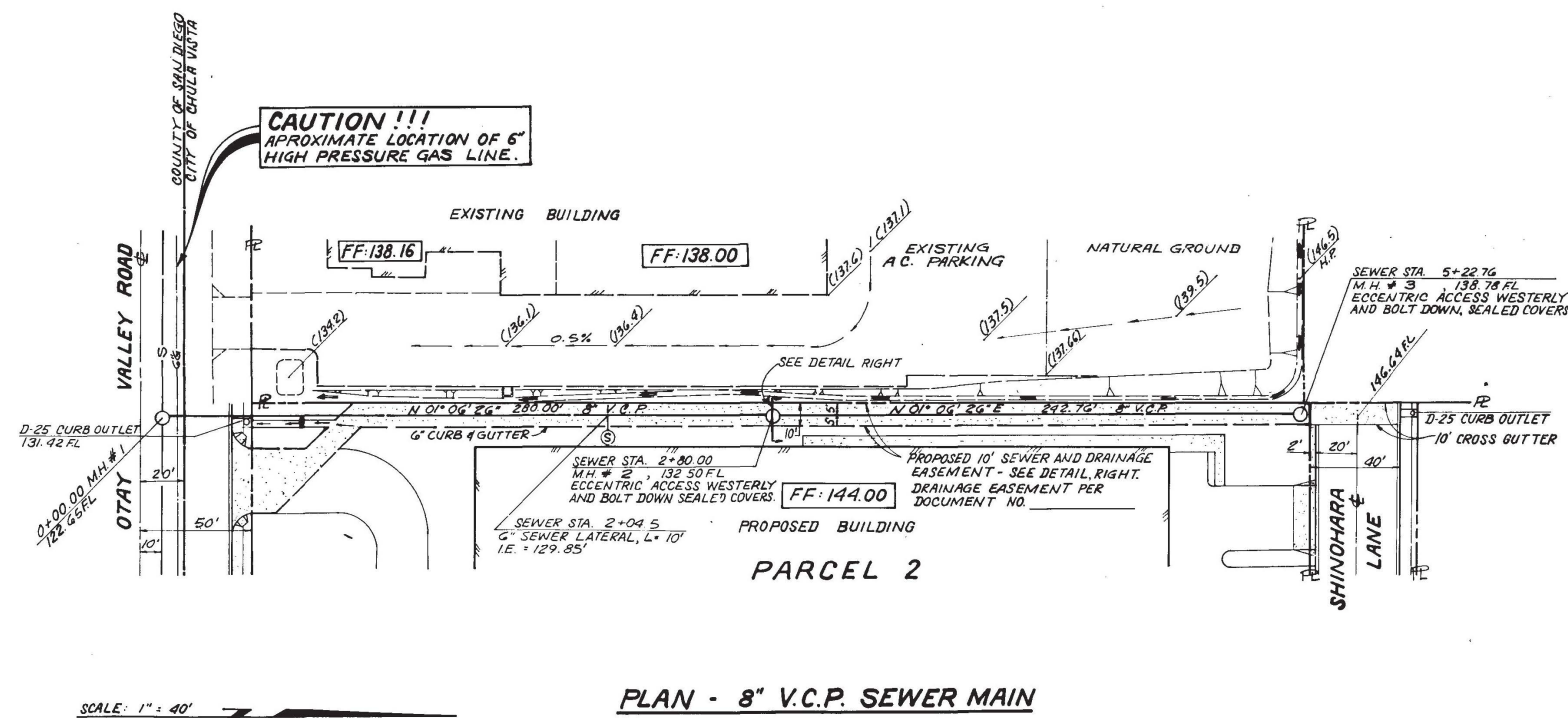
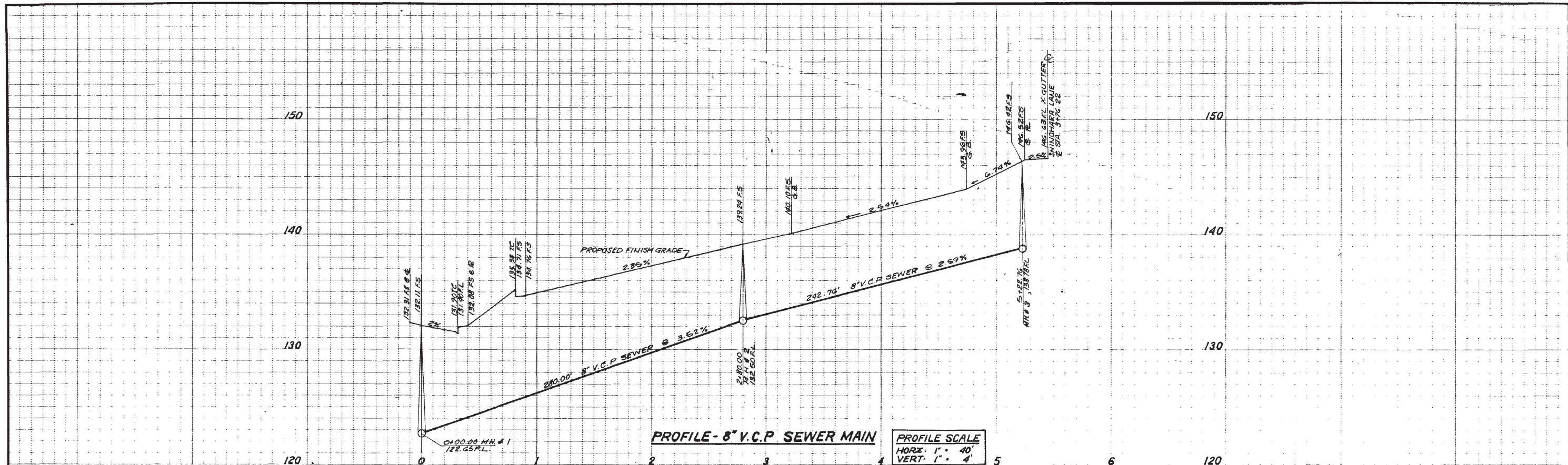
W.O. NO. PG 161

CONSTRUCTION RECORD		REFERENCES		By		REVISIONS		Date		App'd		BENCH MARK		SCALE		Office		Designed By		Drawn By		Checked By		Submitted		Approved		CITY OF CHULA VISTA ENGINEERING DEPARTMENT		Drawing No.	
Contractor <u>Cardon Meadows</u>												BM #1045		Horizontal		Field		M B		P S		M B		10/10/86		11/13/86		GRADING PLANS T.P.M. 86-2		86-480	
Inspector <u>Jim Pias</u>												L & T E/SIDE LT. STD. AT NW		Vertical		Traffic		Plans Prepared Under Supervision Of		Date <u>10-22-86</u>		Senior Civil Engineer		By <u>David L. Walden</u>		City Engineer		1570 AND 1690 BRANDYWINE AVE.		Sheet 1 of 3	
Date Completed <u>5-19-88</u>												OTAY VALLEY RD. ELEV. 128.746						DAVID L. WALDEN		R.C.E. No. <u>19402</u>											
												CE AS-BUILT																			









CONSTRUCTION RECORD		REFERENCES	By	REVISIONS	Date Appd	BENCH MARK	SCALE	Office	Designed By	Drawn By	Checked By	Submitted	Approved	CITY OF CHULA VISTA ENGINEERING DEPARTMENT		Drawing No.
Contractor: <i>Cardon Meadows</i>				AS BUILT	6-1-88	BM #1045	Horizontal AS SHOWN	Field	M.B.	P.S.	M.B.	6/9/87	6-1-88	8" SEWER MAIN		86-481
Inspector: <i>Jim Biasi</i>						L & T E/SIDE LT., STD. AT N.W. COR., OLEANDER AVE. AND OTAY VALLEY RD. ELEV. 128.746	Vertical AS SHOWN	Traffic	DAVID L. WALDEN	Under Supervision Of	By: <i>Roger J. Dwyer</i>	By: <i>Roger J. Dwyer</i>	By: <i>Roger J. Dwyer</i>	OTAY VALLEY RD. TO SHINOHARA LANE		Sheet 3 of 3
Date Completed: 5-19-88																



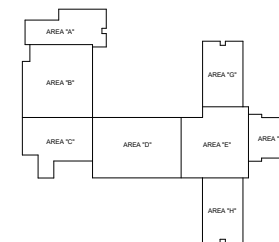
C:\Users\jwain\Documents\1207\_ENCOMPASS HEALTH CHULA VISTA\_MP\_10\_3\_bwin\encompassengineering.net.rvt

TTLBv: 4/20/25 08:23:19 3:52:59 PM

1  
P2.0

PLUMBING - OVERALL UNDERGROUND PLAN

SCALE: 1/16" = 1'-0"



KEYPLAN

PROJECT NUMBER  
184048.00

DRAWN BY  
OG

DATE

REVISIONS	DESCRIPTION	DATE
1		

**neXus**  
engineering

Consulting Mechanical Engineers  
1400 Lone Palm Ave., Suite A  
Modesto, CA 95351  
Tel: 209.572.7799 Fax: 209.236.1579  
www.neXusengineering.net  
HVAC, Plumbing/Piping, Fire Sprinklers  
Process/Plant Engineering, Refrigeration

**BOULDER ASSOCIATES**

**ARCHITECTS**

Boulder Associates, Inc.  
Architecture + Interior Design  
26 O'Farrell Street, Seventh Floor  
San Francisco, California 94108  
415.796.6720 F 415.796.6721  
www.boulderassociates.com



*Paul Anderson*

PROJECT  
**ENCOMPASS  
HEALTH CHULA  
VISTA**

512 SHINOHARA LANE  
CHULA VISTA  
CALIFORNIA 91911

OSHPD APPROVAL STAMP

OSHPD# H190370-37-00

SHEET TITLE  
**PLUMBING -  
OVERALL  
UNDERGROUND  
PLAN**

SHEET NUMBER





