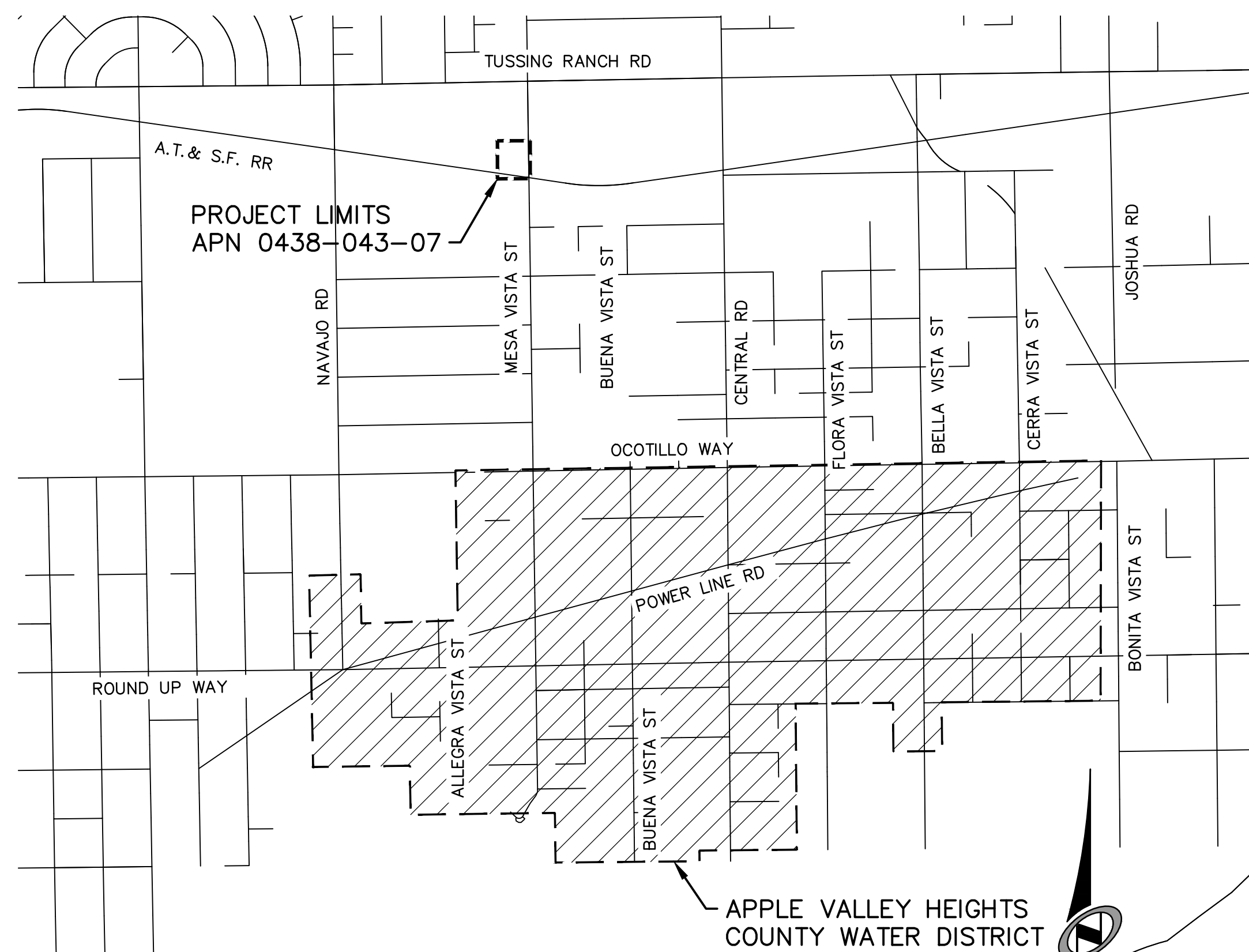


APPLE VALLEY HEIGHTS COUNTY WATER DISTRICT WELL AND BOOSTER PUMP STATION IMPROVEMENTS

30% CONCEPTUAL
SEPTEMBER 2019



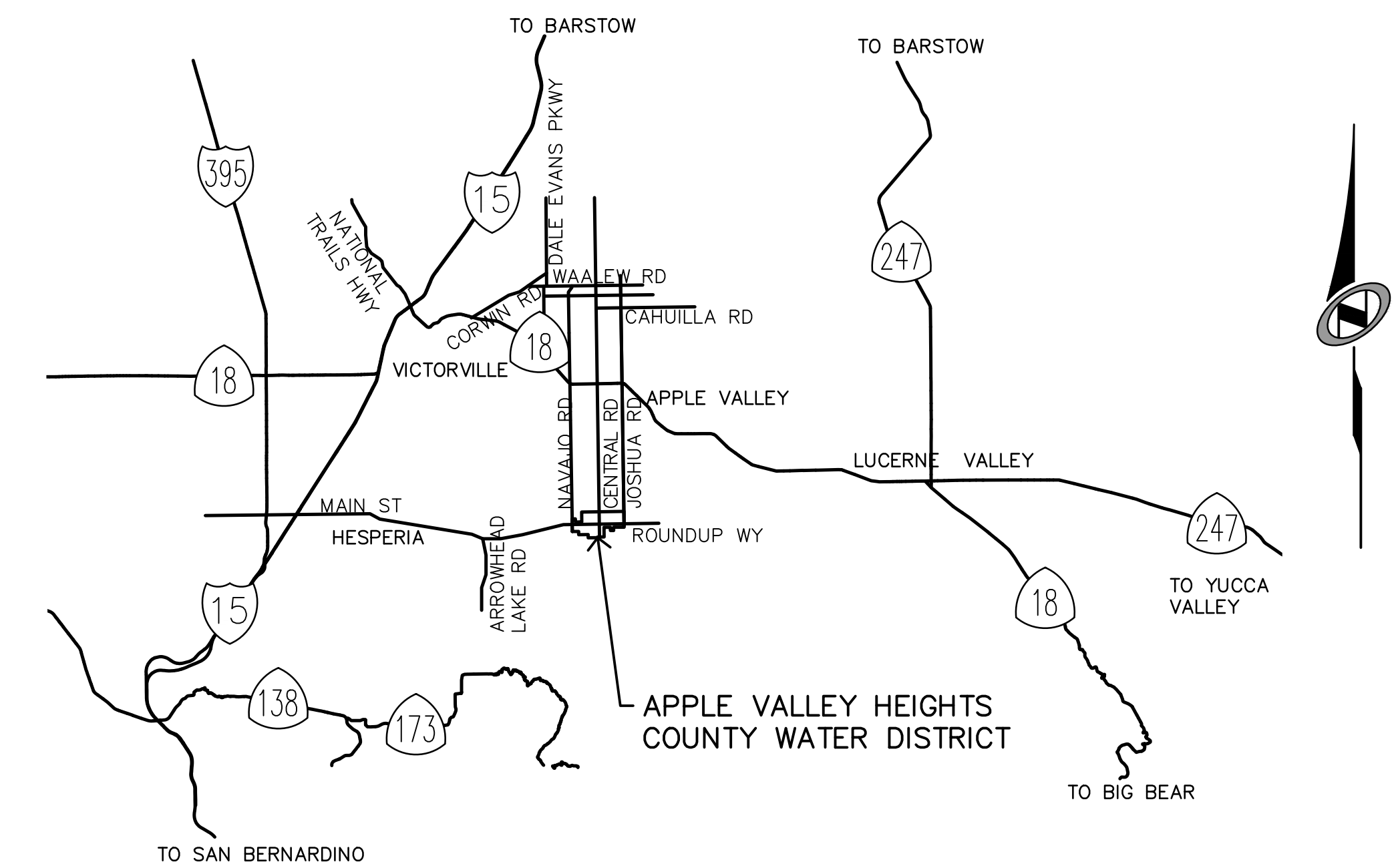
VICINITY MAP
NTS

SHEET INDEX

SHEET NO:	DWG. NO:
1	T-01
2	G-01
3	C-01
4	M-01

DRAWING TITLE:

TITLE SHEET
NOTES, LEGEND, ABBREVIATIONS, KEY MAP &
SURVEY CONTROL
SITE PLAN
WELL HOUSE BUILDING DETAILS



LOCATION MAP
NTS



PRELIMINARY
NOT FOR CONSTRUCTION

DATE: 9/3/19	TIME: 5:50:01 PM	NO.	BY	DATE	REVISIONS:
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PAGE SETUP: ----					
DESIGNER: #### PROJ. MGR: ####					
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WELL AND BOOSTER PUMP STATION IMPROVEMENTS
TITLE SHEET

SHEET NUMBER T-01
1 OF 4 SHEETS
SCALE VERTICAL: 1" = N/A HORIZONTAL: 1" = N/A
JOB NUMBER 226817-0000211.03

PREPARED FOR: APPLE VALLEY HEIGHTS COUNTY WATER DISTRICT

DATE SUBMITTED: SEPTEMBER 2019

GENERAL NOTES

- POTABLE WATER WORKS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE DETAILS AND MATERIALS AS SPECIFIED HEREIN AND PER THE CURRENT STANDARDS OF THE AMERICAN WATERWORKS ASSOCIATION (AWWA). CONTRACTOR SHALL HAVE A COPY OF THE STANDARD SPECIFICATIONS AND SAN BERNARDINO COUNTY PUBLIC WORKS' GENERAL PERMIT CONDITIONS AND TRENCH SPECIFICATIONS (JULY 2017) ON THE JOB SITE AT ALL TIMES.
- UNLESS OTHERWISE NOTED, CONNECTIONS TO EXISTING PIPELINES SHALL BE MADE DRY. THE TIME AND DURATION OF ANY SHUTDOWNS OF EXISTING MAINS SHALL BE SUBJECT TO APPROVAL BY THE OWNER. OWNER SHALL BE NOTIFIED FIVE WORKING DAYS MINIMUM IN ADVANCE OF ANY SHUTDOWN. SYSTEM VALVES WILL BE OPERATED BY OWNER'S FORCES ONLY.
- CONTRACTOR SHALL COORDINATE WITH OWNER ALL ARRANGEMENTS FOR HIGH-LINING TEMPORARY SERVICES PRIOR TO SHUTDOWNS. NO SHUTDOWNS WILL BE SCHEDULED ON MONDAY, FRIDAY, OR WEEKENDS.
- NO WORK MAY BEGIN OR PROCEED WITHOUT DIRECTION OF OWNER'S INSPECTOR. CONTRACTOR SHALL NOTIFY THE OWNER'S INSPECTOR 48 HOURS PRIOR TO THE BEGINNING OF WORK TO ARRANGE FOR INSPECTION OF THE PROJECT.
- THE CONTRACTOR MUST CALL "DIG ALERT OF SOUTHERN CALIFORNIA" TO HAVE UNDERGROUND SERVICE UTILITIES LOCATED PRIOR TO CONSTRUCTION. THIS CALL WILL BE MADE AT LEAST 48 HOURS IN ADVANCE PRIOR TO ANY WORK BEING PERFORMED IN PUBLIC RIGHT-OF-WAY. (DIG ALERT PHONE: 8-1-1)
- ALL EXISTING FACILITIES WHICH MAY AFFECT PROJECT CONSTRUCTION, I.E., LINE CROSSINGS, LINE PARALLELING, OR PROPOSED CONNECTIONS SHALL BE FIELD VERIFIED BEFORE ANY CONSTRUCTION BEGINS.
- CONTRACTOR SHALL TIE OFF ALL VALVE LOCATIONS AND PROVIDE WRITTEN DIMENSIONS TO INSPECTOR IMMEDIATELY UPON INSTALLATION OF VALVES.
- ALL DESIGN CHANGES TO THE WATER SYSTEM SHALL BE APPROVED BY THE OWNER'S REPRESENTATIVE IN WRITING PRIOR TO CONSTRUCTION AND ACCEPTANCE OF THE CHANGE.
- THE WATER SYSTEM SHALL BE PRESSURE TESTED AND DISINFECTED IN ACCORDANCE WITH THE PROCEDURES IN THE PROJECT SPECIFICATIONS.
- PIPELINES AND APPURTENANCES SHALL BE DISINFECTED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS PRIOR TO TIE-IN OR CONNECTION TO EXISTING SYSTEM FACILITIES. BACTERIOLOGIC QUALITY TEST RESULTS SHALL CONFORM TO THE CRITERIA SPECIFIED IN THAT SPECIFICATION.
- CONTRACT RECORD DRAWINGS MUST BE SUBMITTED PRIOR TO FINAL ACCEPTANCE OF WORK. THE PLANS MUST PROVIDE POST CONSTRUCTION VERIFICATION OF THE LOCATION AND ELEVATION OF PIPES AND APPURTENANCES.
- CONTRACTOR SHALL GUARANTEE ALL WORK FOR A PERIOD OF ONE (1) YEAR AFTER THE DATE OF ACCEPTANCE FOR THE PROJECT. CONTRACTOR SHALL REPAIR OR REPLACE ANY OR ALL SUCH WORK, TOGETHER WITH ANY OTHER WORK WHICH MAY BE DISPLACED IN SO DOING THAT MAY PROVE DEFECTIVE IN WORKMANSHIP AND/OR MATERIALS WITHIN THE ONE-YEAR PERIOD FROM THE DATE OF ACCEPTANCE WITHOUT EXPENSE WHATSOEVER TO THE OWNER, ORDINARY WEAR AND TEAR, UNUSUAL ABUSE OR NEGLIGENCE EXCEPTED.
- CONTRACTOR SHALL KEEP ACCESS TO DRIVEWAYS AND PRIVATE ROADS OPEN AT ALL TIMES DURING CONSTRUCTION. CONTRACTOR SHALL KEEP NON-SKID STEEL PLATES ONSITE TO COVER EXPOSED TRENCHES AND PROVIDE IMMEDIATE VEHICULAR OR PEDESTRIAN ACCESS.
- CONSTRUCTION SEQUENCING AND FACILITY SHUTDOWN LIMITATIONS ARE ESSENTIAL TO THE EXECUTION OF THE WORK. SEE PROJECT SPECIFICATIONS.
- CONNECTIONS TO EXISTING ASBESTOS CEMENT PIPE SHALL BE MADE BY DISASSEMBLING THE EXISTING AC PIPE JOINT AND NOT CUTTING THE AC PIPE. PROVIDE NEW PVC PIPE SPOOLS AS REQUIRED TO COMPLETE CONNECTIONS.

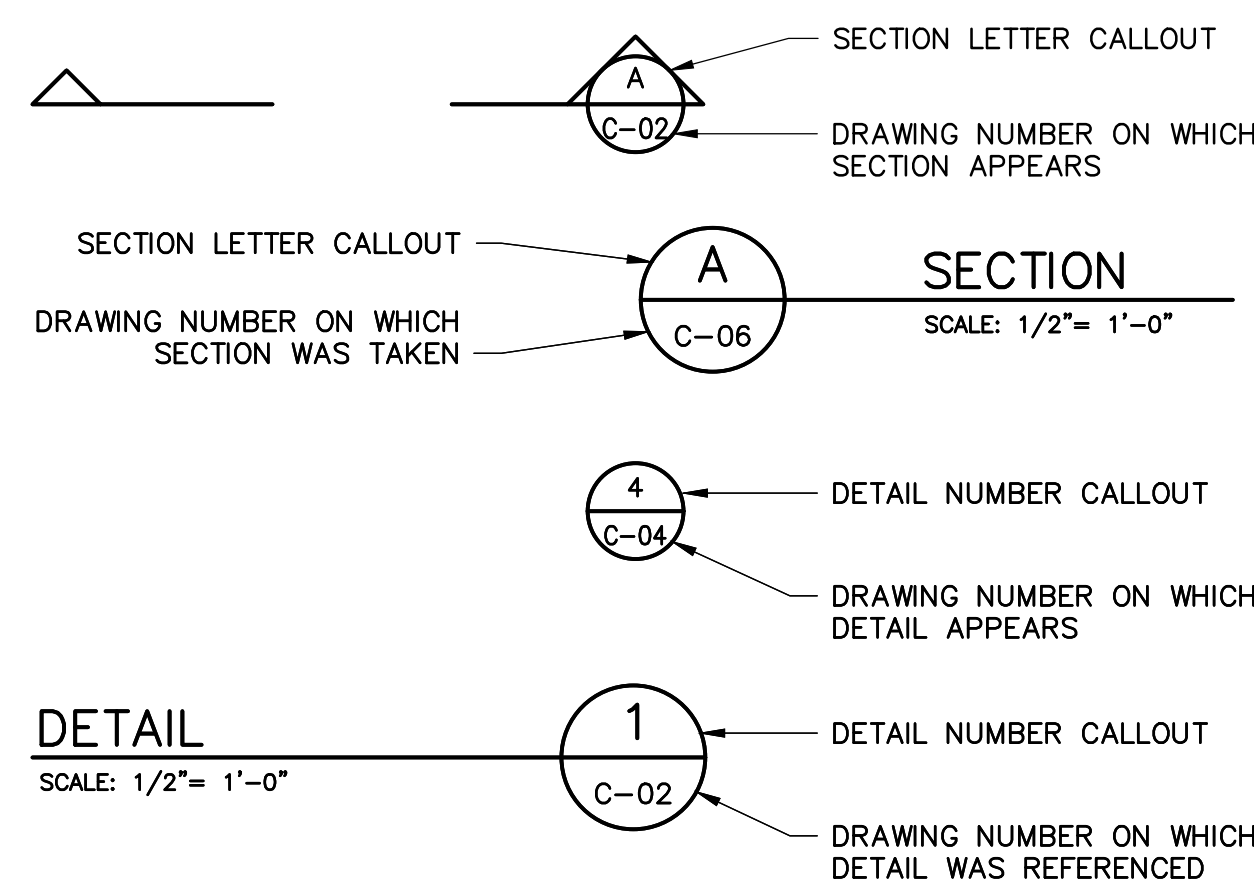
ABBREVIATIONS

AB	AGGREGATE BASE	MAX	MAXIMUM
AC	ASBESTOS CEMENT	MFG	MANUFACTURER
ALT	ALTERNATE	MIN	MINIMUM
ANG	ANGLE	MIP	MALLEABLE IRON PIPE
APPROX	APPROXIMATE	MJ	MECHANICAL JOINT
AWWA	AMERICAN WATER WORKS ASSOCIATION	N	NORTH
AVHCWD	APPLE VALLEY HEIGHTS COUNTY WATER DISTRICT	No. (OR #)	NUMBER
		NTS	NOT TO SCALE
BF	BLIND FLANGE	O.D.	OUTSIDE DIAMETER
CA	CALIFORNIA	OH	OVERHEAD
CAV	COMBINATION AIR AND VACUUM VALVE	OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
CL	CENTERLINE	PC	POINT OF CURVATURE
CONC	CONCRETE	PCC	POINT OF COMPOUND CURVE
CONN	CONNECT/CONNECTION	PE	PLAIN END
CMP	CORRUGATED METAL PIPE	PH	POT HOLE
CY	CUBIC YARDS	PI	POINT OF INTERSECTION
CMRS	COUNTY MAINTENANCE ROAD SYSTEM	PIP	PROTECT IN PLACE
DEFL	DEFLECTION	PL	PROPERTY LINE
DEG	DEGREE	PO	PUSH ON
DEMO	DEMOLISH/DEMOLITION	PP	POWER POLE
DET	DETAIL	PSI	POUNDS PER SQUARE INCH
DI, DIP	DUCTILE IRON, DUCTILE IRON PIPE	PT	POINT, POINT OF TANGENCY
DIPS	DUCTILE IRON PIPE SIZE	PVC	POLYVINYL CHLORIDE
DIA	DIAMETER	PWR	POWER
DWG(S)	DRAWING(S)	RAD	RADIUS
DWY	DRIVEWAY	ROW	RIGHT OF WAY
E	EAST	S	SLOPE, SOUTH
EA	EACH	S.B.CO.	SAN BERNARDINO COUNTY
ELEC	ELECTRIC	SBCFCD	S.B.CO. FLOOD CONTROL DISTRICT
EOP	EDGE OF PAVEMENT	SBCSD	SAN BERNARDINO COUNTY SPECIAL DISTRICTS
ETW	EDGE OF TRAVEL WAY	SCE	SOUTHERN CALIFORNIA EDISON
EX	EXISTING	SF	SQUARE FEET
FCA	FLANGED COUPLING ADAPTER	SFT	SURVEY FEET
FLG	FLANGE	SHT	SHEET
FO	FIBER OPTIC	SPEC(S)	SPECIFICATION(S)
FH	FIRE HYDRANT	SST	STAINLESS STEEL
FT (OR ')	FEET	STA	STATION
F&I	FURNISH AND INSTALL	STD	STANDARD
G	GAS	STL	STEEL
GV	GATE VALVE	SWG	SOUTHWEST GAS
H, HORIZ	HORIZONTAL	TB	THRUST BLOCK
HDG	HOT DIP GALVANIZED	TEL/TELCO	TELEPHONE/TELECOMMUNICATION
HDPE	HIGH DENSITY POLYETHYLENE	TOP	TOP OF PIPE
		TYP	TYPICAL
ID	INSIDE DIAMETER	U.S.A.	UNITED STATES OF AMERICA
IE	INVERT ELEVATION	W	WEST, WATER
IN (OR ")	INCHES		
LF	LINEAR FEET		

LEGEND

- EX. MONUMENT
- EX. WATER VALVE
- EX. WATER METER
- EX. FIRE HYDRANT
- EX. POWER POLE
- EX. WIRE FENCE
- EX CENTERLINE
- EX. RIGHT OF WAY
- EX. SECTION LINE/PROPERTY LINE
- EX. EASEMENT
- EX. WATER LINE
- EX. ELECTRICAL CONDUIT
- PROPOSED EASEMENT
- PROPOSED PIPELINE
- PROPOSED TELCO CONDUIT
- PROPOSED DRY BARREL FIRE HYDRANT
- PIPE, STRUCTURE, ETC. TO BE ABANDONED (PIPES ENDS TO BE PLUGGED)

SECTION AND DETAIL DESIGNATION



BASIS OF ELEVATION

ELEVATIONS ARE REFERENCED TO NAVD88, AND DETERMINED LOCALLY BY OBSERVATION OF BENCHMARK M 327 (PID EV1642) PER NGS.

THE NAVD88 ELEVATION = 3425.05 sft

BENCHMARK

THE BENCHMARK IS A 2.5" BRASS DISK, STAMPED "M 327 1935" SET IN A CONCRETE POST 275 FEET NORTH OF THE CENTERLINE OF OCOTILLO WAY, AND EAST OF THE INTERSECTION OF VALLEY VISTA AVE.

BASIS OF BEARINGS

BEARINGS ARE REFERENCED TO GRID NORTH AS DEFINED BY THE CALIFORNIA COORDINATE SYSTEM 1983, ZONE V AND ARE BASED ON THE CALCULATED LINE FROM POINT NALO TO POINT YUJO (POINT ID EV2858), SAID BEARING = N88°-51'-09"E.

BASIS OF COORDINATES

THE COORDINATES ARE REFERENCED TO THE NORTH AMERICAN DATUM OF 1983 AND ARE EXPRESSED IN TERMS OF THE CALIFORNIA COORDINATE SYSTEM 1983, ZONE V, AT EPOCH 1991.35, AND ARE BASED ON POINT NALO (POINT ID EV2860) PER PUBLISHED NGS CONTROL.

THE GRID VALUE FOR NALO = N-2005514.73 sft, E-6805380.95 sft.
THE GRID VALUE FOR YUJO = N-2005730.56 sft, E-6816156.49 sft.

DATE OF INITIAL SURVEY

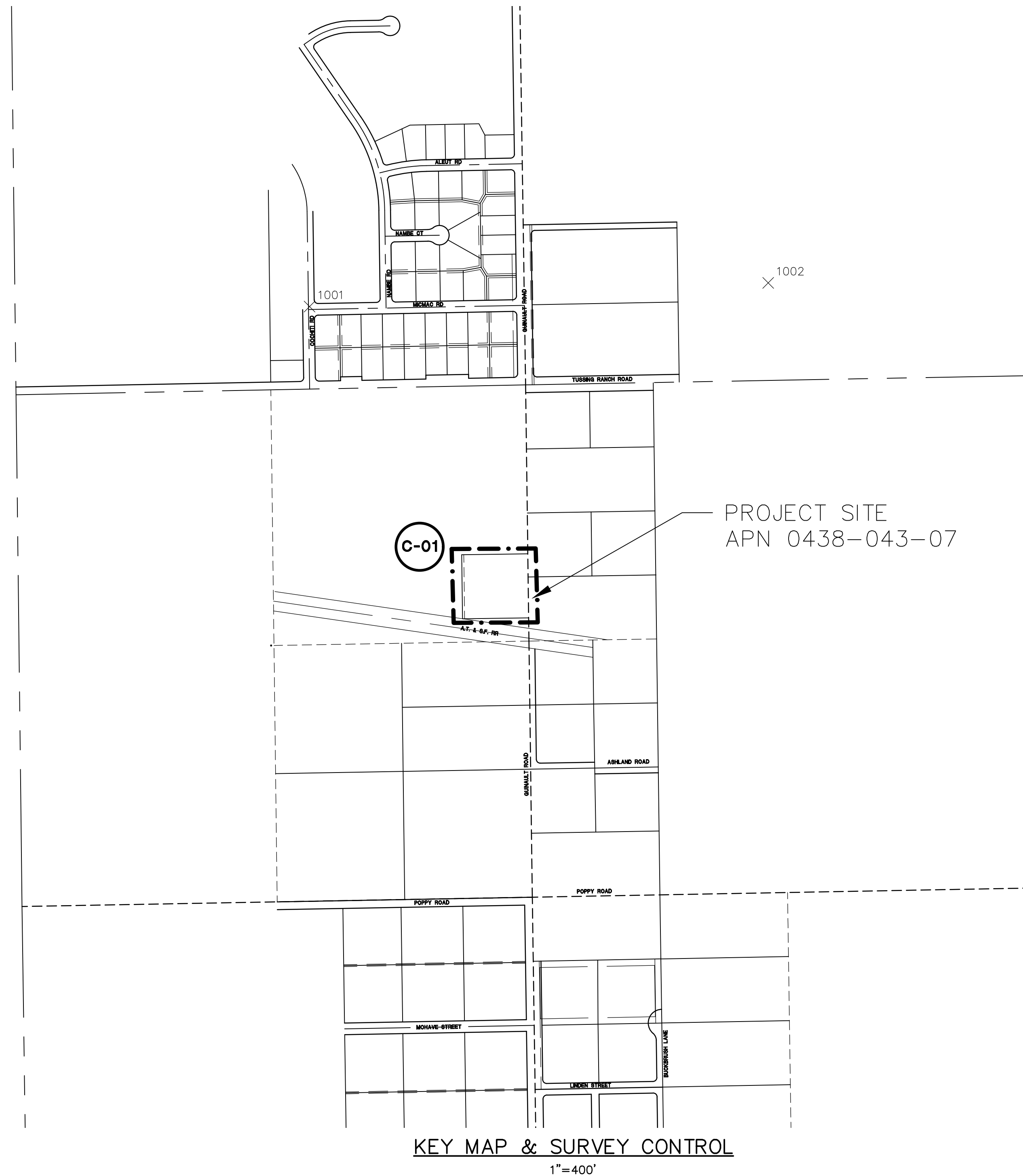
JANUARY 11, 2018 BY INLAND AERIAL SURVEYS, INC.

REFERENCE DRAWING

SBCSD H-3A&B	THRUST BLOCKS
SBCSD H-3C&D	STANDARD RESTRAINT TEES, DEAD ENDS & BENDS FOR PVC C900
SBCSD H-6	AIR AND VACUUM VALVE ASSEMBLY
SBCSD H-7A	4" & 6" BLOWOFF ASSEMBLY FOR A.C. & P.V.C. MAINS
SBCSD H-10A&B	6" & 8" PRESSURE REDUCING STATION
SBCSD H-15	TRENCH REPAIR IN ROADS
SBCSD H-16	TYPICAL TRENCH DETAIL

GEOTECHNICAL INVESTIGATION REPORT

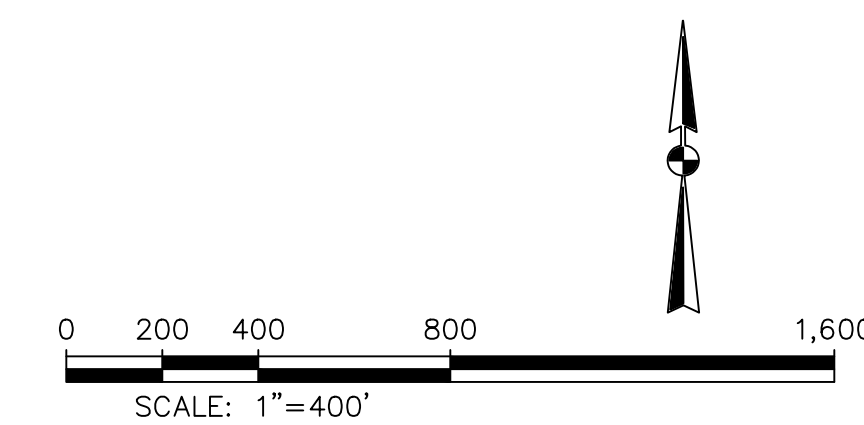
GEOTECHNICAL INVESTIGATION REPORT NV5 WEST (NV5)
APPLE VALLEY HEIGHTS COUNTY WATER DISTRICT
APPLE VALLEY, CALIFORNIA
PROJECT NO. 226817-0000211.01
DATED: MAY 24, 2018



CONTROL POINTS

POINT NO.	NORTHING	EASTING	ELEVATION	DESCRIPTION
1001	1984871.018	6807372.375	3052.739	FX-1 / 60D W/ WASHER
1002	1984992.862	6809736.340	3079.594	FX-2 / 60D W/ WASHER
30005	1976497.416	6805979.966	3155.460	W 1/4 COR SEC. 22 2IN IP BRASS CAP LS 3980
30006	1976522.354	6807287.762	3171.580	CEN WEST 1/16 COR SPIKE & WASHER COUNTY SURVEYOR
NALO	2005514.730	6805380.950	2950.780	NGS PID EV2860 STAMPED NALO 1979
YUJO	2005730.560	6816156.490	2933.070	NGS PID EV2858 STAMPED YUJO 1979

*POINTS 30005, 30006, NALO & YUJO OUTSIDE OF KEY MAP VIEWABLE AREA



PRELIMINARY
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DATE: 9/3/19	TIME: 5:52:31 PM	NO.	BY	DATE	REVISIONS:
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DRAWING NAME: G-01.DWG					
PAGE SETUP: ---					
DESIGNER: ### PROJ. MGR: ###					
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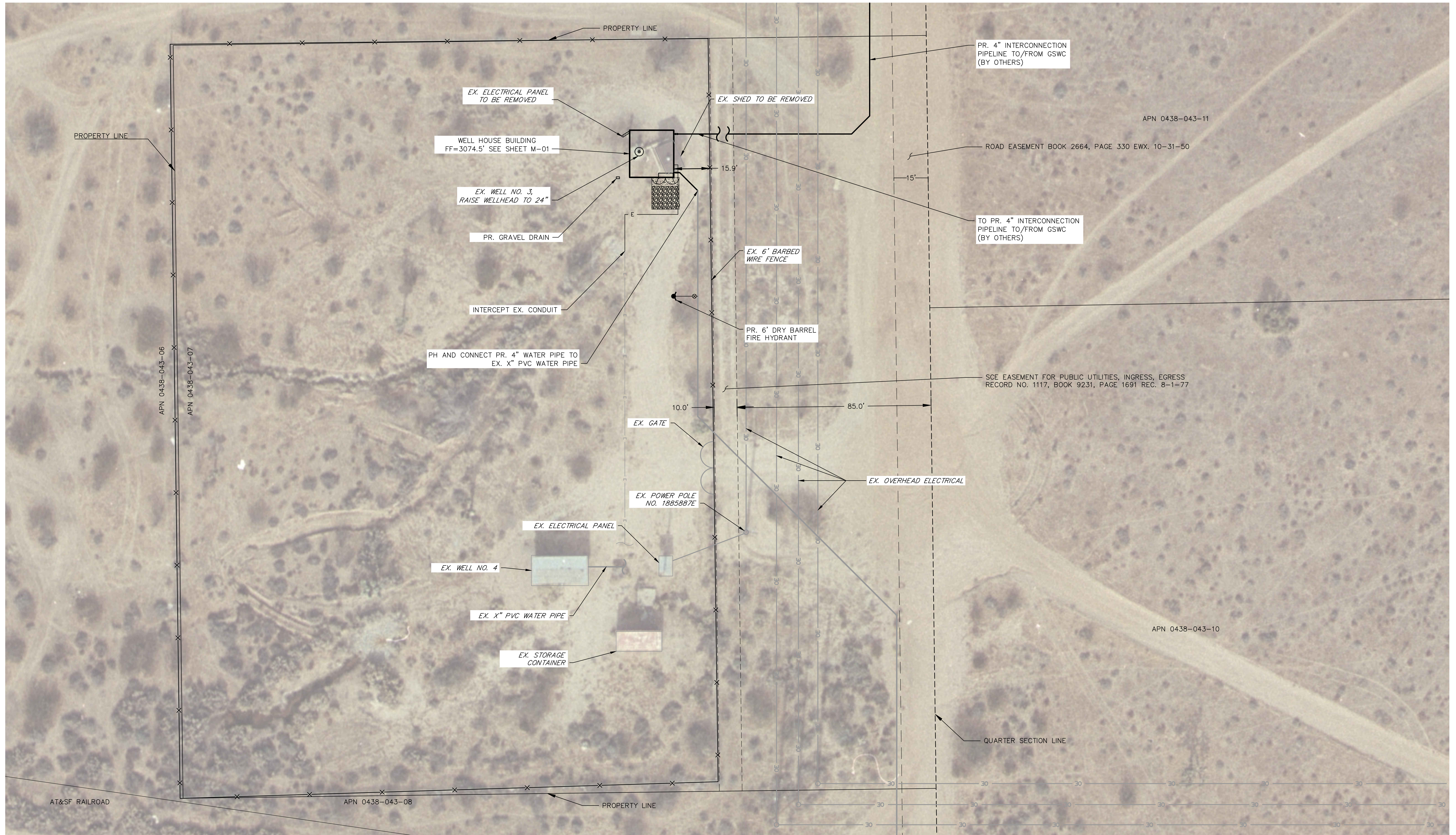
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SAN DIEGO, CA 92128
P: 858.385.0500 WWW.NVS.COM

WELL AND BOOSTER PUMP STATION IMPROVEMENTS
NOTES LEGEND ABBREVIATIONS KEY MAP & SURVEY CONTROL

PREPARED FOR: APPLE VALLEY HEIGHTS COUNTY WATER DISTRICT

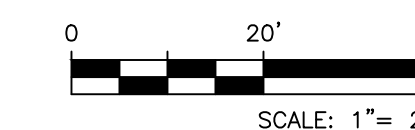
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SHEET NUMBER	G-01
2 OF 4 SHEETS	
SCALE	VERTICAL: 1" = N/A HORIZONTAL: 1" = 400'
JOB NUMBER	226817-0000211.03



GENERAL NOTES

- APPROXIMATE LOCATIONS OF EXISTING UTILITIES SHOWN.



PRELIMINARY
NOT FOR CONSTRUCTION

BROOME WATTS

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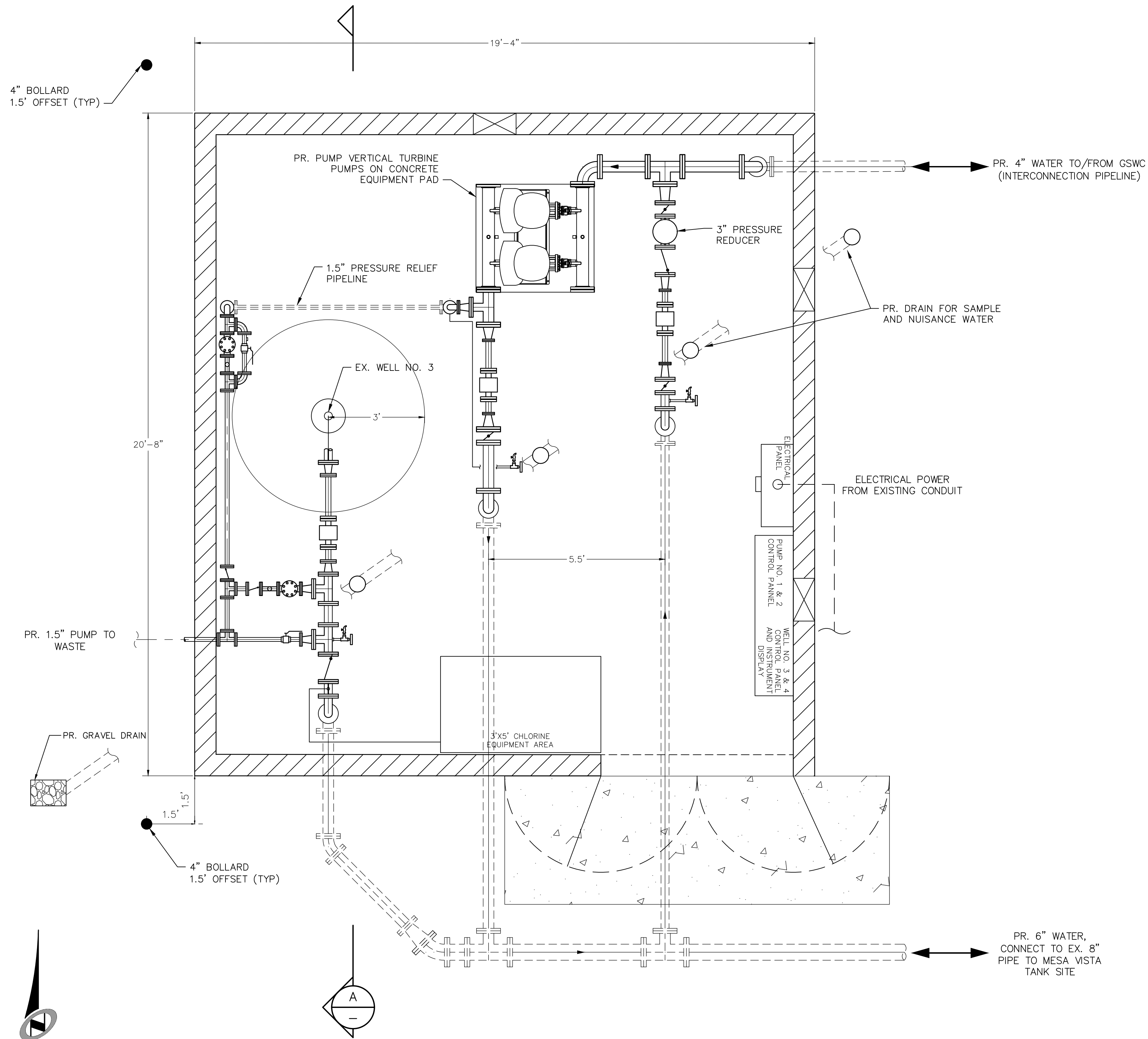
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WELL AND BOOSTER PUMP STATION IMPROVEMENTS
SITE PLAN

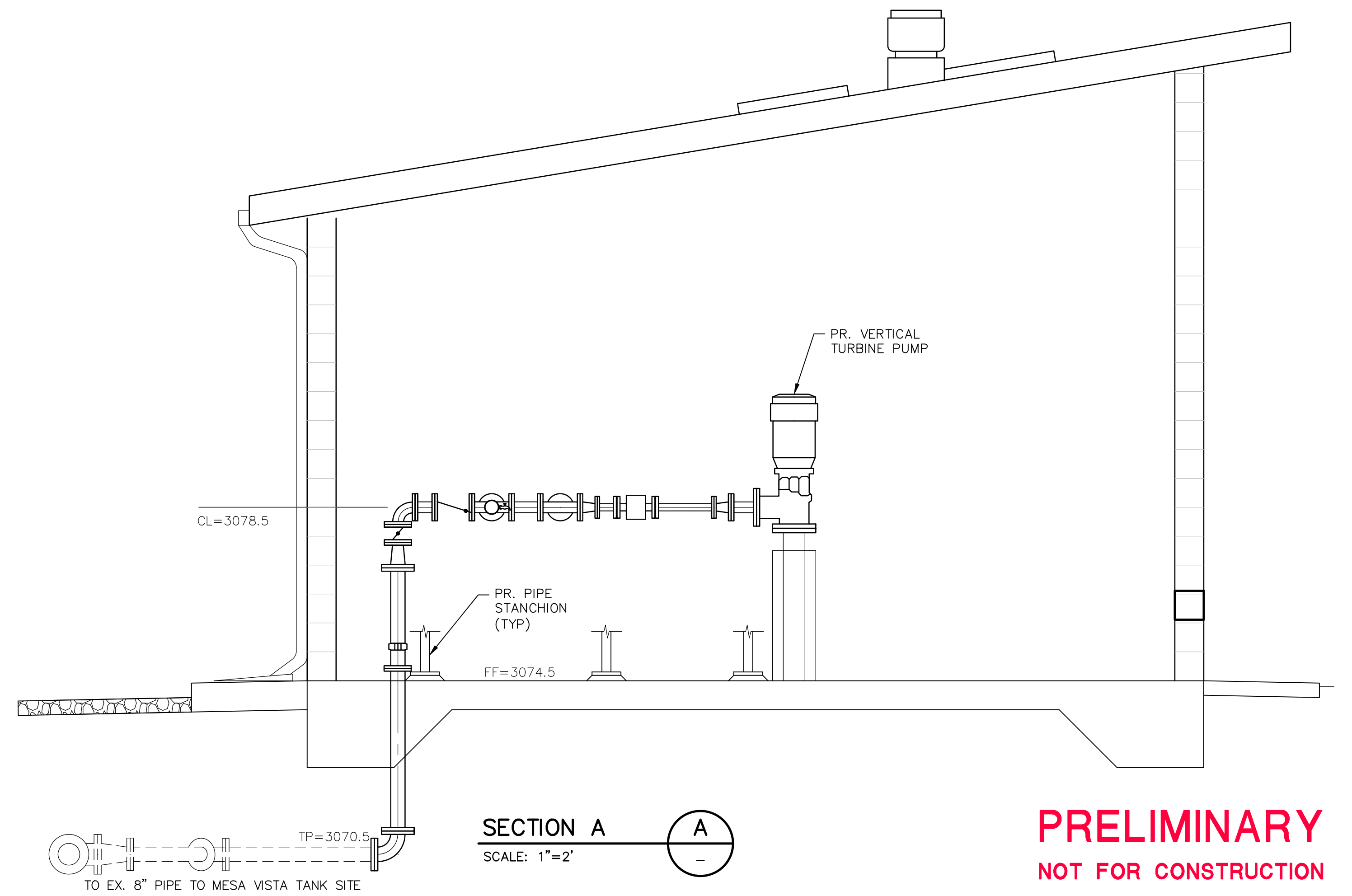
PREPARED FOR: APPLE VALLEY HEIGHTS COUNTY WATER DISTRICT

SHEET NUMBER C-01
3 OF 4 SHEETS
SCALE VERTICAL: 1" = N/A HORIZONTAL: 1" = 20'
JOB NUMBER 226817-0000211.03

DATE SUBMITTED: SEPTEMBER 2019



WELL HOUSE BUILDING BUILDING PLAN VIEW
SCALE: 1"=2'



SECTION A
SCALE: 1"=2'

PRELIMINARY
NOT FOR CONSTRUCTION

DATE: 9/3/19	TIME: 5:34:36 PM	NO.	BY	DATE	REVISIONS:
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DESIGNER: PROJ. MGR:					

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WELL AND BOOSTER PUMP STATION IMPROVEMENTS
WELL HOUSE BUILDING DETAILS

PREPARED FOR: APPLE VALLEY HEIGHTS COUNTY WATER DISTRICT

DATE SUBMITTED: SEPTEMBER 2019

SHEET NUMBER
M-01
4 OF 4 SHEETS
SCALE
VERTICAL: 1"=N/A
HORIZONTAL: 1"=2'
JOB NUMBER
226817-0000211.03