

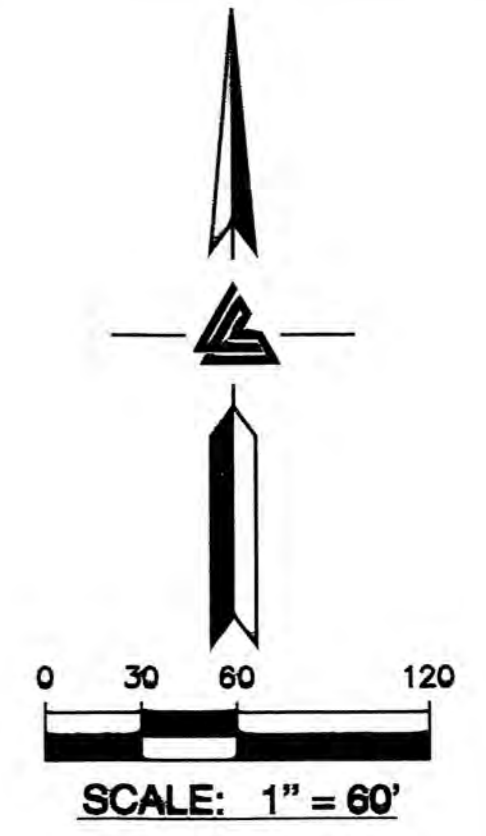


**LEA & BRAZE ENGINEERING, INC.**  
 CIVIL ENGINEERS - LAND SURVEYORS  
 2450 CALIFORNIA STREET  
 2450 CALIFORNIA STREET, SUITE 300  
 HAYWARD, CALIFORNIA 94545  
 (P) (510) 887-0886 (F) (510) 887-3019  
 WWW.LEABRAZE.COM

**NESTLTDOWN RANCH**  
 22420 OLD SANTA CRUZ HIGHWAY  
 LOS GATOS, CALIFORNIA  
 SANTA CLARA COUNTY APN: 558-05-025

**OVERALL SITE UTILITY PLAN**

4	PLAN CHECK	RB
3	PLAN CHECK	RB
2	PLAN CHECK	RB
1	PLAN CHECK	PT
REVISIONS		BY
JOB NO:		2130030
DATE:		9-10-14
SCALE:		1" = 60'
DESIGN BY:		PT/PC
DRAWN BY:		TB
SHEET NO:		<b>C-5.0</b>
		17 OF 39 SHEETS



	Sheet Index
C-5.0 to C-5.5	Civil Overview
E-1 to 4	Site Electrical
P-1 to 4	Gravity Waste System

**COMPLETE BEFORE FINAL INSPECTION**  
 Planning - Pamela Wu  
 call (408) 299-5775  
*Pamela Wu*

**RECEIVED**  
 JUN 05 2015  
 BUILDING INSPECTION DIV.

**AREA OF DETAIL SEE SHEET C-5.4**

**Fire Protection Note:**  
 Fire protection notes are for reference only. The Fire Protections design has been submitted to the Fire Marshal under PC # 14-342

APPROVED FOR ISSUANCE  
 REFER TO ENCROACHMENT AND/OR CONSTRUCTION PERMIT AND PLAN COVER SHEET FOR SPECIAL CONDITIONS AND PERMIT NUMBERS

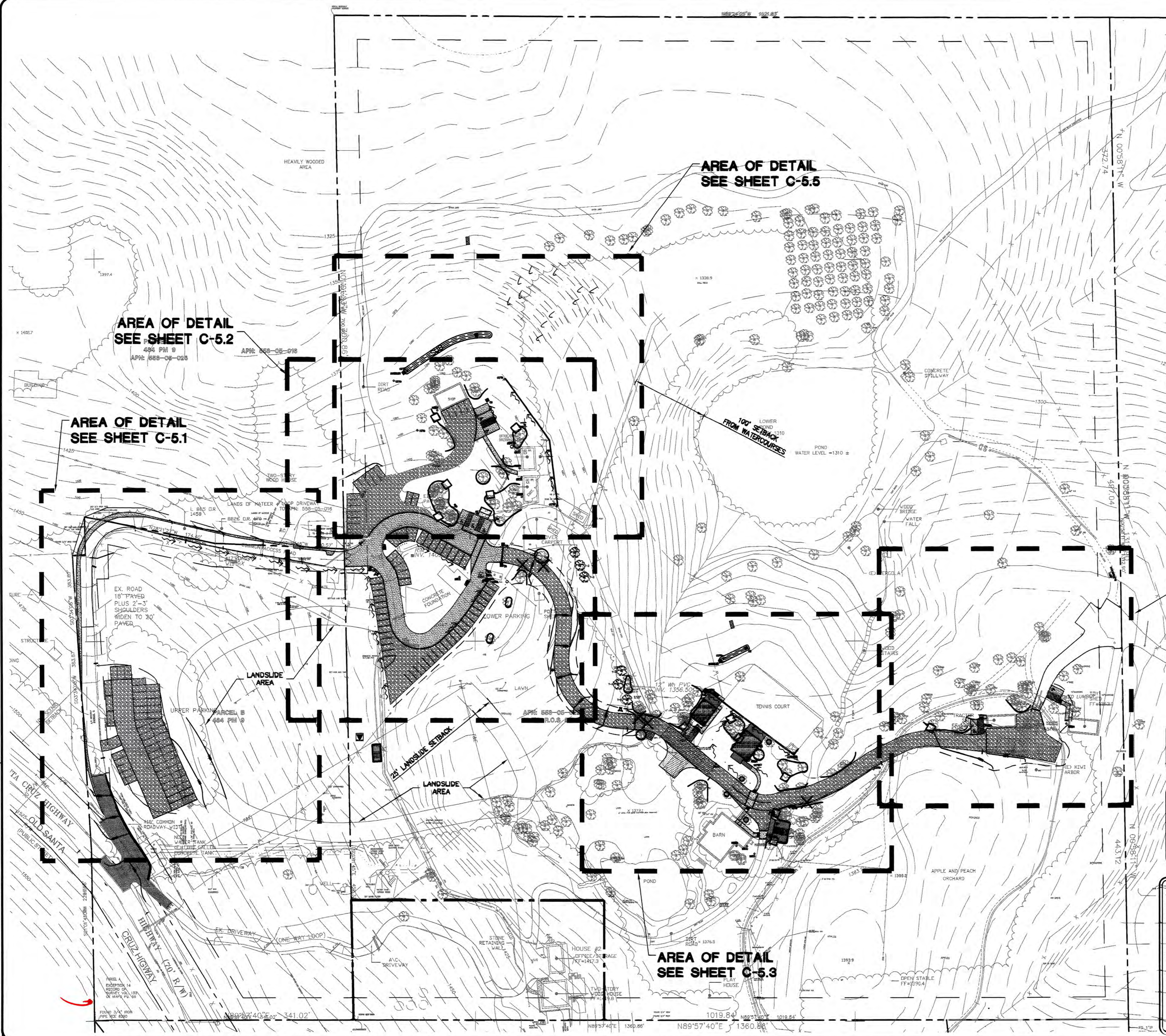
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**RICH HALTENHOFF**  
 (408) 590-8311.



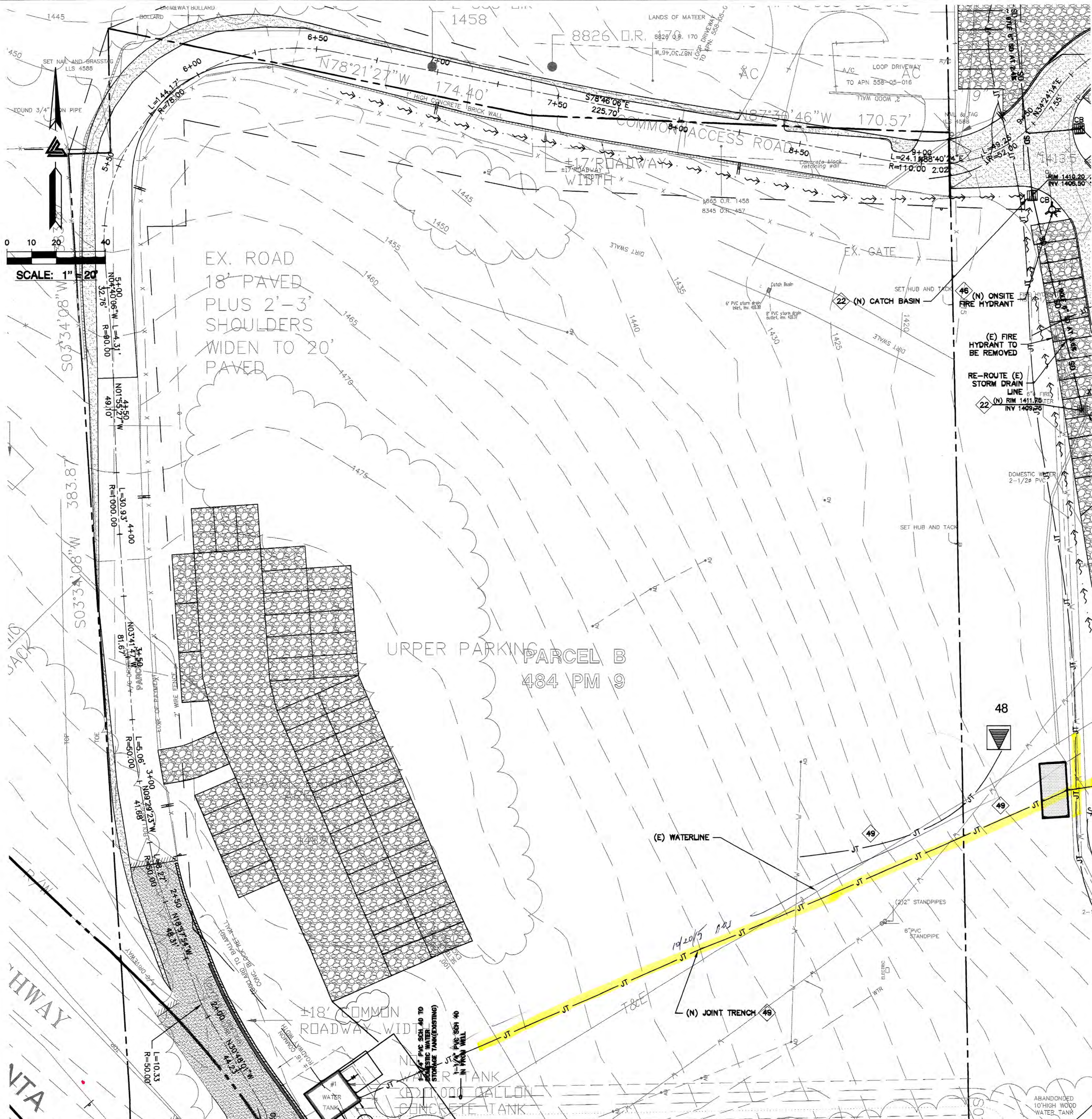
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**POINT OF CONTACT:**  
**ATC ENGINEERING, INC.**  
 (408) 590-8311

**BP 57784**

**PC 39484-3**



PLAN # OF SHEET



- STORM DRAIN**
- 20 INSTALL (N) ON-SITE STORM DRAIN SYSTEM. USE MINIMUM 6" PVC (SDR 35) OR HDPE (ADS N-12 W/ SMOOTH INTERIOR WALLS). MAINTAIN 24" MINIMUM COVER AND SLOPED AT 1% MINIMUM AT ALL TIMES UNLESS OTHERWISE NOTED. PROVIDE CLEAN OUT TO GRADE AT MAJOR CHANGES IN DIRECTION. AVOID USING 90° BENDS AND INSTEAD USE (2) 45° BENDS AND WYE CONNECTIONS.
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SEE SHEET C-5.2

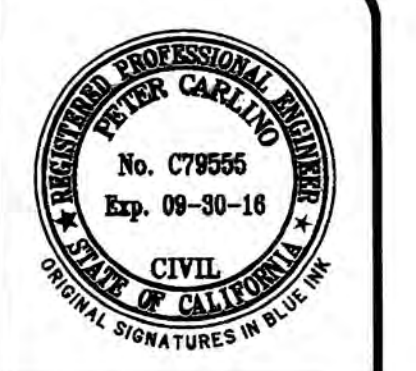
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DAY AREA OFFICE: 3070 RAYBURN BLVD., SUITE 300, DAYTON, CA 94501  
SAN JOSE AREA OFFICE: 3070 RAYBURN BLVD., SUITE 300, SAN JOSE, CA 95128  
ROSEVILLE, CA 95661  
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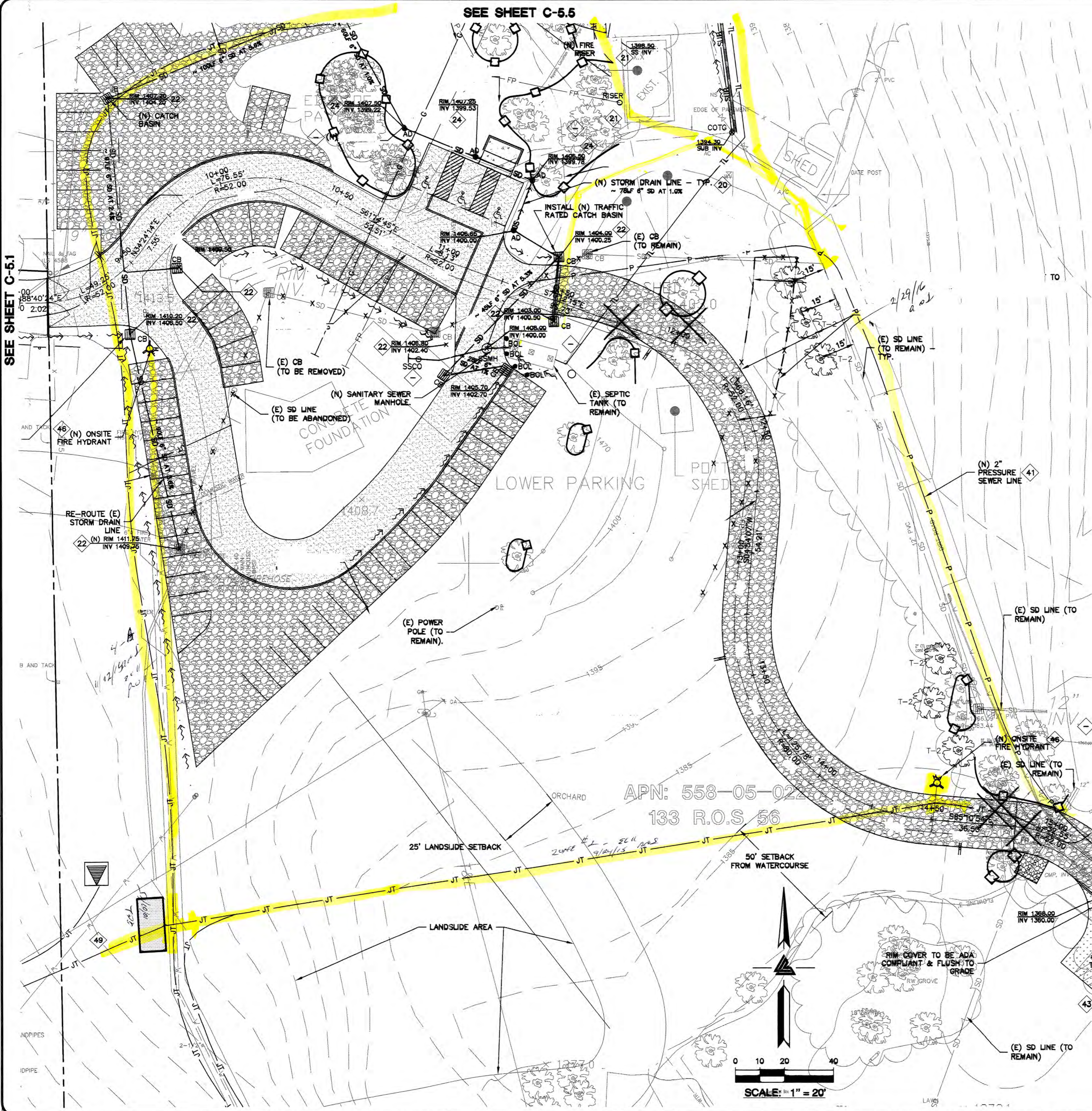
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APN: 558-05-022  
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**AREA OF DETAIL**  
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2	PLAN CHECK	RB
1	PLAN CHECK	PT
REVISIONS		
JOB NO: 2130030		
DATE: 9-10-14		
SCALE: 1" = 20'		
DESIGN BY: PT/PC		
DRAWN BY: TB		
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**C-5.1**  
18 OF 39 SHEETS

PLAN # OF SHEET



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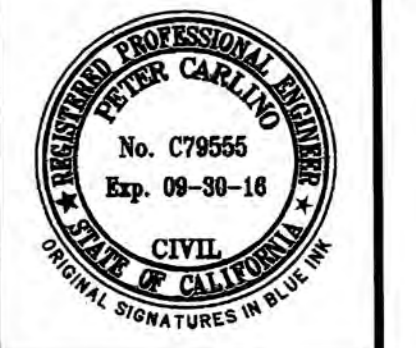
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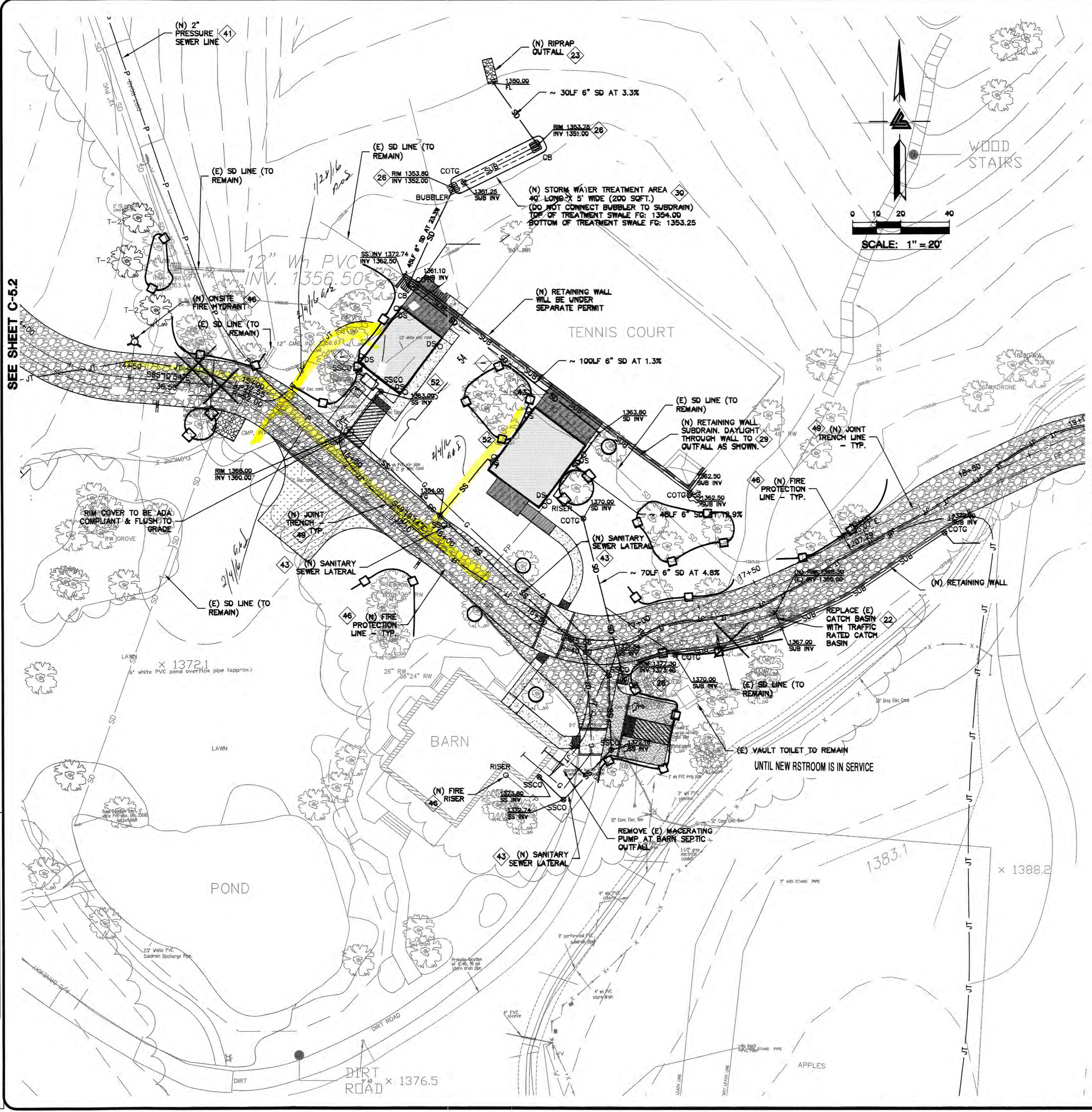
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**LOS GATOS, CALIFORNIA**  
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 APN: 558-05-022  
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**AREA OF DETAIL**  
**UTILITY PLAN**

4	PLAN CHECK	05-07-15	RB
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1	PLAN CHECK	11-31-14	PT
REVISIONS		BY	

JOB NO: 2130030  
 DATE: 9-10-14  
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 DESIGN BY: PT/PC  
 DRAWN BY: TB  
 SHEET NO:

**C-5.2**  
 19 OF 39 SHEETS



**STORM DRAIN**

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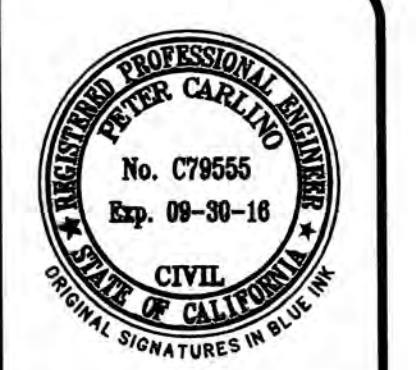
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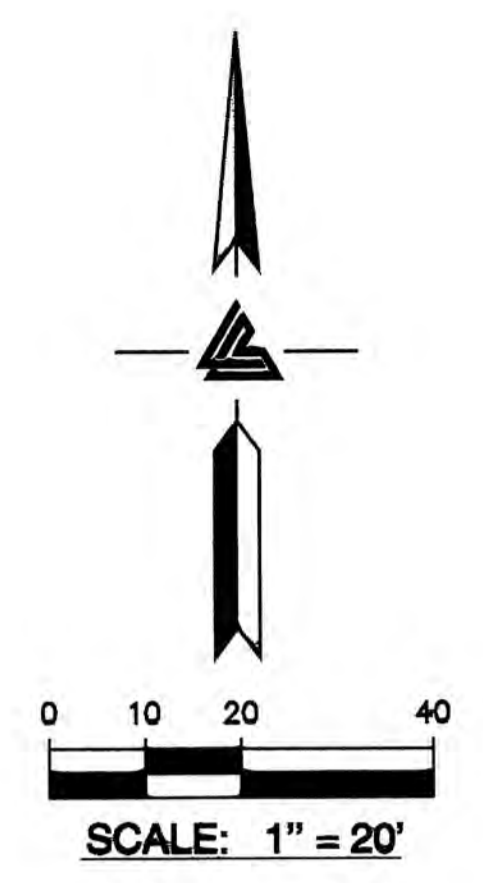
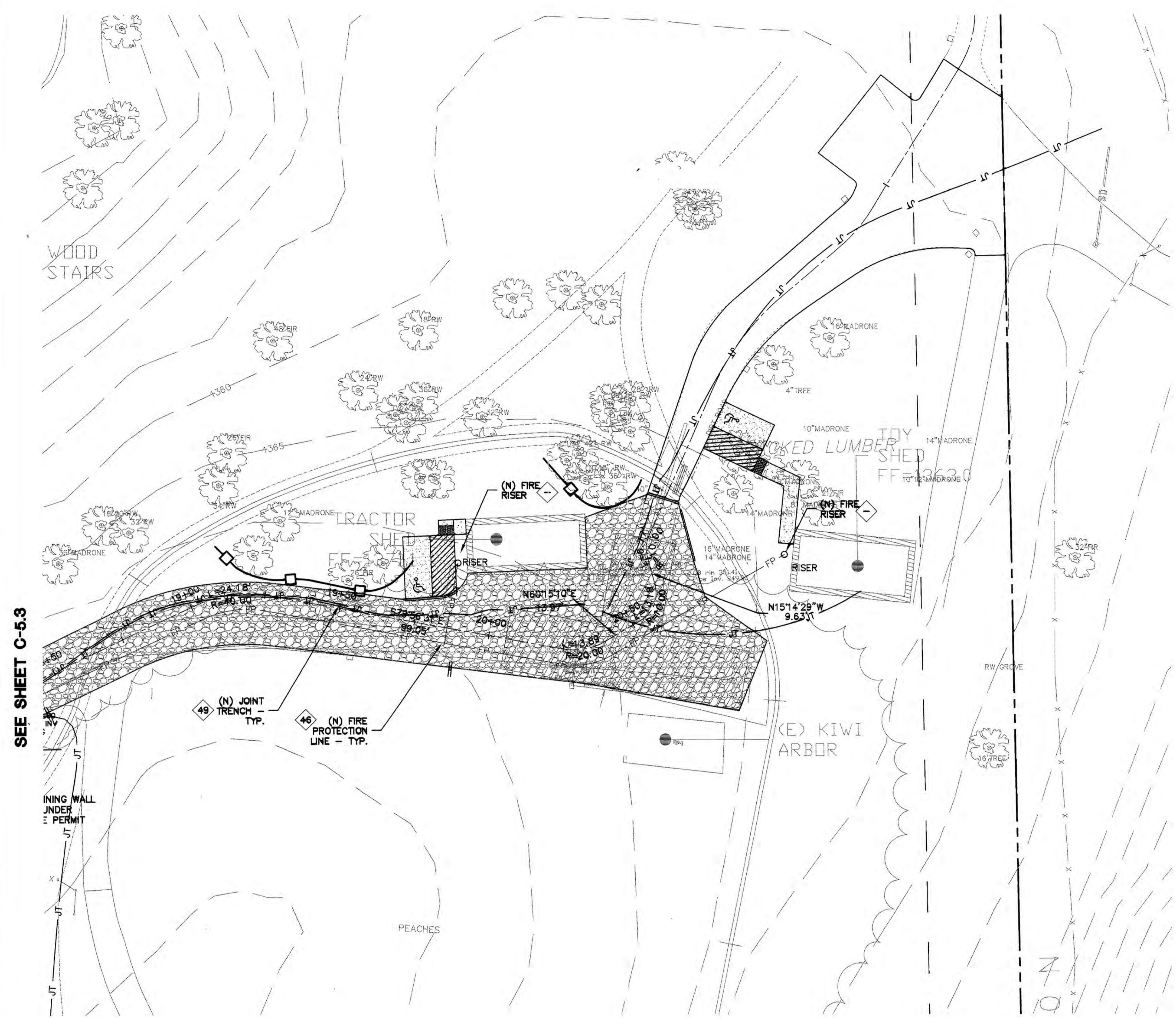
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4	PLAN CHECK	RB
05-07-15		
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10-8-14		
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	SCALE:	1" = 20'
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	DRAWN BY:	TB
	SHEET NO:	

**C-5.3**  
20 OF 39 SHEETS



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- 41 (N) SEWER PRESSURE LINE. REFER TO THE SEPTIC PLANS BY ATC FOR FINAL PIPE SIZING REQUIREMENTS.
- 42 LEFT BLANK
- 43 TYPICAL, INSTALL (N) SANITARY SEWER LATERAL USE 4" PVC (SDR-26) SLOPED AT 2% MINIMUM. CONNECT TO CLEANOUT(S) AS SHOWN. SET CLEANOUT(S) TO GRADE AT BUILDING(S) AND AT MAJOR CHANGES IN DIRECTION, AS SHOWN. CONNECT SS TO (N) SEPTIC TANKS AS SHOWN PER DISTRICT STANDARDS. SEE PLANS BY WYEAST ENGINEERING FOR ADDITIONAL SEWER DESIGN.
- 44 LEFT BLANK
- 45 LEFT BLANK
- 46 (N) ONSITE FIRE HYDRANT - TYP. SEE PLANS BY WYEAST ENGINEERING FOR ADDITIONAL SEWER DESIGN.
- 47 LEFT BLANK
- 48 (N) PAD MOUNTED TRANSFORMER. FINAL LOCATION TO BE COORDINATED WITH PG&E. REFER TO ELECTRICAL PLANS FOR DETAILS
- 49 INSTALL (N) JOINT TRENCH FOR SERVICES INCLUDING CATV & ELECTRIC FROM NEAREST POINT OF CONNECTION. SEE DETAIL ON SHEET C-7.0 FOR SCHEMATIC LAYOUT OF JOINT TRENCH. DESIGN BY ELECTRICAL.
- 50 LEFT BLANK
- 51 LEFT BLANK
- 52 INSTALL (N) SANITARY SEWER CLEANOUT (SSCO) TYPICAL SEE PLANS BY WYEAST ENGINEERING FOR ADDITIONAL SEWER DESIGN.
- 53 LEFT BLANK
- 54 (N) ON-SITE PROPANE TANKS. SEE BLDG. PLANS FOR DETAILS.
- 55 LEFT BLANK

**DEMOLITION**

- 60 DEMOLISH (E) IMPROVEMENTS AS NECESSARY TO ACCOMMODATE (N) CONSTRUCTION. NO DEMOLITION SHALL COMMENCE WITHOUT REQUIRED DEMOLITION PERMITS.
- 61 REMOVE (E) TREE. CONTRACTOR SHALL OBTAIN THE PROPER TREE REMOVAL PERMITS AS REQUIRED.

**FOR REFERENCE ONLY**

**NOTE:**  
**FOR CONSTRUCTION STAKING**  
**SCHEDULING OR QUOTATIONS**  
**PLEASE CONTACT**  
**RICH HALTENHOFF**  
**(408)590-8311.**

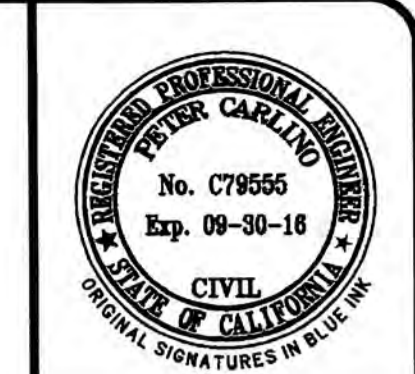


**INSPECTIONS REQUIRED**  
**ATC, ENGINEERING, INC. REQUIRES TO INSPECT ALL STORM DRAINAGE AS IT IS INSTALLED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT ATC ENGINEERING, INC. PRIOR TO START OF CONSTRUCTION TO SET UP A PRE-CONSTRUCTION MEETING, AND TO CALL AT LEAST 48 HOURS IN ADVANCE OF ANY INSPECTIONS. PIPES ARE TO REMAIN UNCOVERED UNTIL AN INSPECTION PERFORMED BY ATC ENGINEERING, INC. OCCURS.**  
**POINT OF CONTACT:**  
**ATC ENGINEERING, INC.**  
**(408)590-8311**

APPROVED FOR ISSUANCE  
 REFER TO ENCROACHMENT AND/OR  
 CONSTRUCTION PERMIT AND PLAN COVER  
 SHEET FOR SPECIAL  
 CONDITIONS AND PERMIT NUMBERS

SEE SHEET C-5.3

PLAN # OF SHEET



**LEA & BRAZE ENGINEERING, INC.**  
 CIVIL ENGINEERS • LAND SURVEYORS  
 SACRAMENTO REGION  
 3005 DOUGLAS BLVD # 300  
 SACRAMENTO, CA 95833  
 (916) 887-4086 (F) (916) 887-3338  
 BAY AREA REGION  
 2485 INDUSTRIAL PKWY WEST  
 SAN FRANCISCO, CA 94133  
 (415) 887-4086 (F) (415) 887-3019  
 WWW.LEABRAZE.COM

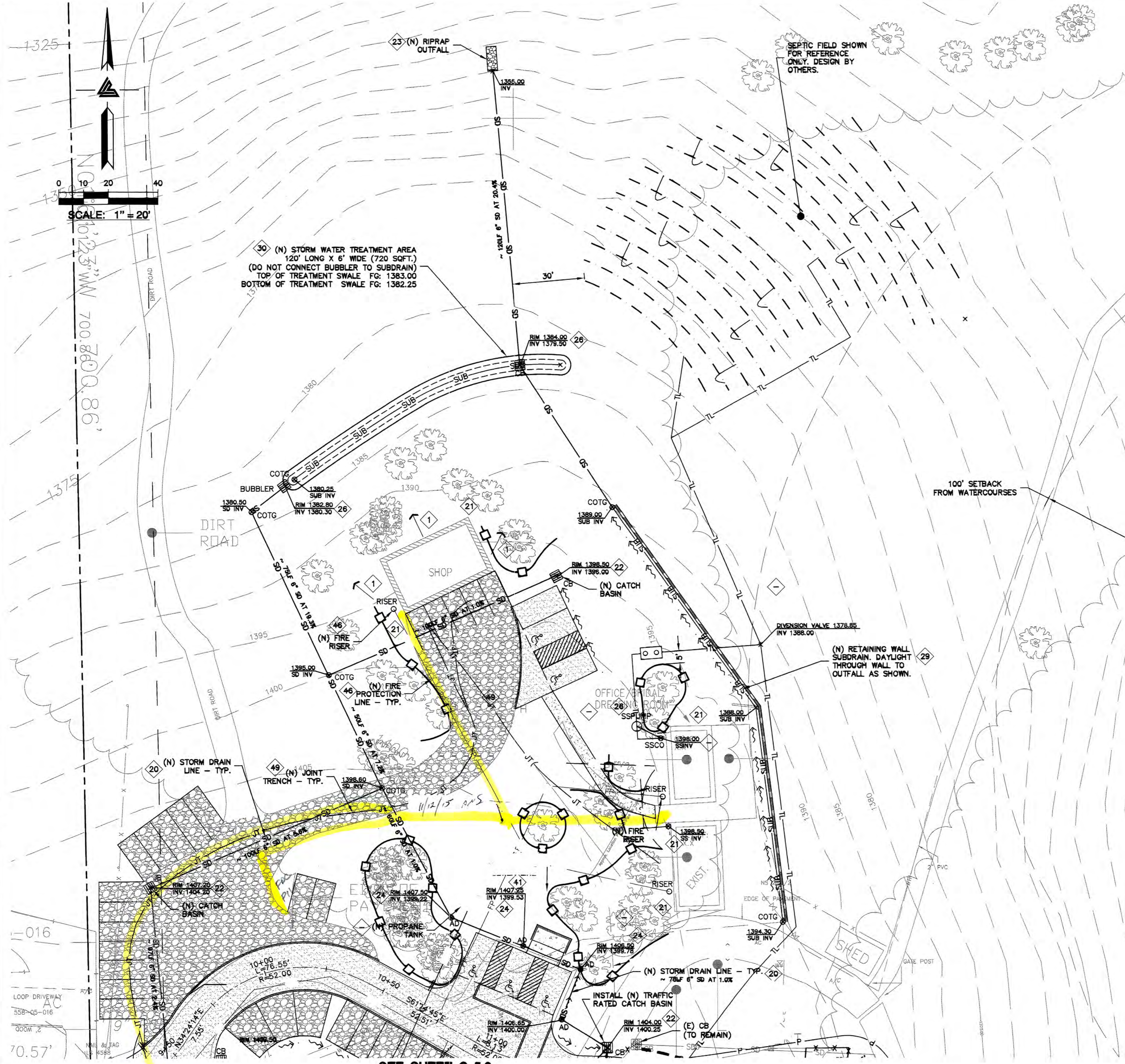
**NESTLDOWN RANCH**  
**22420 OLD SANTA CRUZ HIGHWAY**  
**LOS GATOS, CALIFORNIA**  
 SANTA CLARA COUNTY  
 APN: 558-05-022  
 APN: 558-05-025

**AREA OF DETAIL**  
**UTILITY PLAN**

4	PLAN CHECK	05-07-15	RB
3	PLAN CHECK	12-11-14	RB
2	PLAN CHECK	10-09-14	RB
1	PLAN CHECK	11-31-14	PT
REVISIONS		BY	

JOB NO: 2130030  
 DATE: 9-10-14  
 SCALE: 1" = 20'  
 DESIGN BY: PT/PC  
 DRAWN BY: TB  
 SHEET NO:

**C-5.4**  
 21 OF 39 SHEETS



- STORM DRAIN**
- 20 INSTALL (N) ON-SITE STORM DRAIN SYSTEM. USE MINIMUM 6" PVC (SDR 35) OR HDPE (ADS N-12 W/ SMOOTH INTERIOR WALLS). MAINTAIN 24" MINIMUM COVER AND SLOPED AT 1% MINIMUM AT ALL TIMES UNLESS OTHERWISE NOTED. PROVIDE CLEAN OUT TO GRADE AT MAJOR CHANGES IN DIRECTION. AVOID USING 90° BENDS AND INSTEAD USE (2) 45° BENDS AND WYE CONNECTIONS.
  - 21 DIRECT DOWNSPOUTS TO 24" LONG PRECAST CONCRETE SPLASHBLOCKS OR OTHER HARD SURFACE. DIRECT AWAY FROM ANY STRUCTURE AND TOWARDS POSITIVE DRAINAGE.
  - 22 (N) TRAFFIC RATED CHRISTY U-21 CATCH BASIN. SEE DETAIL 6 ON SHEET C-7.1.
  - 23 INSTALL (N) RIP-RAP ENERGY DISSIPATER - 6"-12" DIAMETER ROCK.
  - 24 (N) "CHRISTY V-1" AREA DRAINS. CONNECT TO ON-SITE STORM DRAIN SYSTEM. SEE DETAIL 1 ON C-7.1.
  - 25 (N) 4" DIAMETER BRASS AREA DRAIN (AD) IN HARDSCAPE AREAS OR BRASS ATRIUM GRATE (NDS PART 70C) IN LANDSCAPE OR PLANTER AREAS DO NOT USE PLASTIC GRATES. SEE DETAIL 1 ON C-7.1.
  - 26 (N) "CHRISTY V-24" SILT BASIN WITH GRAVEL BOTTOM. SEE DETAIL 2 SHEET C-7.1.
  - 27 (N) 4" PVC (SDR-35 OR BETTER) RETAINING WALL SUBDRAIN.
  - 28 (N) STORM DRAIN MANHOLE.
  - INSTALL (N) SUBDRAIN. USE PERFORATED 4" PVC (SDR-35) WITH HOLES DOWN AND SLOPED AT 1% MINIMUM SURROUND WITH 3/4" DRAIN ROCK WRAPPED IN FILTER FABRIC (MIRAFI 140N). MIRADRAIN OR OTHER LEA & BRAZE PREAPPROVED DRAINAGE SYSTEM MAY ALSO BE USED. AVOID USING 90° BENDS AND INSTEAD USE (2) 45° BENDS AND WYE CONNECTIONS. PROVIDE CLEANOUT TO GRADE AT MAJOR CHANGES IN DIRECTION AND AT 100' MAXIMUM INTERVALS. SUBDRAIN SHALL REMAIN A DEDICATED SEPARATE SYSTEM UNTIL IT CONNECTS TO STORM DRAIN SYSTEM OR OUTFALL AS SHOWN.
  - 29
  - 30 INSTALL (N) BIO-RETENTION TREATMENT AREAS TO CONFORM TO C.3 STORM WATER TREATMENT REQUIREMENTS. SEE SHEET C-6.2 FOR DETAIL.
- UTILITIES**
- 40 LEFT BLANK
  - 41 (N) SEWER PRESSURE LINE. REFER TO THE SEPTIC PLANS BY ATC FOR FINAL PIPE SIZING REQUIREMENTS.
  - 42 LEFT BLANK
  - 43 TYPICAL INSTALL (N) SANITARY SEWER LATERAL USE 4" PVC (SDR-26) SLOPED AT 2% MINIMUM. CONNECT TO CLEANOUT(S) AS SHOWN. SET CLEANOUT(S) TO GRADE AT BUILDING(S) AND AT MAJOR CHANGES IN DIRECTION, AS SHOWN. CONNECT SS TO (N) SEPTIC TANKS AS SHOWN PER DISTRICT STANDARDS. SEE PLANS BY WYEAST ENGINEERING FOR ADDITIONAL SEWER DESIGN.
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FOR REFERENCE ONLY

APPROVED FOR ISSUANCE  
REFER TO ENCROACHMENT AND/OR  
CONSTRUCTION PERMIT AND PLAN COVER  
SHEET FOR SPECIAL  
CONDITIONS AND PERMIT NUMBERS

**NOTE:**  
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PLEASE CONTACT  
RICH HALTENHOFF  
(408)590-8311.



**INSPECTIONS REQUIRED**  
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**POINT OF CONTACT:**  
ATC ENGINEERING, INC.  
(408)590-8311

\* BUILDING PAD NOTE:  
ADJUST PAD LEVEL AS  
REQUIRED. REFER TO  
STRUCTURAL PLANS  
FOR SLAB SECTION OR  
CRAWL SPACE DEPTH  
TO ESTABLISH PAD  
LEVEL.



**LEA & BRAZE ENGINEERING, INC.**  
CIVIL ENGINEERS • LAND SURVEYORS  
SACRAMENTO REGION  
BAY AREA REGION  
10123 W W 700.800.86  
SANTA CLARA COUNTY  
APN: 558-05-022  
APN: 558-05-025

**NESTLDOWN RANCH**  
22420 OLD SANTA CRUZ HIGHWAY  
LOS GATOS, CALIFORNIA

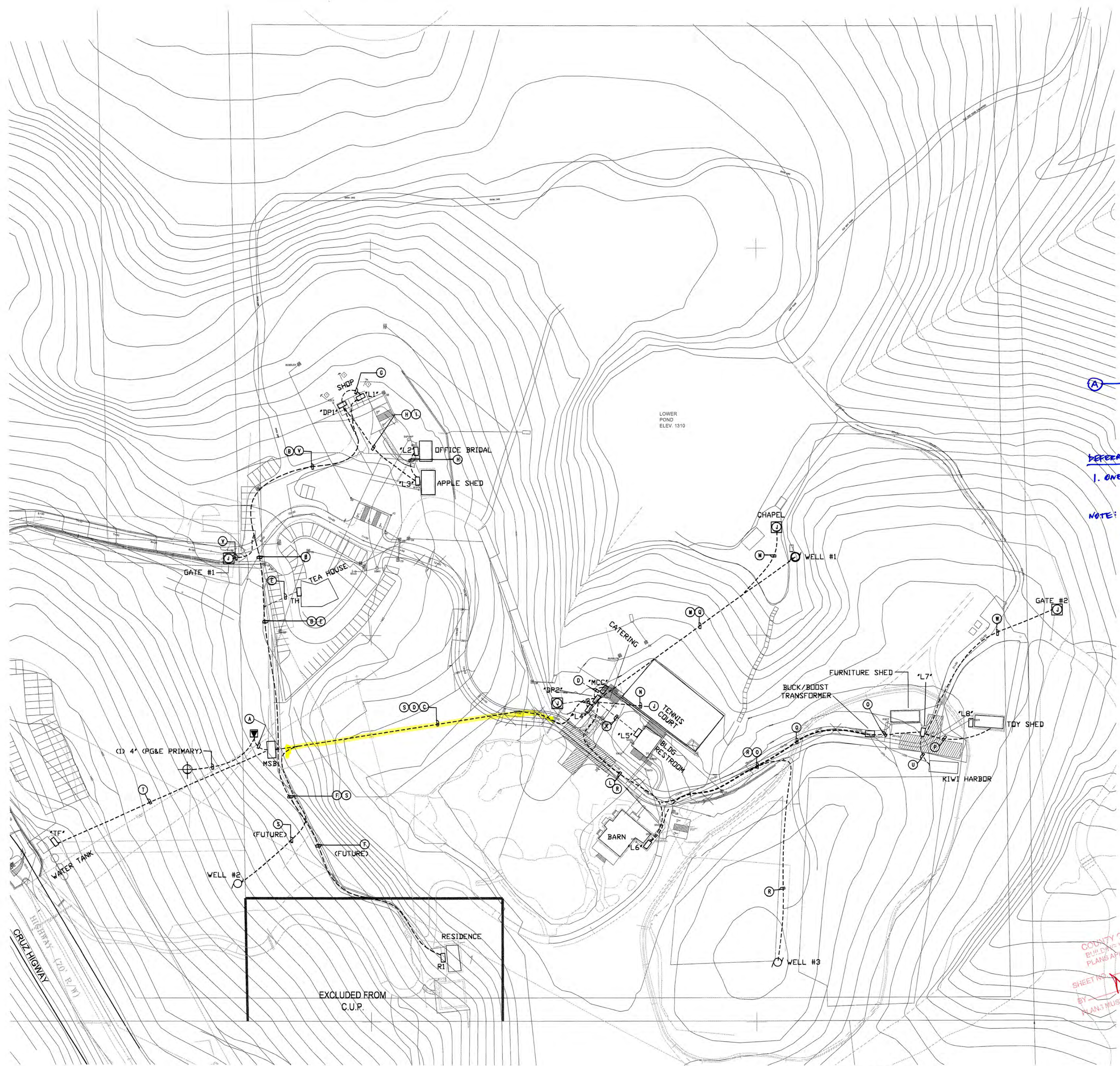
**AREA OF DETAIL**  
**UTILITY PLAN**

PLAN CHECK	RB
PLAN CHECK	RB
PLAN CHECK	RB
PLAN CHECK	PT
REVISIONS	BY
JOB NO:	2130030
DATE:	9-10-14
SCALE:	1" = 20'
DESIGN BY:	PT/PC
DRAWN BY:	TB
SHEET NO:	

**C-5.5**  
22 OF 39 SHEETS

PLAN #  
SHEET

SEE SHEET C-5.2

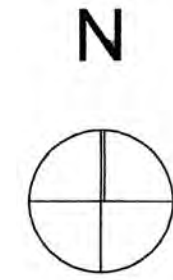


(A) - FEEDER TAG, SEE SHEET E.3

DEFERRED ITEMS:  
 1. ONE LINE DIAGRAM - WIRING.

NOTE: ELECTRICAL LOADING FOR CONDUIT SIZING ONLY.

COUNTY OF SAN JOSE  
 BUILDING DEPARTMENT  
 PLANS APPROVED FOR PERMIT  
 SHEET NO. OF 4 SHEETS  
 BY: [Signature] DATE: 6/11/15  
 PLANS MUST BE ON JOB FOR INSPECTIONS



1 **SITE POWER PLAN**  
 SCALE: 1/64" = 1'-0"

PROJECT NAME:

BCC JOB NO:

PROJ:#

REV. NO.	DESCRIPTION	DATE

SUBMITTAL NO:

DRAWN BY: DATE: 05/27/2015

CHECKED BY: DATE:

SHEET NO: **E.1**

PROJECT NAME:

SHEET NAME:

BCC JOB NO:

PROJ:#

REV. NO.	DESCRIPTION	DATE

SUBMITTAL NO:

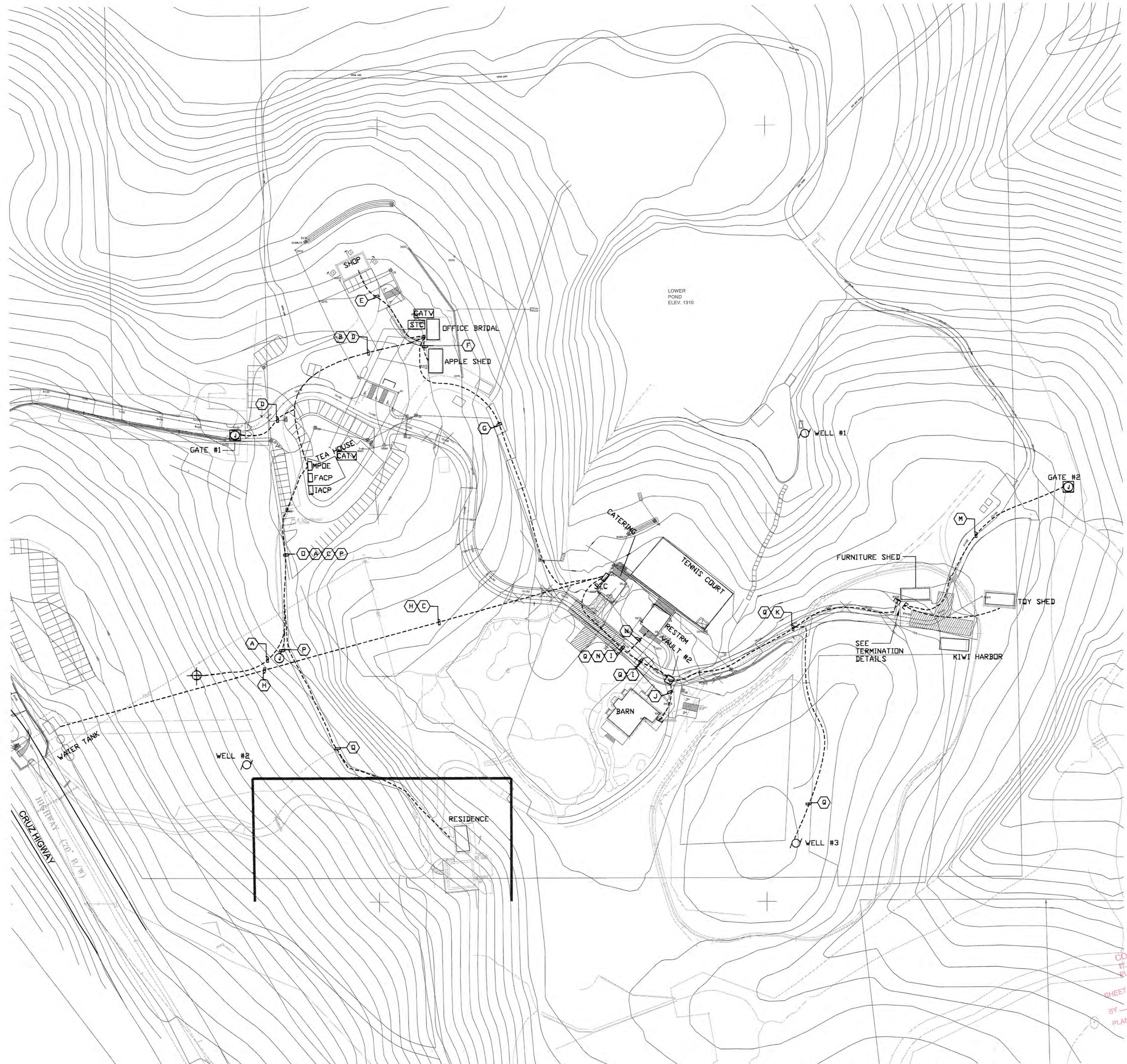
DRAWN BY: DATE: 05/27/2015

CHECKED BY: DATE:

SHEET NO:

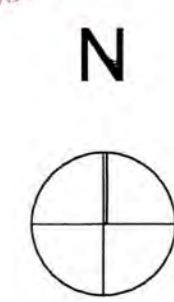
**E.2**

SHEET NO.



A - CONDUIT TAG  
 SEE SHEET E.4

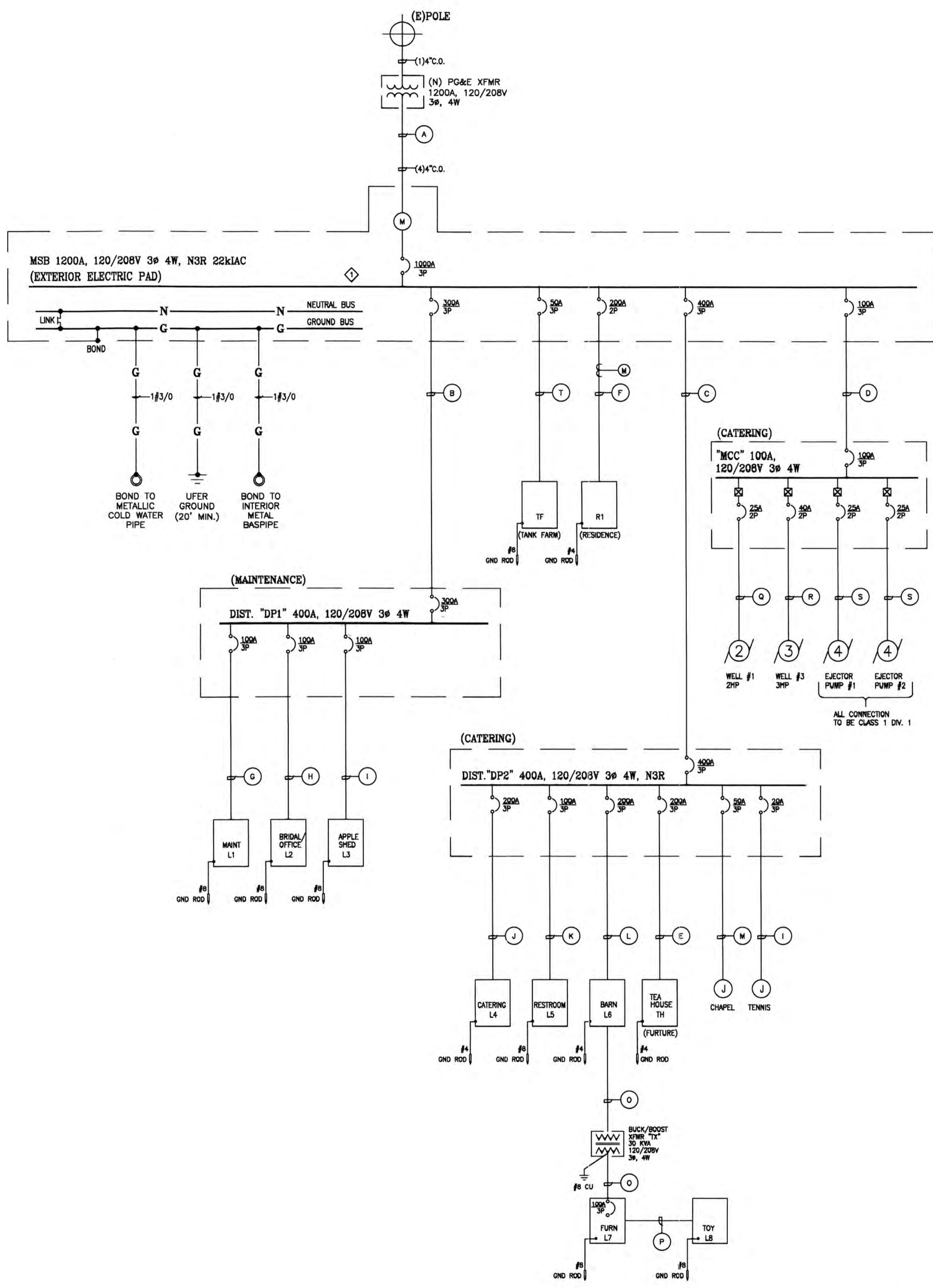
COUNTY OF SANTA CLARA  
 PLANS APPROVED FOR PERMIT  
 SHEET NO. 2 OF 2  
 DATE: 05/27/2015  
 PLANS MUST BE ON JOB FOR INSP.



**1** SITE LOW VOLTAGE PLAN  
 SCALE: 1/64" = 1'-0"



REV. NO.	DESCRIPTION	DATE



Subfeeds	Feeder Tap	Panel/Equipment	Panel/Equipment Location	Source of Power	Bus	Breaker/Feeder	Estimated Connected Load	Actual Connected Load	80% of rated breaker capacity	Feeder Length (ft)	Conductor Size (Cu)	Conduit Size*	Voltage Drop**	Notes
A	MSB	pad	PG&E xformer	1200	1000	750			800	35	by PG&E	(4)4"	n/a	available kAIC to be confirmed by PG&E
B	DP1	Maintenance	MSB	400	300	210			240	560	(2)sets, (4)500 (1)2	(2)4"	2.7	
C	DP2	Catering	MSB	400	400	305			320	465	(2)sets, (4)500 (1)2	(2)4"	2.9	
D	MCC	Catering	MSB	100	100	55			80	465	(4)3/0 (1)6	2"	2.7	
E	TH	Tea House	MSB	225	200	80			160	260	(4)1/0 (1)6	2"	4.4	
F	R1	Residence	MSB	225	200	80			160	360	(3)1/0 (1)6	2"	4.2	future connection, 220/1 feed
T	TF	Tank Farm	MSB	100	50	20			40	330	(4)4 (1)8	2"	3.4	
G	L1	Maintenance	DP1	100	100	80			80	25	(4)2 (1)8	1.5"	3.2	VD combined with VD at dist panel DP1
H	L2	Bridal/Office	DP1	100	100	50			80	200	(4)1 (1)6	2"	4.8	VD combined with VD at dist panel DP1
I	L3	Apple Shed	DP1	100	100	50			80	200	(4) (1)6	2"	4.8	VD combined with VD at dist panel DP1
J	L4	Catering	DP-2	225	200	100			160	25	(4)3/0 (1)6	2"	3.2	VD combined with VD at dist panel DP2
K	LS	Restroom	DP-2	100	100	50			80	200	(4)1 (1)6	2"	5.0	VD combined with VD at dist panel DP2
L	L6	Barn	DP-2	225	200	160			160	270	(4)350 (1)4	3"	4.9	VD combined with VD at dist panel DP2
M	J-box	Chapel (lake)	DP-1	n/a	60	50			40	400	(4)1 (1)6	2"	5.0	VD combined with VD at dist panel DP2
N	J-box	Tennis Court	DP-2	n/a	20	15			16	100	(4)10 (1)12	1.5"	4.5	VD combined with VD at dist panel DP2
O	L7	Furniture Shed	L6	100	100	80			80	380	(4)250 (1)4	3"	3.2	back/boost transformer on line side
P	L8	Toy Shed	L7	60	60	20			48	120	(3)4 (1)8	2"	4.7	VD combined with VD at panel L7
Q	Well #1	Chapel	MCC	230/1	2 hp	10			10	360	(2)6 (1)10	2"	4.2	VD combined with VD at MCC
R	Well #3	Orchard	MCC	230/3	3 hp	12			12	700	(3)3 (1)8	2"	4.2	VD combined with VD at MCC
S	Well #2	Residence	MCC	230/1	2 hp	10			10	690	(2)4 (1)10	2"	4.5	future connection, VD combined with VD at MCC
V	Gate 1	Gate 1	L1	120/1	0.25 hp	6			10	280	(3)6 (1)10	1.5"	5.5	VD combined with VD at panel L1
W	Gate 2	Gate 2	L7	120/1	0.25 hp	6			10	280	(3)6 (1)10	1.5"	5.5	VD combined with VD at panel L7
U	L9 (alt)	Kiwi Arbor	L7	60	40	20			32	100	(3)6 (1)10	1.5"	1.5	208/1
--	Eject Pump #1	Barn	MCC	230/3	4 hp	12			15	190	(3)8 (1)10	1.5"	4.3	VD combined with VD at MCC
--	Eject Pump #2	Barn	MCC	230/3	4 hp	12			15	190	(3)8 (1)10	1.5"	4.3	VD combined with VD at MCC

**SHEET NOTES:**

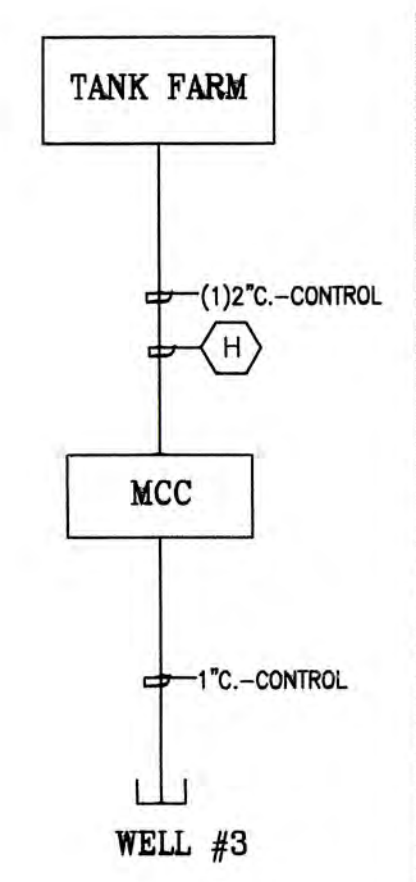
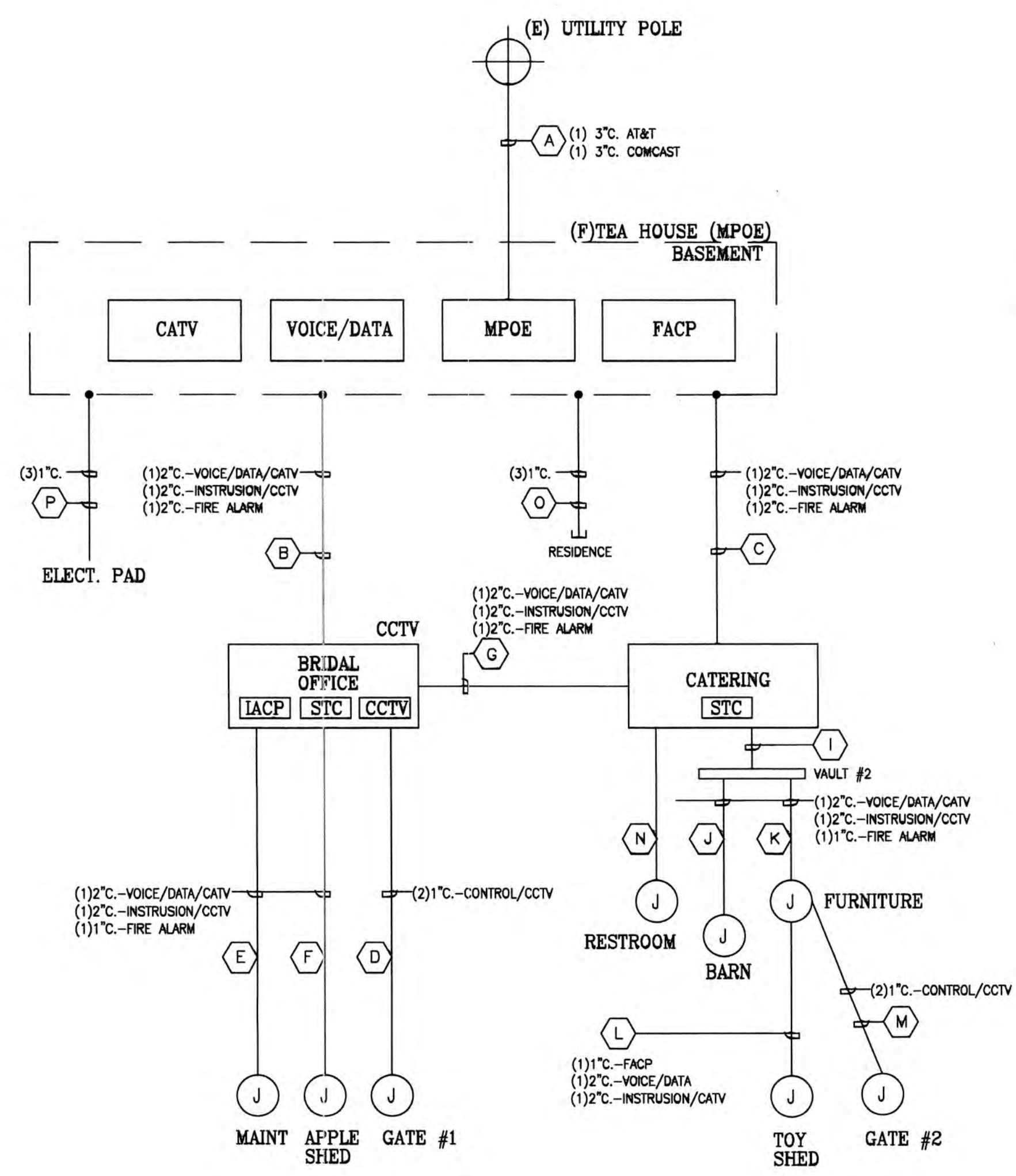
◇ TO BE CONFIRMED WITH PG&E ENGINEERING PACKAGE.

**GENERAL NOTES:**

1. PROVIDE GROUNDING PER NEC 2013
2. PROVIDE GROUND ROD AT ALL BUILDING PANELS

COUNTY OF SANTA CLARA  
BUILDING DEPARTMENT  
PLANS APPROVED FOR PERMIT  
SHEET NO. 3 OF 3  
DATE 05/27/2015  
PLANS MUST BE IN JOB FOR INSPECTIONS

**1** SINGLE LINE DIAGRAM  
SCALE: NTS



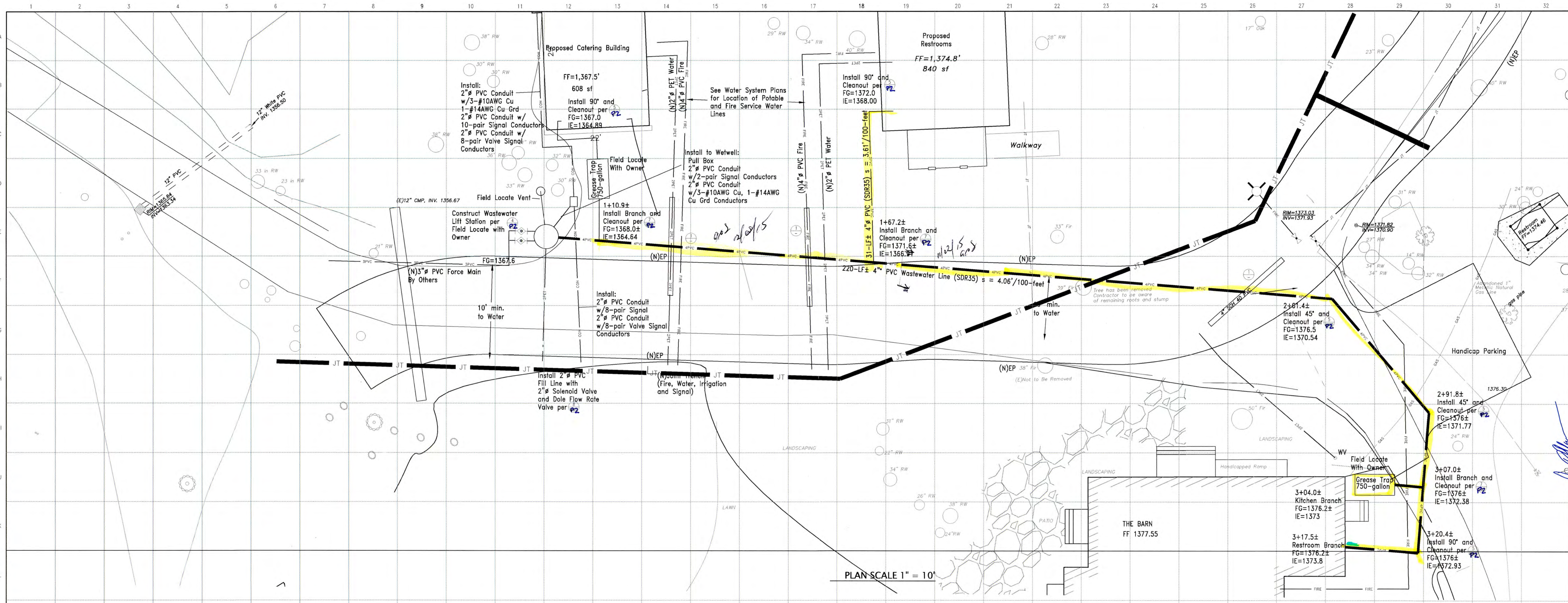
Tag	Origin	Destination	Voice/Data/CATV	CATV	Security/CCTV	Fire Alarm	Control	Notes
A	(e) utility pole	Tea House (MPOE)	3"	3"				incoming phone, internet and CATV service
B	Tea House (MPOE)	Bridal/Office	2"		2"	2"		
C	Tea House (MPOE)	Catering	2"		2"	2"		
D	Bridal/Office	Gate #1			1"		1"	
E	Bridal/Office	Maintenance	2"		1"	1"		
F	Bridal/Office	Apple Shed	2"		1"	1"		
G	Bridal/Office	Catering	2"		2"	2"		
H	MCC	Tank Farm					2"	
I	Catering	Vault #2	2"		2"	2"		
J	Vault #2	Barn	2"		1"	1"		
K	Vault #2	Furniture Shed	2"		1"	1"		
L	Furniture Shed	Toy Shed	2"		1"	1"		
M	Furniture Shed	Gate #2			1"		1"	
N	Catering	Restroom	2"		1"	1"		
O	Tea House (MPOE)	Residence	1"		1"	1"		
P	Tea House (MPOE)	MSB (electrical pad)	1"				(2) 1"	
Q	MCC	Well #3					1"	

provide vaults/pullboxes as needed

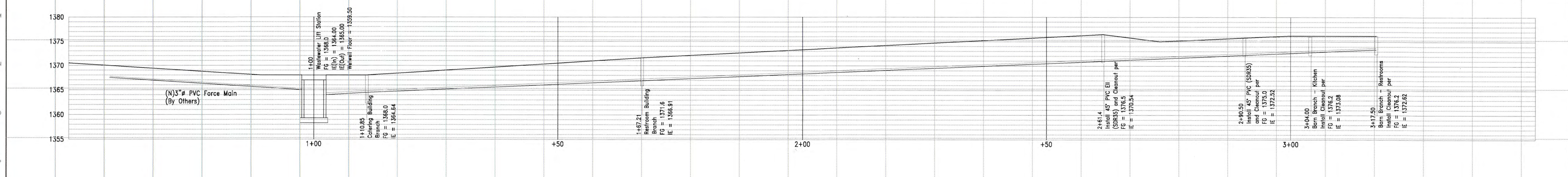
**1** SITE LOW VOLTAGE SYSTEM DIAGRAM  
SCALE: NTS

COUNTY OF SANTA CRUZ  
 PUBLIC WORKS DEPARTMENT  
 PLANS APPROVED FOR PERMIT  
 SHEET NO. 4 DATE 05/27/2015 SHEETS  
 BY: \_\_\_\_\_ DATE \_\_\_\_\_  
 PLANS MUST BE ON 11" X 17" SHEETS

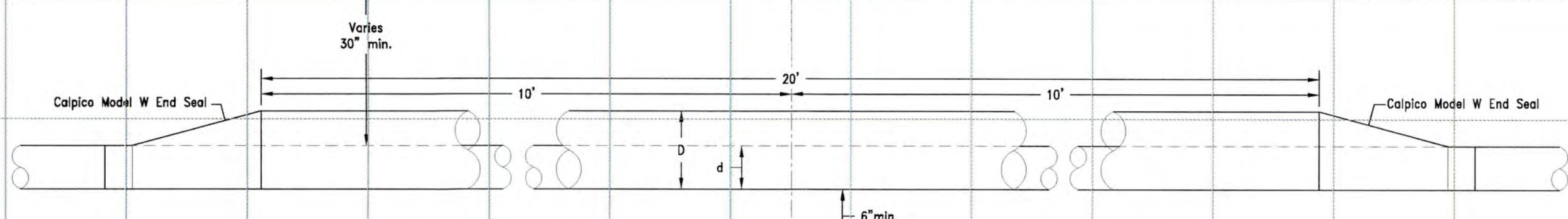
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 SHEET NAME: \_\_\_\_\_  
 BCC JOB NO: \_\_\_\_\_  
**PROJ:#** \_\_\_\_\_  
 REV. NO. DESCRIPTION DATE  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 SUBMITTAL NO: \_\_\_\_\_  
 DRAWN BY: \_\_\_\_\_ DATE: 05/27/2015  
 CHECKED BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
 SHEET NO: **E.4**



PLAN SCALE 1" = 10'



PROFILE SCALE 1" = 10'H 1" = 1'V



CASING and CARRIER TABLE	
Carrier (C)	Casing (O)
2" PVC	2" PVC
2" PET	4" PVC
6" PVC	10" PVC

Casing to be Sch. 40 PVC (min.)

1 CROSSING DETAIL - WATER OVER WASTEWATER  
SCALE: NTS

Date: May 2015  
 Scale: 1" = 10'H, 1" = 1'V  
 Drawn: DR  
 Job: 14-020  
 Sheet: P-1

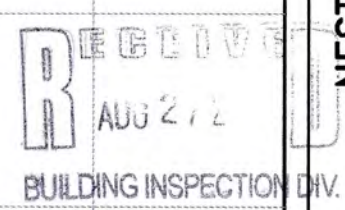
Revision: \_\_\_\_\_  
 Date: \_\_\_\_\_

NESTLDOWN RANCH LLC  
 175 Dell Avenue  
 Campbell, California 95008  
 (408)890-3123

Wyeast Engineering  
 784 Northridge Center, Suite 229  
 Salinas, CA 93906  
 (831)443-5514 (FAX) 444-9490

Professional Engineer  
 No. 64374  
 Exp. 6/30/17  
 State of California

NESTLDOWN RANCH  
 Wastewater Collection System  
 Plan and Profile - Gravity and Lift Station  
 Barn Area



COUNTY OF SAN JUAN  
 BUILDING INSPECTION DIVISION  
 PLANS APPROVED FOR PERMIT

SHEET NO. 1 OF 2 SHEETS  
 BY: [Signature] DATE: 8-28-15  
 PLANS MUST BE ON JOB FOR INSPECTIONS

PC39484-4

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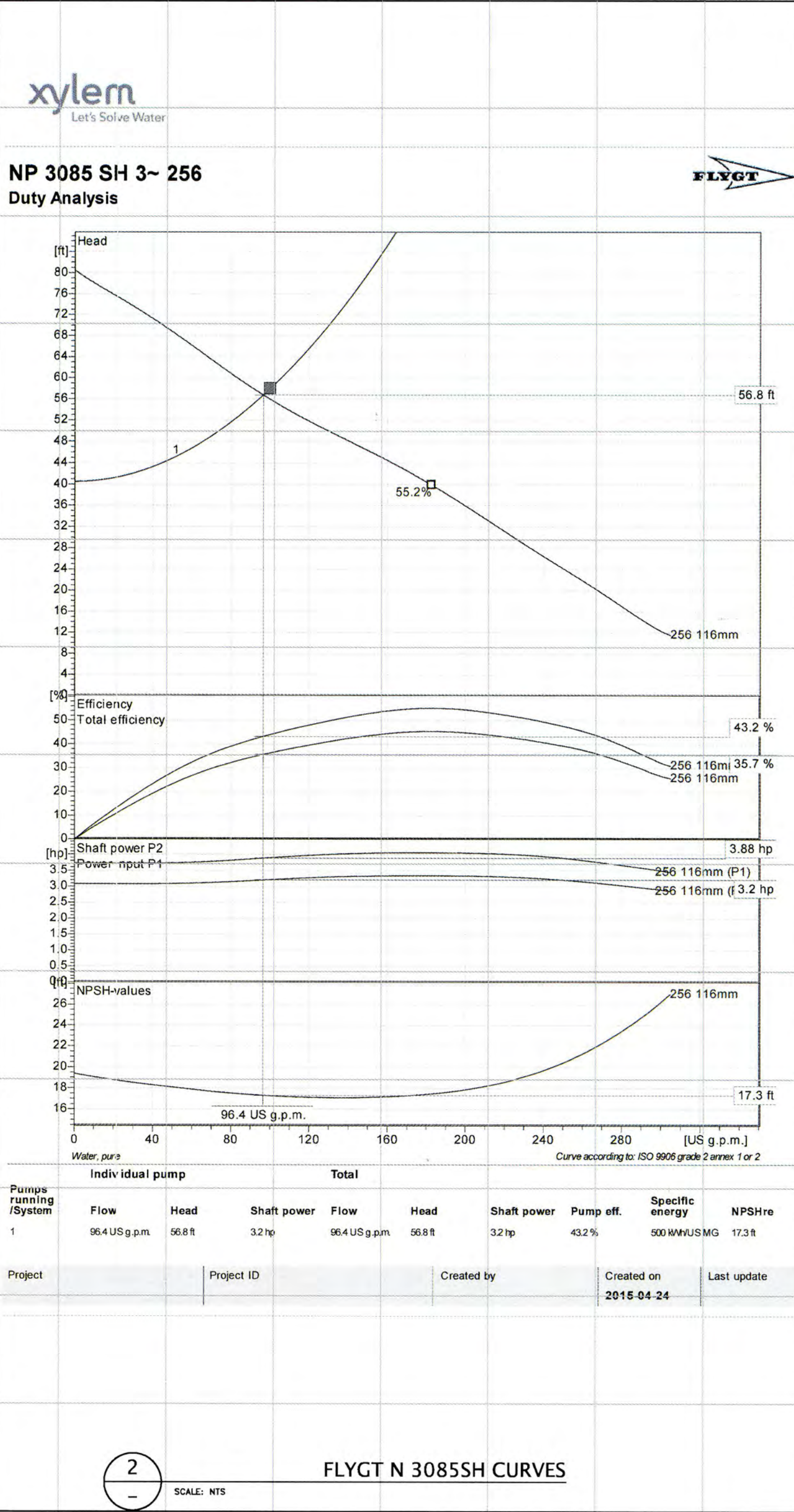
**Wy'east Engineering**  
 784 Northridge Center, Suite 229  
 Salinas, California 93906  
 (831)443-5514 • (FAX)444-9490

**HEADLOSS CALCULATIONS**

**Project:** Nestlown Ranch Wastewater Force Main  
**Date:** 4/22/2015  
**Scenario:** 100-gpm, 3-inch PVC

Flow Data					Topographic Head (Ht)					Data to be Added						
Q =	100-gpm	Lift Sta Low Level	1359.5-ft MSL													
Static P =	0.22-cfs	Septic Tank Elev	1400.0-ft MSL													
	-psi	H <sub>t</sub> =	40.5-ft													
<b>Pipe Materials</b> $h_f = 0.2083(100/C)^{1.85}(q^{1.85}/d^{4.8655})$																
Pipe	ID	C	V	H <sub>f</sub> /100-ft	L	H <sub>f</sub>	Adjustment for Tables C = 100 <sup>d</sup>		Results							
3" PVC	3	140	4.54	2.67	475	12.69	Pipe Material	C	Factor	Total Headlosses						
6" PVC	6	140	1.13	0.09			ACP	150	0.47	17.49-ft						
8" PVC	8	140	0.64	0.02			Copper	140	0.54	7.57 -psi						
10" PVC	10	140	0.41	0.01			Cl/DIP	130	0.62	Residual Pressure						
12" PVC	12	140	0.28	0.00			PVC/PET	140	0.54	NA -psi						
Total Pipeline Losses							12.69	GIP	100	1.00	TDH					
Headloss of Fittings								Headloss of Valves								
$H_f = Kv^2/2g$							$H_v = Kv^2/2g$									
Fitting	D	V	k	H <sub>f</sub>	Fitting	H <sub>f</sub>	Valve	D	Velocity	k	H <sub>f</sub>	Valve	H <sub>f</sub>			
	(in)	(ft/sec)		(feet)	Count	Total		(in)	(ft/sec)		(feet)	Count	Total			
or Tee	6	4.54	1.25	0.40	5.00	2.00	Gate	4	2.55	0.14	0.01					
	8	1.13	1.25	0.05				6	1.13	0.12						
	8	0.64	1.25	0.02				8	0.64	0.11						
	10	0.41	1.25	0.01				10	0.41	0.11						
	12	0.28	1.25	0.01				12	0.28	0.10						
	3	4.54	0.31	0.21	4.00	0.84	BFV	6	2.55	0.77	0.08					
	8	1.13	0.31	0.01				6	1.13	0.66	0.01					
	8	0.64	0.31					8	0.64	0.63						
	10	0.41	0.31					10	0.41	0.63						
	12	0.28	0.31					12	0.28	0.35						
	4	2.55	0.08	0.02			Globe	3	4.54	5.80	1.86	1.00	1.86			
	6	1.13	0.08				Check	6	1.13	5.10	0.10					
	8	0.64	0.08					8	0.64	4.80	0.03					
	10	0.41	0.08					10	0.41	4.80	0.01					
	12	0.28	0.08					12	0.28	4.40	0.01					
	4	2.55	0.02				Swing	4	2.55	1.50	0.15					
	6	1.13	0.02					6	1.13	1.50	0.03					
	8	0.64	0.02					8	0.64	1.50	0.01					
	10	0.41	0.02					10	0.41	1.50						
	12	0.28	0.02				Plug	2	10.21	0.31	0.50					
Total Fitting Losses							2.84	Thru		2	12	6.54	0.32	0.21		
Total Headlosses													3	4.54	0.32	0.10
Residual Pressure													4	2.55	0.31	0.03
													6	1.13	0.27	0.01
													8	0.64	0.25	
													10	0.41	0.25	
													12	0.28	0.23	
Total Valve Losses							1.96						Total Valve Losses			
Pipelines							12.69						1.00			
Fittings							2.84						1.96			
Valves							1.96						1.96			
Total							17.49						1.96			

1-H<sub>f</sub> by fitting or valve  
 Practical Hydraulics - Simon, 1976, pg 59-62  
 2-Hazen-Williams C values  
 Practical Hydraulics - Simon, 1976, pg 445



**NP 3085 SH 3~256**  
Technical specification

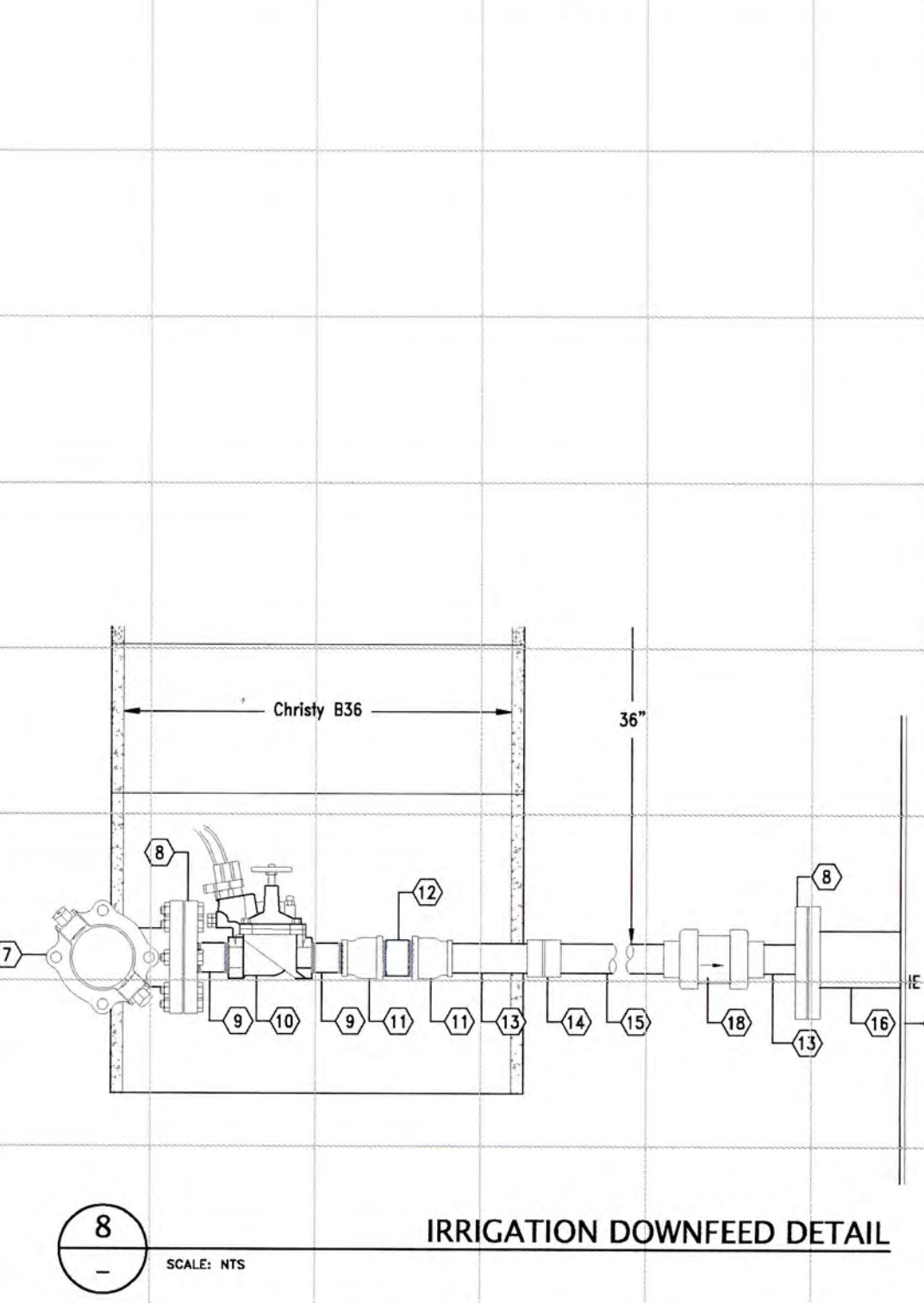
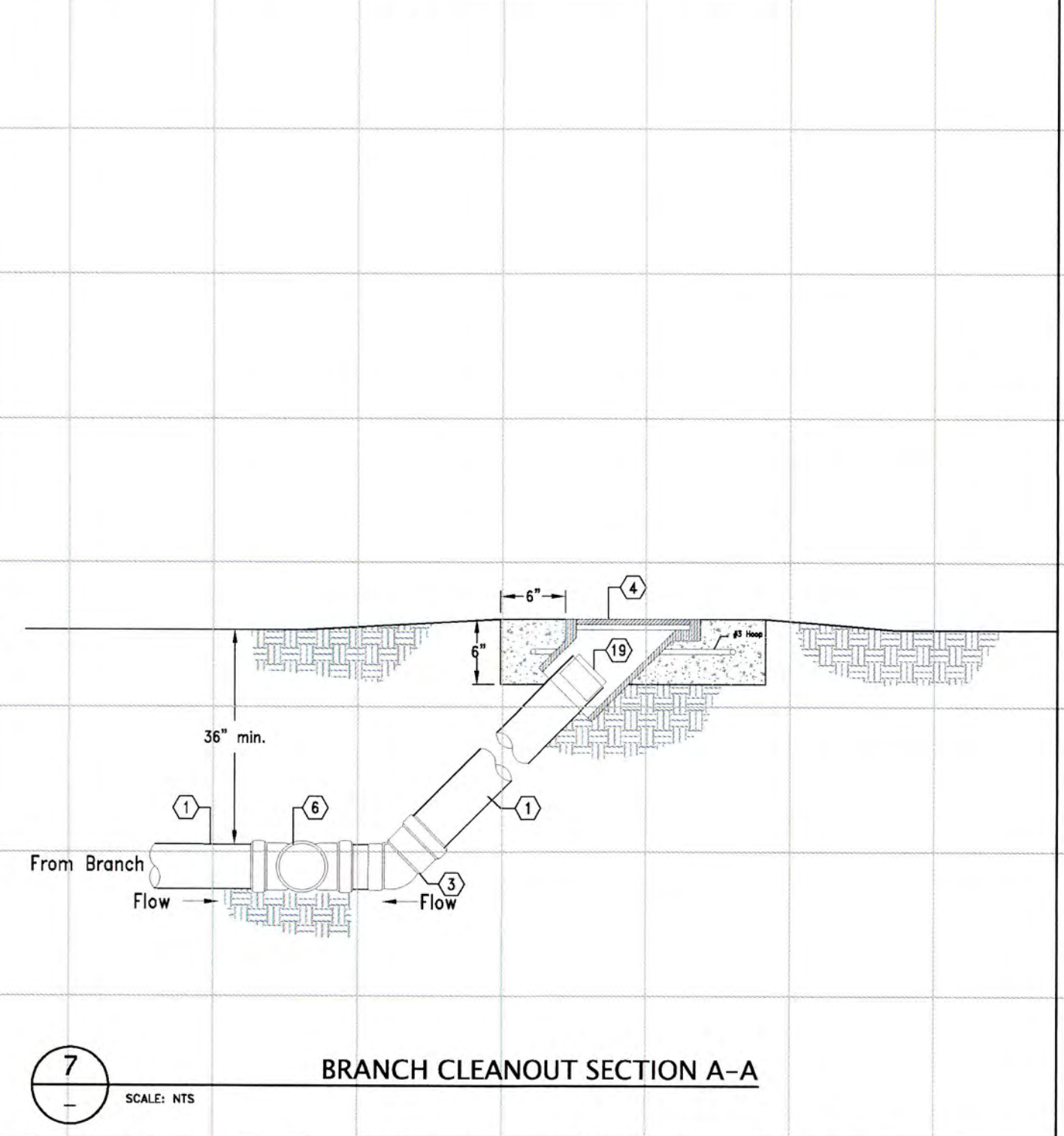
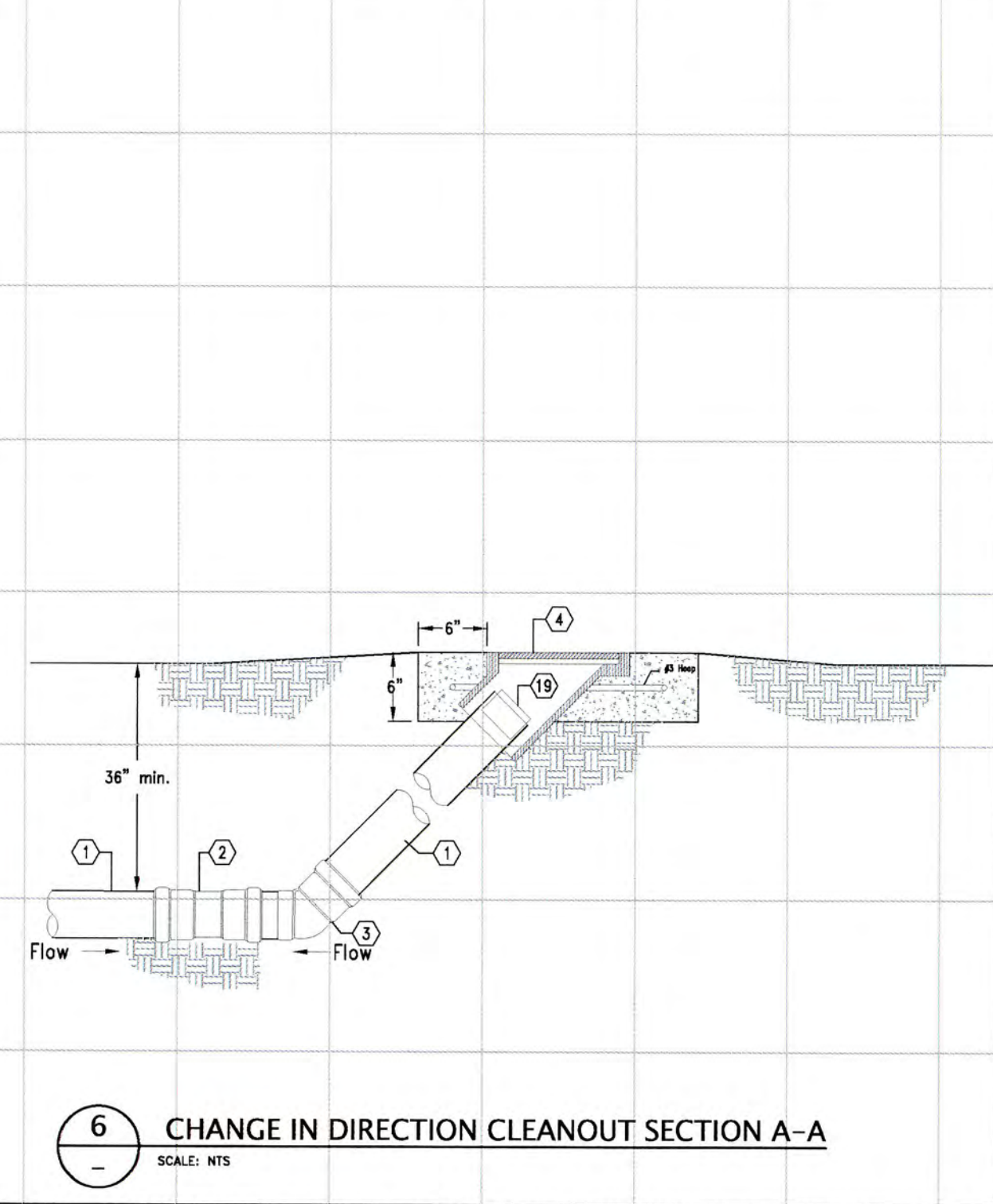
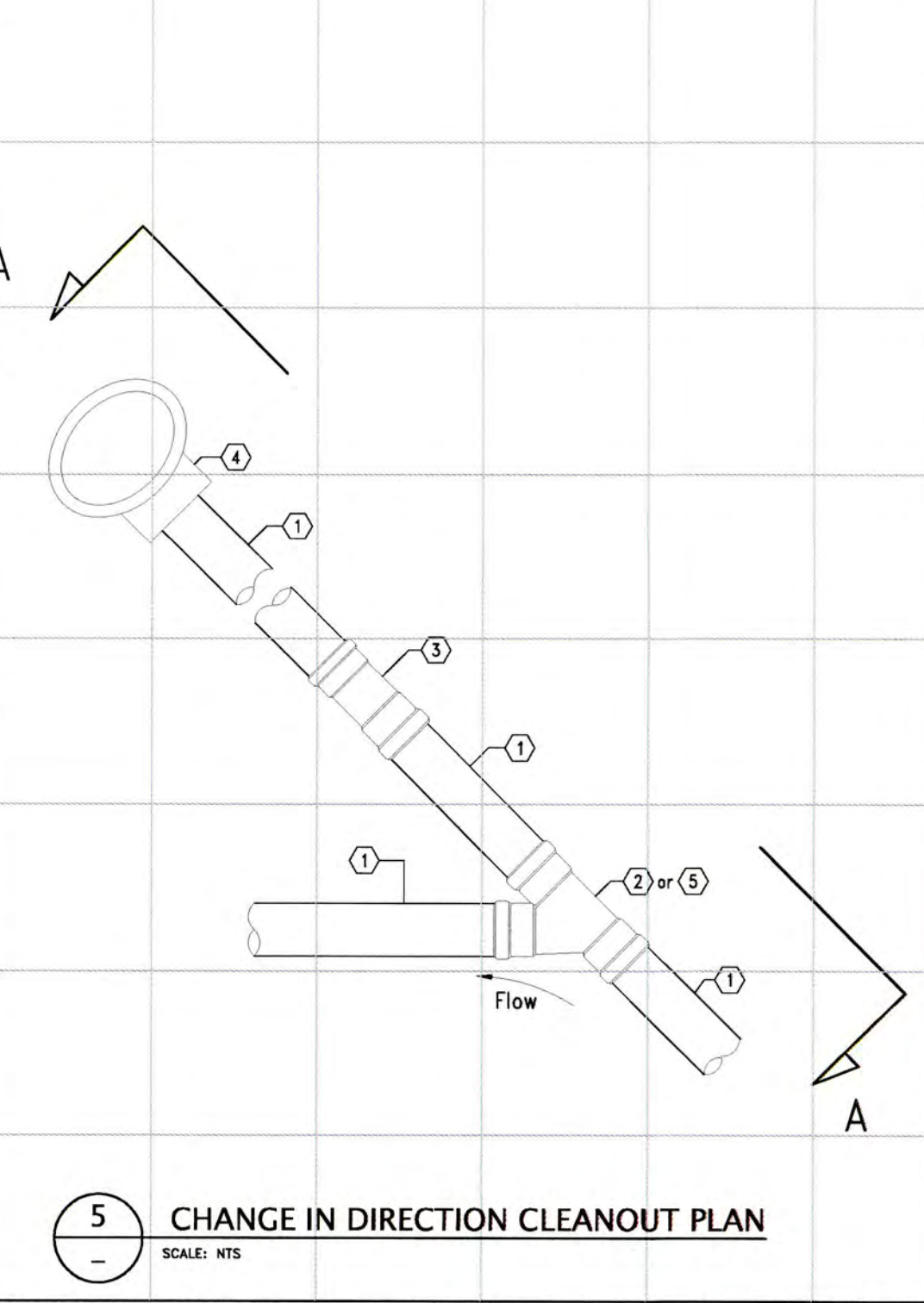
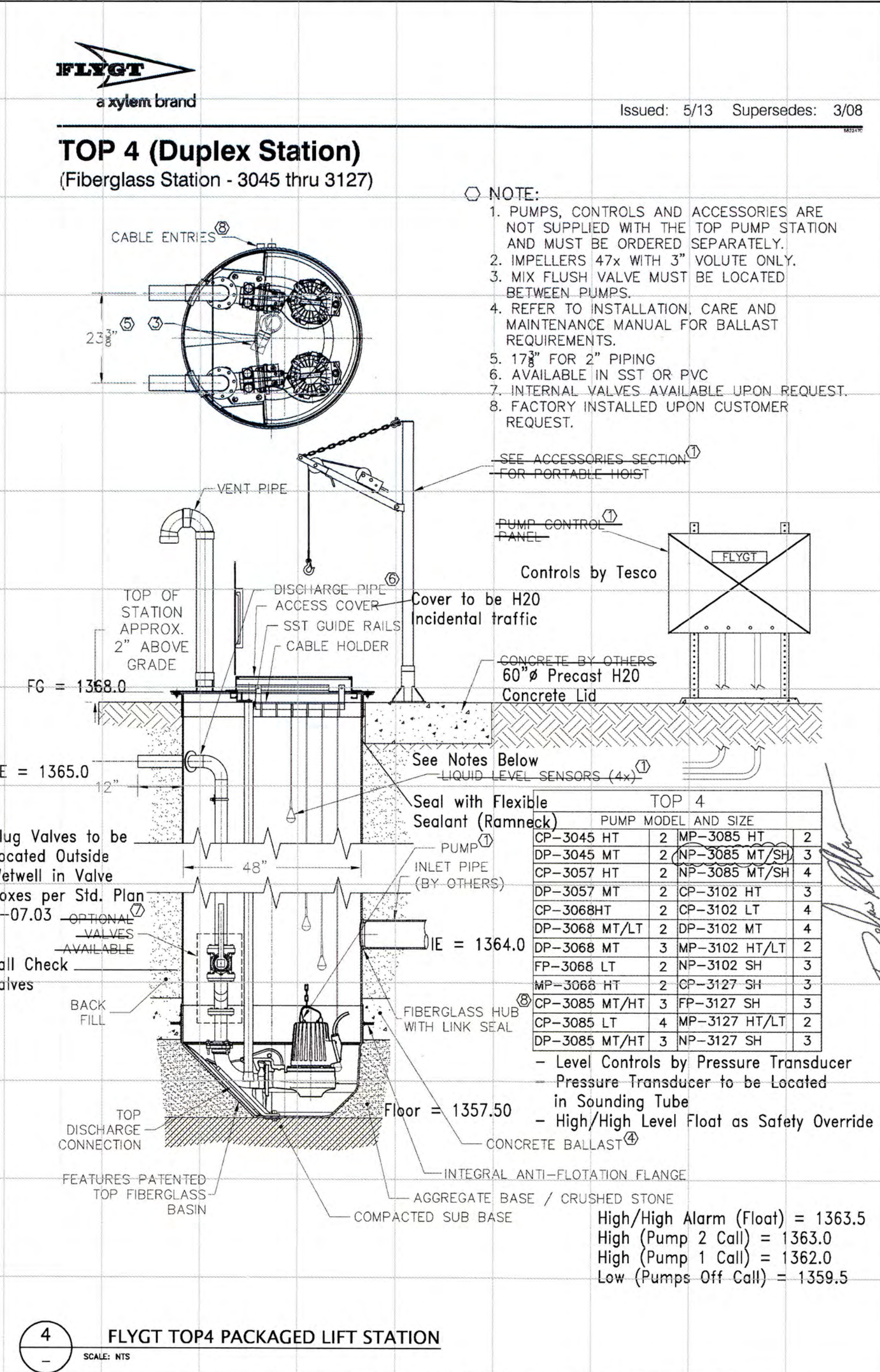
**Impeller**  
 Impeller material: Grey cast iron  
 Discharge Diameter: 3.18 inch  
 Suction Flange Diameter: 80 mm  
 Impeller diameter: 116 mm  
 Number of blades: 2

**Motor**  
 Motor # N3085-092-15-09-2AL-W 4hp  
 Stator voltage 12  
 Frequency 60 Hz  
 Rated voltage 240-VAC  
 Number of poles 3  
 Phases 3  
 Rated power 4 hp  
 Rated current 44.4-10.2-omp  
 Starting current 30 A  
 Rated speed 3415 rpm  
 Power factor 0.91  
 1/2 Load 0.88  
 3/4 Load 0.81  
 Efficiency 80.5%  
 1/2 Load 82.5%  
 3/4 Load 82.5%

**Configuration**

Installation: P - Semi permanent Wet

Project ID: \_\_\_\_\_ Created by: \_\_\_\_\_ Created on: 2015-04-24



**WASTEWATER MECHANICAL SCHEDULE**

ID	DESCRIPTION
1	4" PVC (SDR35)
2	4" x 4" x 4" PVC Wye (SDR35 - Gasketed)
3	4" x 45" PVC Ell (SDR35 - Gasket x PE (Specified Fittings))
4	6" Clean Out Frame and Cover (Phoenix P-7103 or Approved Substitute)
5	4" x 4" x 4" PVC Tee (SDR35 - Gasketed)
6	4" x 4" x 4" x 4" PVC Cross (SDR35 - Gasketed) (Specified Fittings Part No. 2604)
7	4" x 4" x 4" DIP Tee (MJ x MJ x FL w/Megalug 2004 Restraining Glonds)
8	4" x 2" PVC Reducing Flange (Sch. 80)
9	2" x 4" Brass Nipple
10	2" Solenoid Valve (RainBird Model 2006B - 24VDC)
11	2-1/2" x 2" Brass Bell Reducer
12	2-1/2" Rate of Flow Control Valve (Dole FRGH25055 (55-gpm))
13	2" PVC Tee Nipple (Length to FH)
14	2" PVC Coupling (Sch. 80 - Slip x Slip)
15	2" PVC (Sch. 80 - Length to FH)
16	4" Wet Well Nozzle
17	Wet Well Slideshell
18	2" True Union Check Valve (S x S - Hayward or Approved Substitute)
19	4" Expansion Plug

County of Santa Clara Building Inspection Office  
 SHEET NO. 2 OF 2 SHEETS  
 DATE 8-28-15  
 PLANS MUST BE ON JOB FOR INSPECTIONS

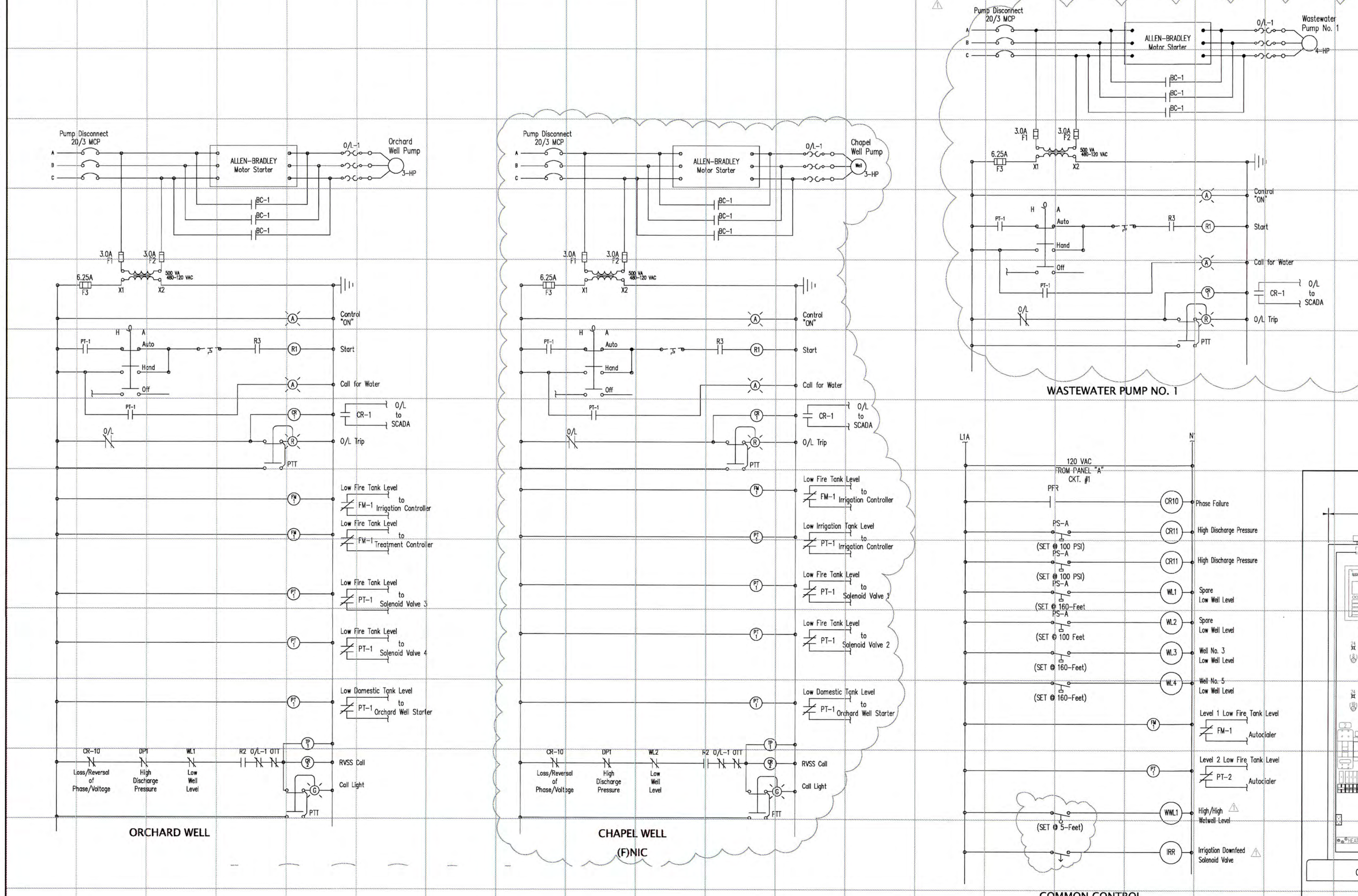
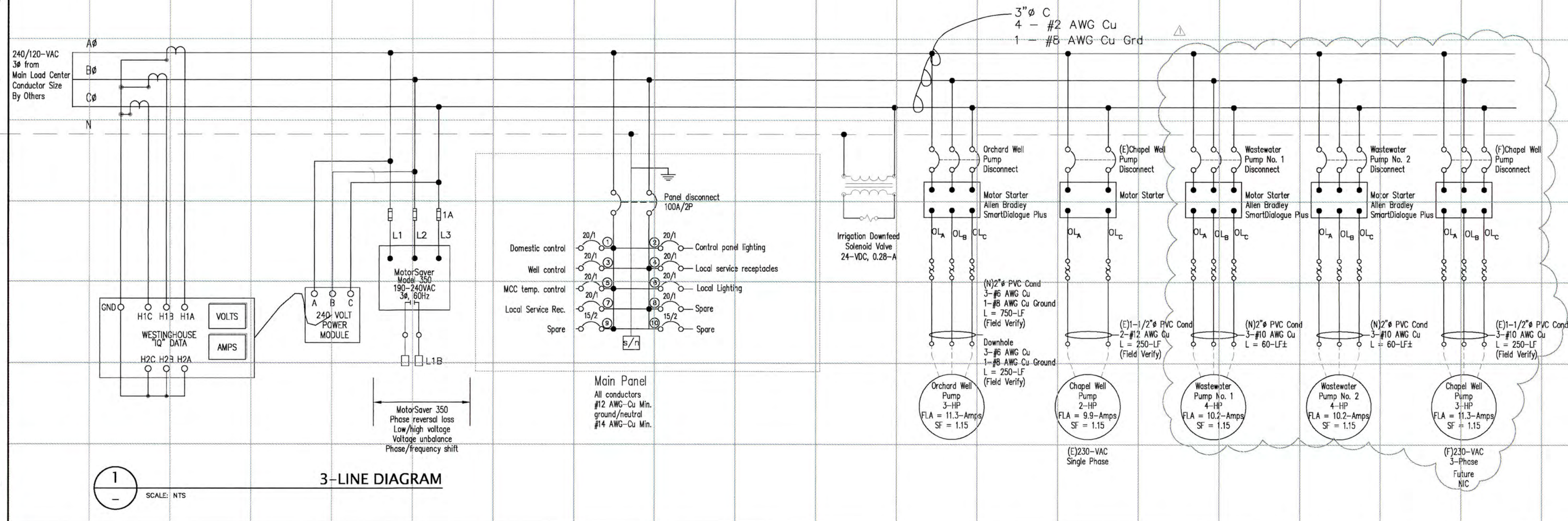
**Wy'east Engineering**  
 784 Northridge Center, Suite 229  
 Salinas, CA 93906  
 (831)443-5514

**NESTLON RANCH LLC**  
 175 Dell Avenue  
 Campbell, California 95008  
 (408)690-3123

**Wastewater Collection System**  
 Total Dynamic Head, Pump Selection and Lift Station Details  
 Miscellaneous Details

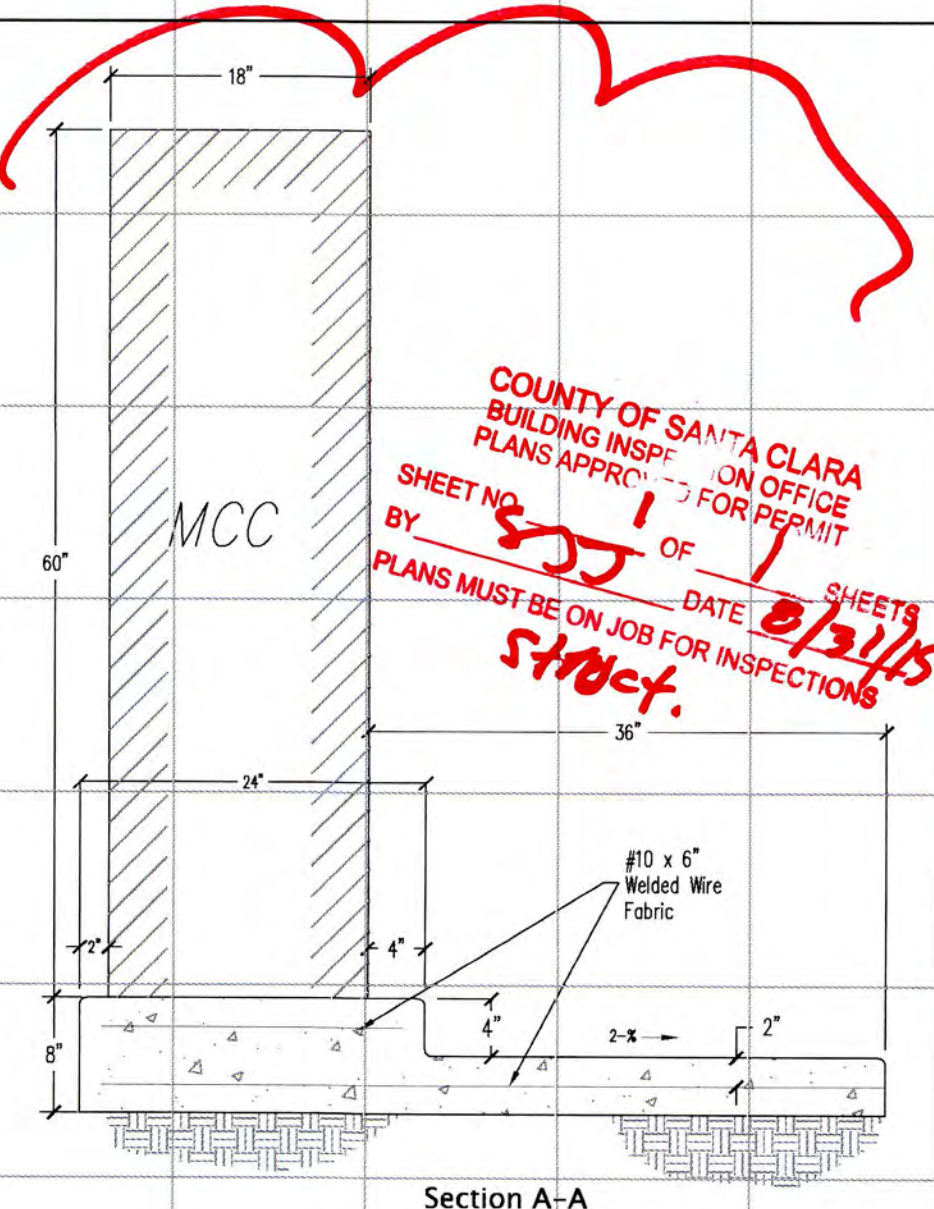
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 Scale: None  
 Drawn: DRA  
 Job: 14-020  
 Sheet: P-2

# Three Line Drawing for Nestdown Water and Wastewater Systems



NAMEPLATE SCHEDULE			
ID	Qty	Type	Description
1	1	Tag	NESTDOWN RANCH WATER MOTOR CONTROL CENTER
2	1	Tag	MAIN DISCONNECT
3	1	Tag	ORCHARD WELL PUMP DISCONNECT
4	1	Tag	CHAPEL WELL PUMP DISCONNECT
5	1	Tag	WELL PUMP No. 3 DISCONNECT
6	1	Tag	TRANSFORMER DISCONNECT
7	1	Tag	ORCHARD WELL CONTROLS
8	1	H-O-A	ORCHARD WELL HAND-OFF-AUTO
9	1	Tag	CHAPEL WELL CONTROLS
10	1	H-O-A	CHAPEL WELL HAND-OFF-AUTO SWITCH
11	1	Tag	WASTEWATER PUMP NO. 1
12	1	H-O-A	WASTEWATER PUMP NO. 1 HAND-OFF-AUTO SWITCH
13	1	Tag	WASTEWATER PUMP NO. 2
14	1	H-O-A	WASTEWATER PUMP NO. 2 HAND-OFF-AUTO SWITCH
15	1	Tag	NESTDOWN WATER SYSTEM CONTROLS
16	1	Tag	NESTDOWN WASTEWATER SYSTEM CONTROLS
17	1	Tag	WASTEWATER PUMP NO. 1 DISCONNECT
18	1	Tag	WASTEWATER PUMP NO. 2 DISCONNECT
19	1	Tag	IRRIGATION LOCK-OUT
20	1	Tag	(FUTURE) AUXILIARY GENERATOR TRANSFER SWITCH
21	1	Tag	(FUTURE) NORMAL POWER
22	1	Tag	(FUTURE) AUXILIARY POWER
23	1	Light	AMBER
24	1	Light	GREEN
25	1	Light	RED
26	2	Tag	ALARM ACKNOWLEDGE
27	6	Switch	ALARM ACKNOWLEDGE PUSHBUTTON
28	7	Tag	MAIN DISCONNECT
29	1	Tag	(FUTURE) AUXILIARY GENERATOR DISCONNECT
30	1	Tag	(FUTURE) NORMAL
31	1	Tag	~
32	1	Tag	~
33	1	Tag	~
34	1	H-O-A	~
35	1	Tag	~
36	1	Tag	~
37	1	Tag	~
38	1	Tag	~
39	1	H-O-A	~
40	1	Tag	~
41	1	Tag	~
42	1	Tag	~
43	1	Tag	~
44	~	~	~

**FOR REFERENCE ONLY**



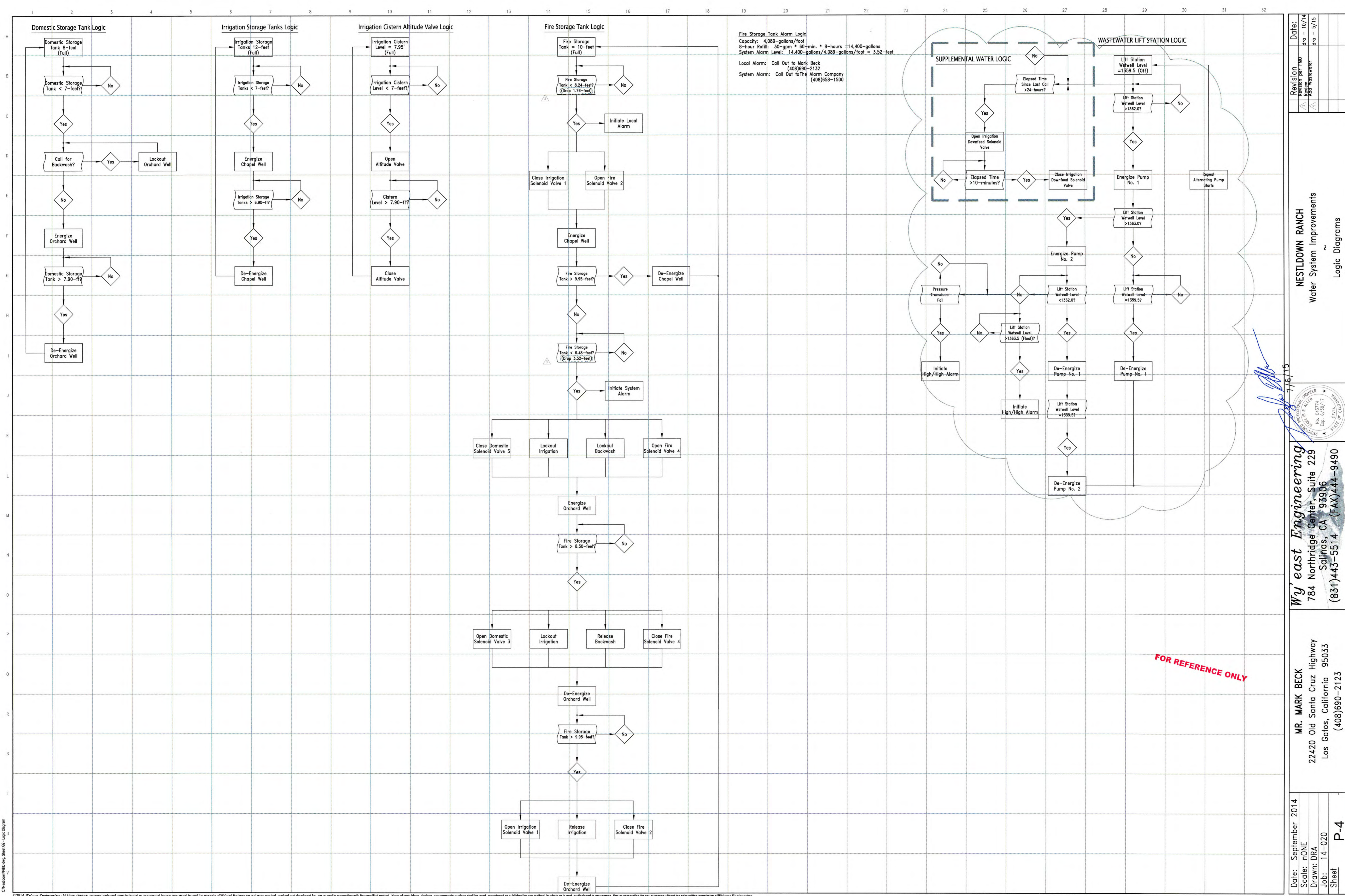
**Wyeast Engineering**  
784 Northridge Center, Suite 229  
Salinas, CA 95906  
(831)443-5514 (FAX)444-9450

**NESTDOWN RANCH LLC**  
1745 Dell Avenue  
Campbell, California 95008  
(408)690-2132

Date: September 2014  
Scale: As Shown  
Drawn: DRA  
Job: 14-020  
Sheet: P-3

**NESTDOWN RANCH WATER SYSTEM**  
Fire Suppression and Domestic Potable Water Systems  
Wastewater Lift Station  
3-Line Diagram and Electrical Details

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**Fire Storage Tank Alarm Logic**  
 Capacity: 4,089-gallons/foot  
 8-hour Refill: 30-gpm \* 60-min. \* 8-hours =14,400-gallons  
 System Alarm Level: 14,400-gallons/4,089-gallons/foot = 3.52-feet  
 Local Alarm: Call Out to Mark Beck (408)658-2132  
 System Alarm: Call Out to The Alarm Company (408)658-1500

Date: September 2014	Date: 10/14
Scale: NONE	Revision: 10/14
Drawn: DRA	By: Wastewater
Job: 14-020	By: 5/15
Sheet: P-4	

**NESTLDOWN RANCH**  
Water System Improvements  
Logic Diagrams

**Wy'east Engineering**  
784 Northridge Center, Suite 229  
Sallinas, CA 95306  
(831)443-5514 (FAX) 444-9490

MR. MARK BECK  
22420 Old Santa Cruz Highway  
Los Gatos, California 95033  
(408)690-2123



FOR REFERENCE ONLY

C:\Newswater\14-020\_Sheet P-4\_Logic Diagram