

Project Memorandum

Project Name: **Chumash Village Utility Review** Date: **10/7/2020**

Subject: **Preliminary Wet and Dry Utility Layouts and Associated Cost Estimates** AV Job Number: **15800**

To whom it may concern:

The following documents were prepared at the direction of Chumash Village Staff in an effort to further the evaluation of existing facility conditions, well documented in the Wallace report prepared December 23, 2014, and prepare plans and opinions of probable costs related to the replacement of existing water, sewer and electrical facilities into areas that are more functional on a long term/maintenance basis.

Enclosed are the following documents:

- Water and Sewer Opinion of Probable Costs (A&V)
- Electrical Opinion of Probable Costs (Thoma)
- Water and Sewer Preliminary Utility Master Plan (A&V)
- Electrical Site Utilities Master Plan (Thoma)

These documents are preliminary and not for construction. Cost estimates may vary from actual costs based on current construction costs, potential phasing efforts and other unforeseen conditions.

Respectfully,



Ken Brown, PE 78390
Principal Engineer
Ashley & Vance Engineering, Inc.



ENGINEER'S ESTIMATE OF PROBABLE COST

**CHUMASH VILLAGE MOBILE HOME PARK
COMPREHENSIVE WATER AND SEWER REPLACEMENT PROJECT**

PREPARED BY: KBB
DATE: 9/14/2015

ITEM	DESCRIPTION	QUANTITY	UNIT	COST/UNIT	TOTAL
	<u>GENERAL CONSTRUCTION</u>				
1	MOBILIZATION	1	LS	\$ 8,000	\$ 8,000
2	WATER POLLUTION CONTROL PROGRAM (SWPPP)	1	LS	\$ 3,500	\$ 3,500
3	EROSION CONTROL IMPLEMENTATION	1	LS	\$ 10,000	\$ 10,000
	<u>WATER DISTRIBUTION SYSTEM</u>				
4	2" SCHEDULE 40 PVC	7940	LF	\$ 12	\$ 95,280
5	6" C900 DR18 PVC	4860	LF	\$ 30	\$ 145,800
6	SERVICE CONNECTION W/ NEW METER	239	EA	\$ 650	\$ 155,350
7	ARV/BO VALVES	2	EA	\$ 2,000	\$ 4,000
8	FIRE HYDRANT	6	EA	\$ 3,500	\$ 21,000
9	6" GATE VALVES	82	EA	\$ 900	\$ 73,800
	<u>SEWER COLLECTION SYSTEM</u>				
10	6" SDR35 PVC MAIN	4390	LF	\$ 45	\$ 197,550
11	8" SDR35 PVC MAIN	3350	LF	\$ 65	\$ 217,750
12	4" SDR35 PVC LATERAL CONNECTIONS	239	EA	\$ 150	\$ 35,850
13	MANHOLE	26	EA	\$ 4,500	\$ 117,000
14	CLEANOUT (NOT AT EACH CONNECTION)	11	EA	\$ 650	\$ 7,150
15	SERVICE CONNECTION	239	EA	\$ 300	\$ 71,700

CONSTRUCTION SUBTOTAL	\$	1,163,730
ENGINEERING/TESTING/STAKING @ 25%	\$	290,933
CONTINGENCY @25%	\$	363,666
TOTAL ESTIMATED PROJECT COST	\$	1,818,328

**DRAFT**

January 10, 2019

Ashley & Vance Engineering
1413 Monterey St.
San Luis Obispo, CA 93401

Attn: Ken Brown

RE: Chumash Village
Utility Upgrades

Ken: As a follow up to our meeting at Thoma Electric with Owner Representatives, I offer the following:

Project Overview:

Original base scope of work was to plan new electrical distribution throughout the park following your new distribution plan for new underground wet utilities. As requested by the Owner, we created an add service task to focus on a plan that could be built in phases and address issues that were created by electrical cable failures at the south end of the park.

Deliverables:

This report will make recommendations and include budgets of probable construction costs for:

- A. Existing main switchboard (test/service and/or replace).
- B. Infrastructure plan (i.e., conduits, boxes, transformer pads, etc.) for first phase to serve south end of park.
- C. Distribution plan (i.e., breakers, conductors, transformer, etc.) for first phase and feeder plan (i.e., feeders, feeder taps, meter pedestal, etc.) required to reconnect units temporarily connected to 120 volt.
- D. Typical feed to a residential unit from the drive entry to new meter pedestal.

A. MAIN SWITCHBOARD

The existing main switchboard is rated 1600 amps at 480 volt, three phase, three wire. It appears to be original equipment per the original drawings (dated 1971) and is at the end of its useful life. There are several options to consider here:

1. Have the switchboard inspected/tested by a certified testing agency. This would involve some utility downtime while the equipment is opened so the work could be performed. The idea here is to give the Owners a comfort level that the existing breakers have been tested

and should operate properly in the future if needed. However, this option does not guarantee any extended life of the equipment and in the end you still have a very old switchboard.

We would expect the cost for this option to be in the range of \$7,000.00 to \$9,000.00.

2. Replace the existing switchboard with new. This option involves more extensive utility downtime as the old equipment is removed and the new switchboard installed. This option will be the most expensive but leaves the project with a brand new metered switchboard with distribution.

We would expect the cost for this option to be in the range of \$75,000.00 to \$80,000.00.

3. Add new distribution section to the side of the existing switchboard for breakers/feeds to new transformers, while the existing transformers stay connected to the existing distribution breakers. This option leaves the project with a new distribution section and breakers. It can be installed without involving PG&E because the work could be done by shutting off the main circuit breaker. The existing switchboard/distribution breakers could be left in place and continue to feed the existing transformers currently serving the park. As new transformers are installed and connected to the new distribution section/breakers, the old breakers can be disconnected and retired in place.

We would expect the cost for this option to be in the range of \$25,000.00 to \$30,000.00.

Of the (3) options described above, our recommendation would be to have a testing company test/certify the main breaker, generally clean/inspect the switchboard structure, and add the distribution section with new breakers as described in Option 3 above.

B. INFRASTRUCTURE

New boxes, conduits, transformer pads, trenching/site work, etc. associated with implementing electrical distribution plan.

Although a plan has been sketched with proposed infrastructure throughout the park, the focus for budget pricing is the infrastructure that would serve Lots 45 through 73 inclusive and 112 through 117 inclusive.

We would expect the cost for this first phase of infrastructure to be in the range of \$330,000.00 to \$350,000.00.

C. DISTRIBUTION PLAN

New 480 volt feed to (1) transformer and 120/240 volt feeders to Lots 112 through 117.

Although a plan has been sketched with proposed transformer locations and distribution to residential lots throughout the park, the focus for budget pricing is the feeder associated with transformer "T1" and distribution to Lots 112 through 117.

We would expect the cost for this first phase of distribution to be in the range of \$100,000.00 to \$115,000.00.

D. TYPICAL FEED TO RESIDENTIAL UNITS

The infrastructure/distribution plan leaves a conduit stubbed, capped and marked at the driveway of each residential lot for future use as needed. This line item is a budget to extend conduit/conductors from the stub at the driveway, set a new 100 amp meter pedestal and reconnect the home.

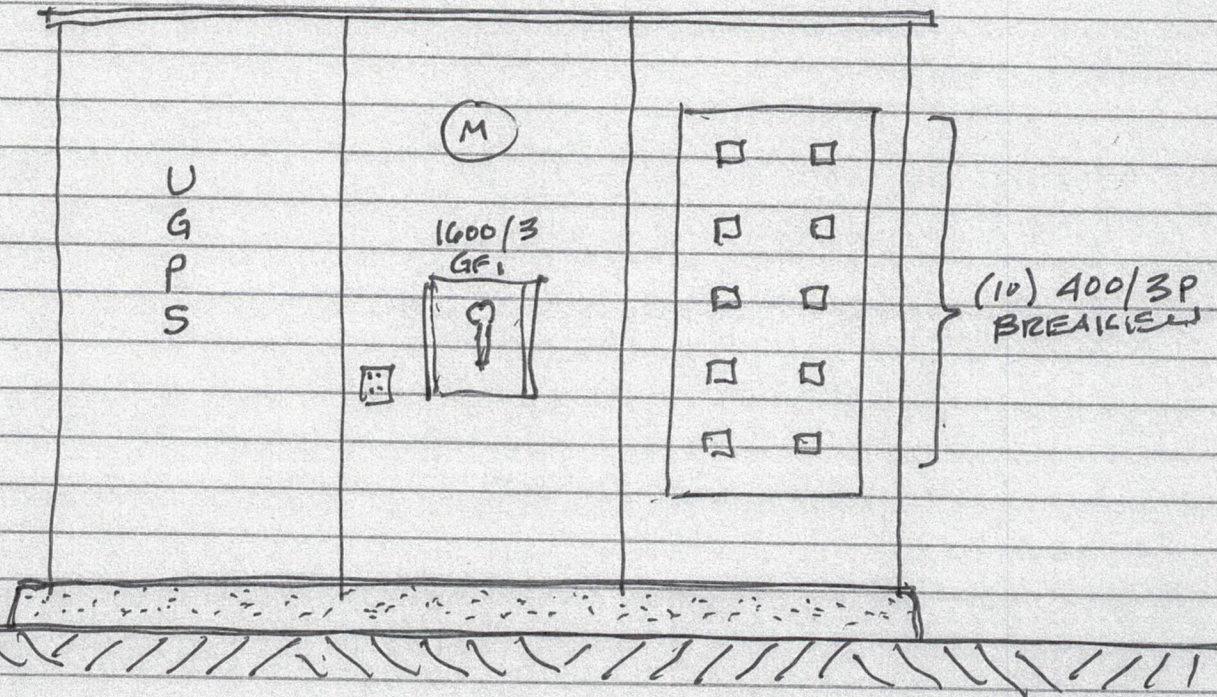
We would expect the cost for a new feeder/meter pedestal at each residential lot to be in the range of \$10,000.00 to \$15,000.00.

Sincerely,

James J. Dean
Engineering Division Supervisor
Thoma Electric, Inc.
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Attached: Equipment Options

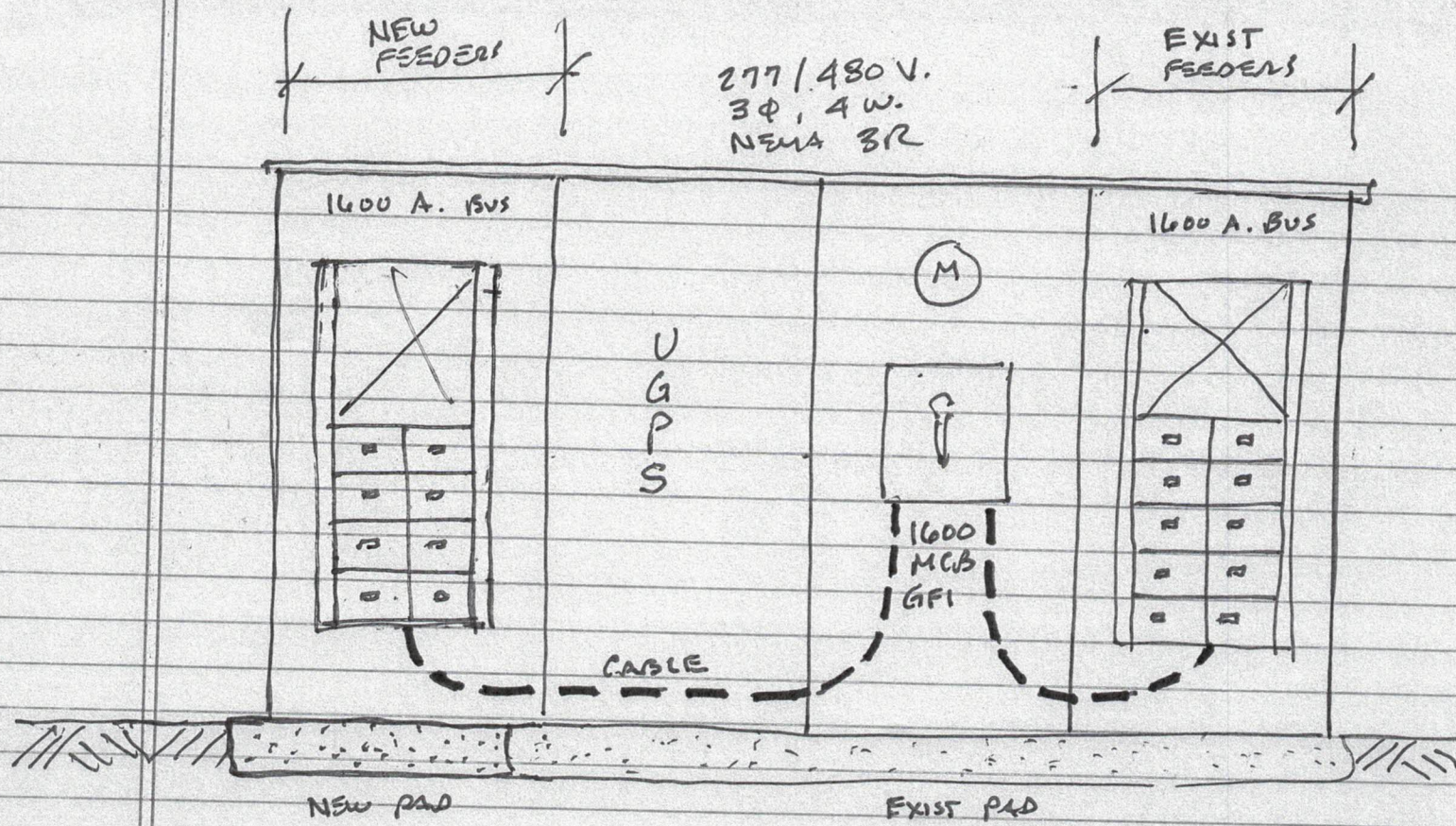
480 V. 3 ϕ , 3W
NEMA 3R



EXIST. CONDITIONS

CHUMASH VILLAGE

1-10-19

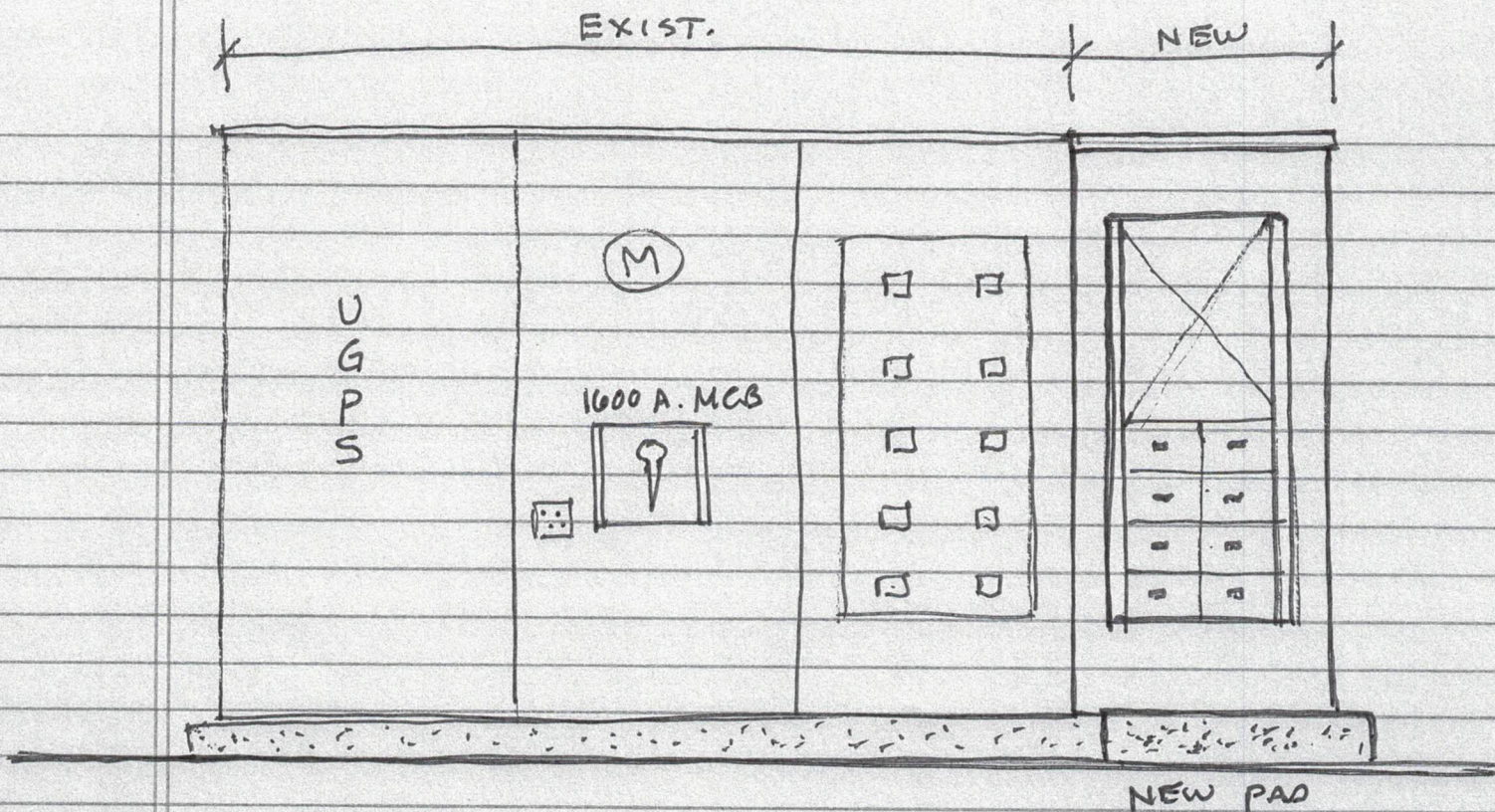


PROPOSED NEW SWBRD.

EXTENDED PG & E DOWNTIME

CHUMASH VILLAGE

1-10-19



NEW DISTRIB. SECTION

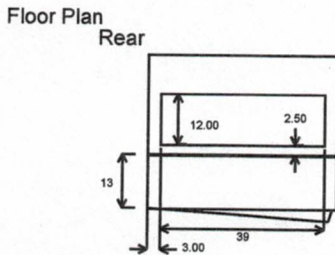
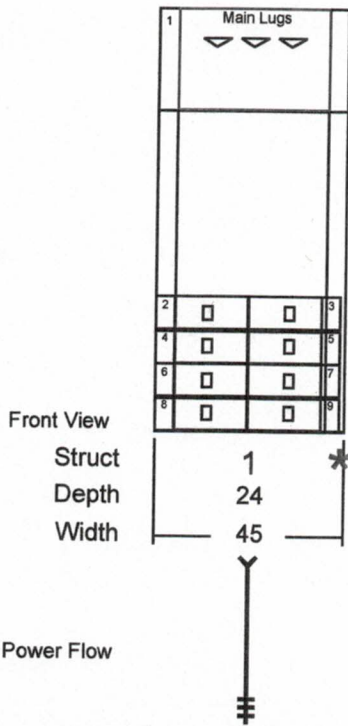
NO PG&E DOWNTIME

(INSPECTION OF SWITCHBOARD AND TESTING
OF MAIN BREAKER STILL RECOMMENDED)

CHUMASH VILL.

1-10-19

NEW DISTRIBUTION SECTION



Total of 1 Structures, Total Weight of 750 Weight-Lbs. with Front Hinged Doors.
Total of 1 Structures, Total Width of 45 Inches with Front Hinged Doors.

Structure	1				
Ship-Inches	45.00				
Ship-MM	1143				
Wdth-Inches	45.00				
Wdth-MM	1143				
Depth(Inner)-In.	24.00				
Depth(Inner)-MM	609				
Depth(Outer)-In.	37.00				
Depth(Outer)-MM	939				
Height-Inches	90.00				
Height-MM	2286				
Weight-Lbs.(Est.)	750				
Weight-Kg.(Est.)	340				

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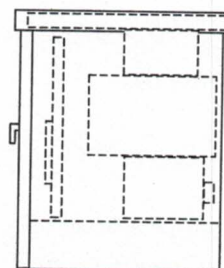
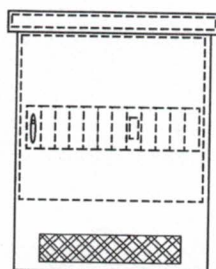
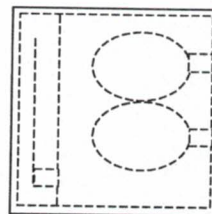
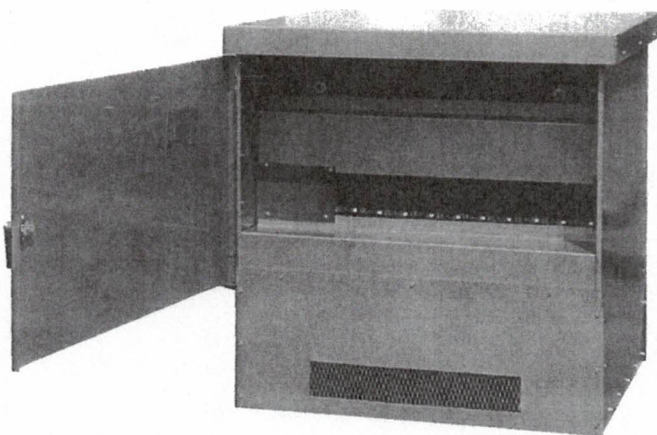
PREPARED BY JAN APPEL	DATE 12/26/2018	Eaton	SumterSC
APPROVED BY	DATE	JOB NAME CHUMASH DISTRIBUTION BOARD	DESIGNATION DP
VERSION 9.0.14.0	TYPE Switchboards	DRAWING TYPE CustAppr	
REVISION 0	DWG SIZE DwgA	G.O.	ITEM
			SHEET 2 of 3

NEG-ALT Number
F5611226X8K1-0000

Dry Type Transformers

With distribution for RV & mobile home park applications

25
DRY TYPE
TRANSFORMERS



Distribution Transformers

Catalog Number	KVA	Volts to 120/240 1Ø	UL Listed	Weight (lbs.)	Dimensions		
					D"	W"	H"
7URMD	75	480	Yes	850	40	38	48
10URMD	100	480	Yes	1050	40	38	48
16URMD	167½	480	Yes	1400	40	38	48
20URMD	200	480	Yes	1650	40	38	48
25URMD	250	480	No	2200	40	38	48
7URMD24	75	2400	No	1050	53	41	48
10URMD24	100	2400	No	1200	53	41	48
16URMD24	167½	2400	No	1650	53	41	48
20URMD24	200	2400	No	1900	53	41	48
25URMD24	250	2400	No	2200	53	41	48

Notes

- **Replacement Bus Kit:** For a replacement bus kit, order **K5425**.

Utility requirements for this equipment may vary. Always consult the serving utility for their requirements prior to ordering or installing this equipment. This product must be installed by a licensed electrician. Installation of this equipment may require local electrical inspector approval.



C:\Egry\Shared\San\All Jobs\0002 Pending All Jobs\2015 Pending\15800 - Chumash Village (CV) - Chumash Village\02_cad\Primary or Construction\03_Exhibits\UTILITY MASTER PLAN EXHIBIT.dwg, 9/15/2015 1:56:18 PM, RTM

LEGEND

- APPROXIMATE EDGE OF PAVEMENT
- DRY UTILITY TRENCH (1/3)
- SANITARY SEWER
- SANITARY SEWER LATERAL
- SD APPROXIMATE LOCATION OF EXISTING STORM DRAIN
- JOINT FIRE/WATER TRENCH (2/3)
- 2" WATER LINE
- THRUST BLOCK
- WATER SERVICE WITH METER
- GATE VALVE
- FIRE HYDRANT
- SEWER CLEAN-OUT
- SEWER MANHOLE
- ROAD PAVEMENT

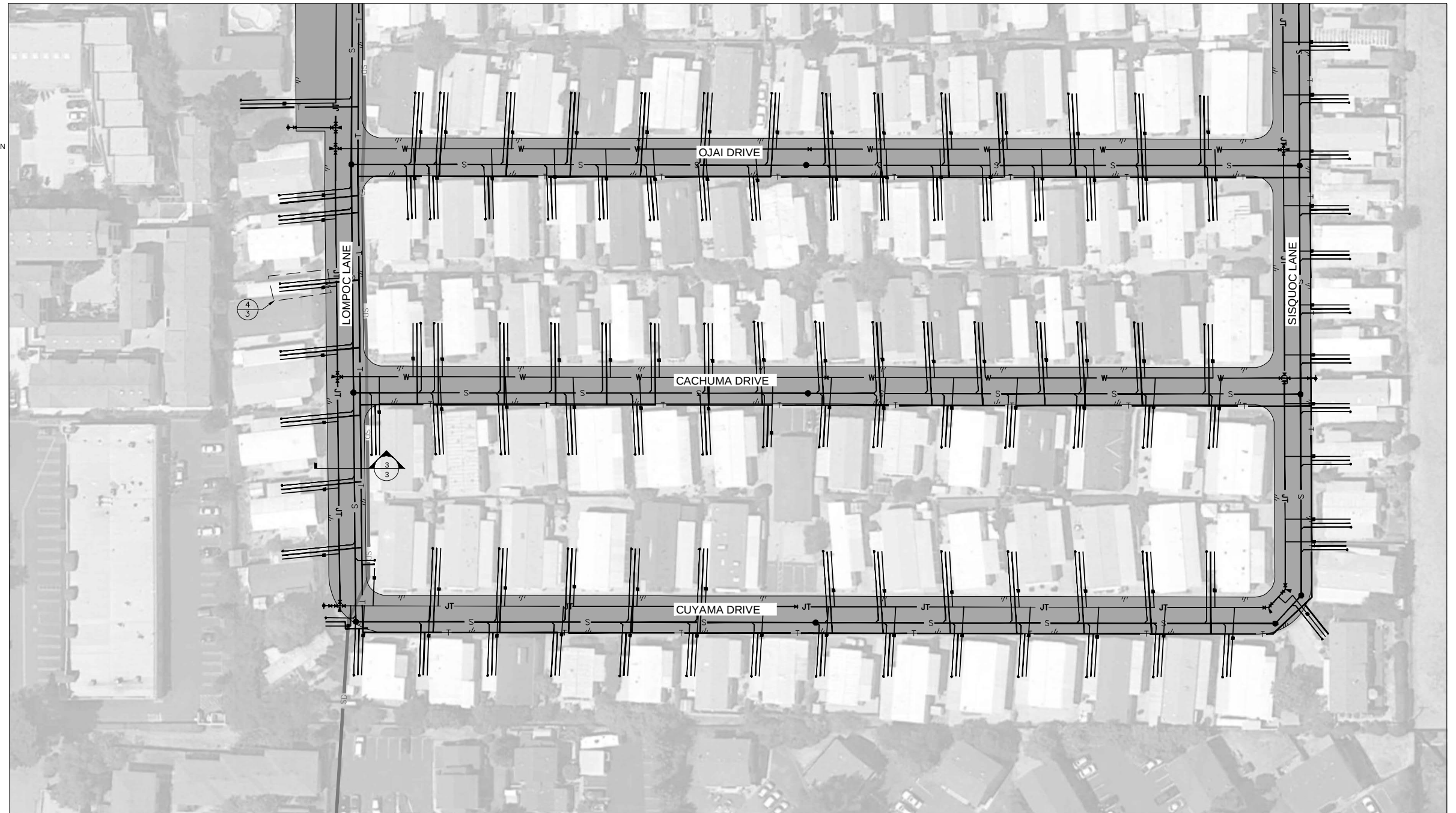


CHUMASH VILLAGE PRELIMINARY
UTILITY MASTER PLAN
NORTH



1413 Monterey St.
San Luis Obispo, CA 93405
(805) 545-0010
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	APPROXIMATE EDGE OF PAVEMENT
	DRY UTILITY TRENCH
	SANITARY SEWER
	SANITARY SEWER LATERAL
	APPROXIMATE LOCATION OF EXISTING STORM DRAIN
	JOINT FIRE/WATER TRENCH
	2" WATER LINE
	THRUST BLOCK
	WATER SERVICE WITH METER
	GATE VALVE
	FIRE HYDRANT
	SEWER CLEAN-OUT
	SEWER MANHOLE
	ROAD PAVEMENT



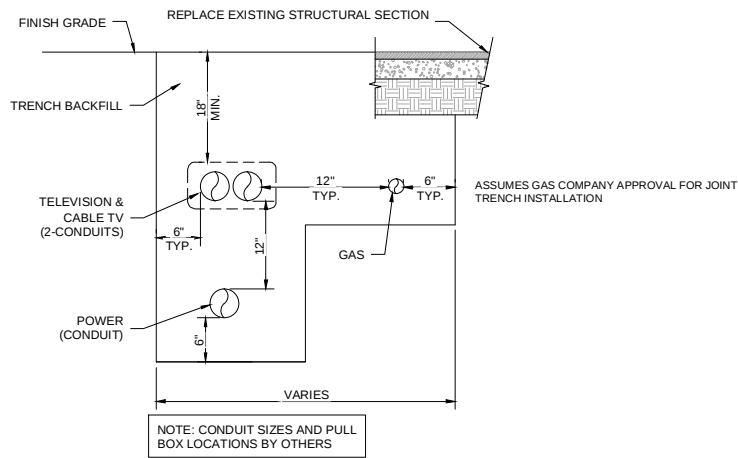
 **Ashley & Vance**
ENGINEERING, INC.

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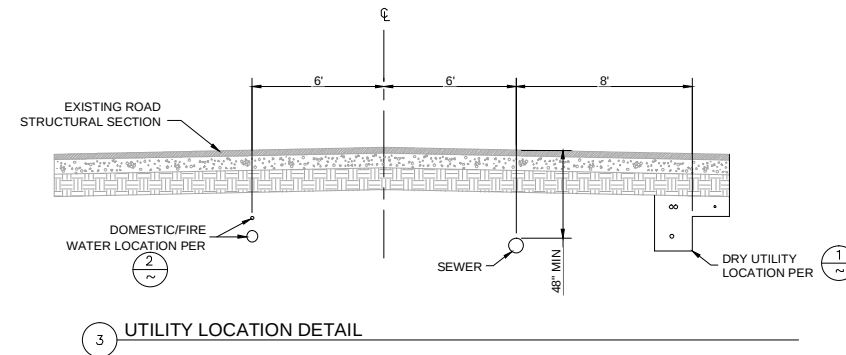
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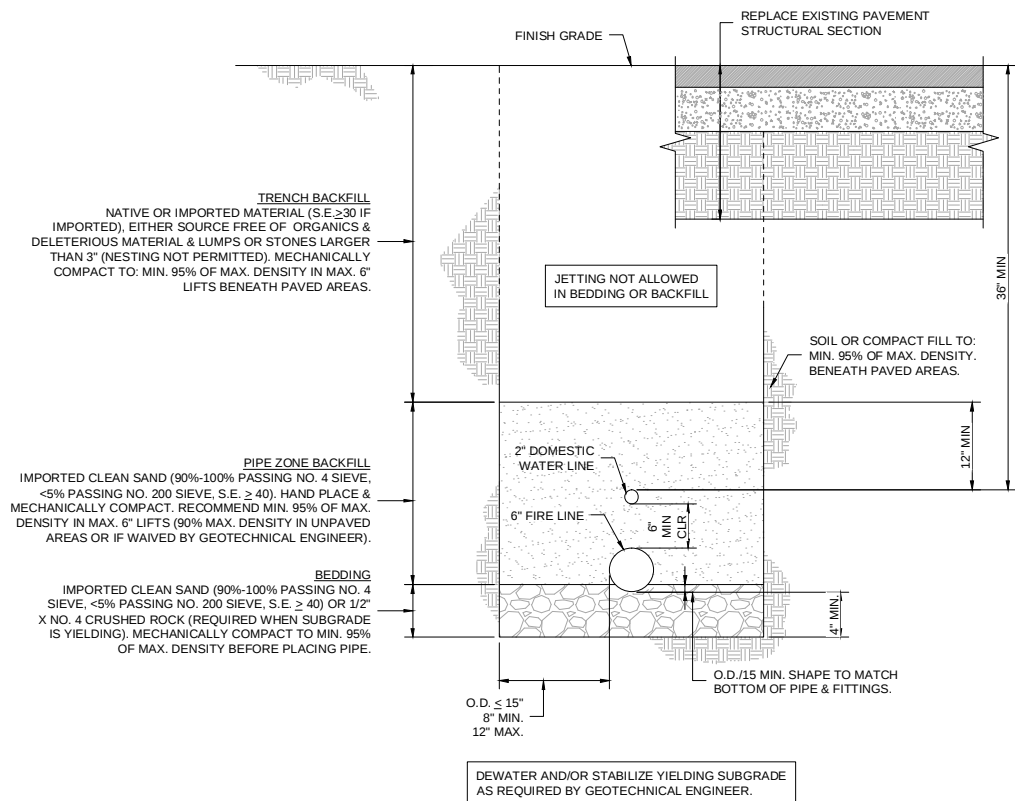
SHEET 2 OF 3



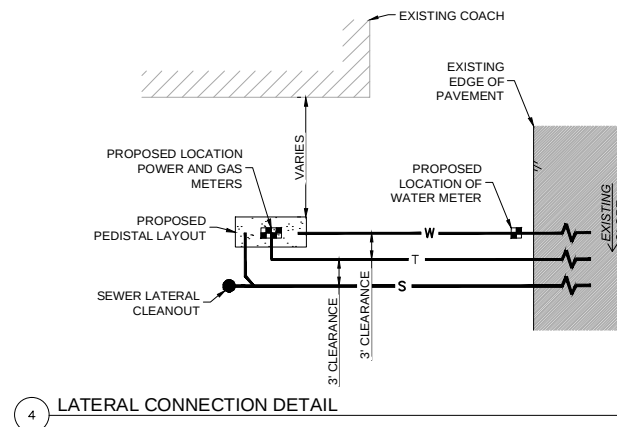
1 DRY UTILITY TRENCH DETAIL



3 UTILITY LOCATION DETAIL



2 JOINT DOMESTIC/FIRE WATER TRENCH DETAIL



4 LATERAL CONNECTION DETAIL

CHUMASH VILLAGE PRELIMINARY
UTILITY MASTER PLAN
DETAIL SHEET



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REFERENCE NOTES

- EXISTING METERED SWITCHBOARD TO REMAIN, SEE "MSB" PHOTO ON SHEET E-5,2.
- EXISTING DIRECT BURY FEEDER TO BE DISCONNECTED, TAPPED OFF, AND ABANDONED IN-PLACE.
- NEW FEEDER IN CONDUIT PER SITE PLAN ON SHEET E-2 AND WIRING MATRIX ON SHEET E-3. CROSS REFERENCE TO WIRING MATRIX PER UNIT SUBSTATION TRANSFORMER DESIGNATION, PULL BOXES NOT SHOWN ON S.L.D.
- EXISTING UNIT SUBSTATION WITH CIRCUIT BREAKERS SERVING SITE LOADS TO REMAIN, SEE PHOTOS ON SHEETS E-5,0, E-5,1 & E-5,2. DISCONNECT EXISTING INCOMING 480V POWER FEEDER AND RECONNECT UNIT TO THE NEW 480V POWER FEEDER. COORDINATE DOWN-TIME WITH OWNER.
- PROVIDE BUS LINK PER SWITCHGEAR MANUFACTURER.
- PROVIDE NEW 1600A, 480V, 3PH, 4W SWITCHBOARD SECTION.
- EXTEND CONCRETE HOUSEKEEPING PAD AS REQUIRED.

LEGEND

NOTE: INTERPRET IN CONTEXT

POWER/COMM.

- COMM IDF CABINET.
- ELECTRICAL PANEL.

CONDUIT/WIRE

- NEW
- UNDERGROUND
- FUTURE UNDERGROUND
- INDICATES LINE CONTINUES

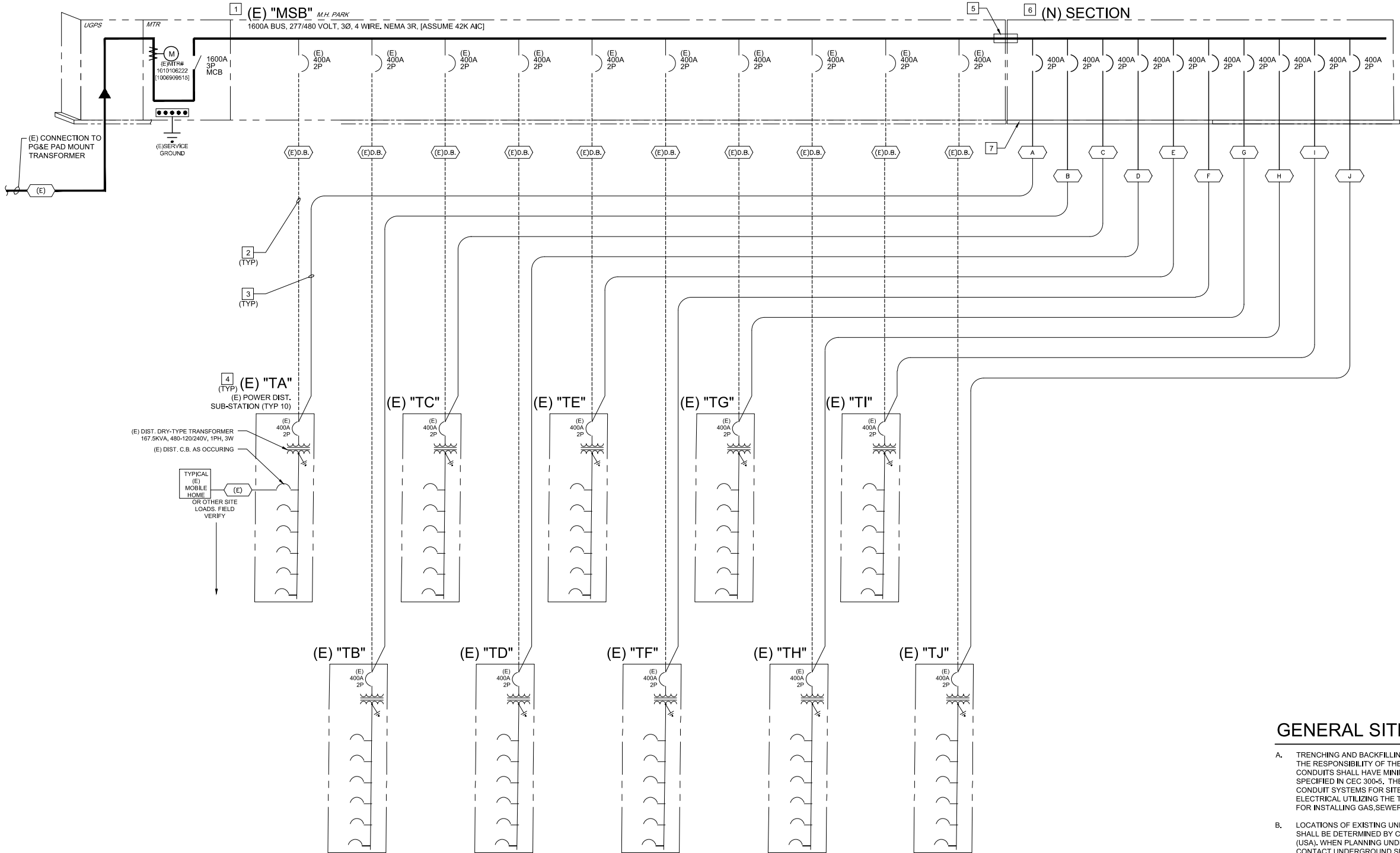
CONVENTIONS

- NUMBERED SHEET NOTES: REFERS TO NOTES ON SAME SHEET AS REFERENCE

- DETAIL REFERENCE:
 - DETAIL DESIGNATION
 - SHEET NUMBER REFERENCE

ABBREVIATIONS

A	AMPERE	G	GROUNDING CONDUCTOR	TYP	TYPICAL
AF	AMP FUSE RATING	GC	GENERAL CONTRACTOR	UC	UNDERCABINET
AFB	ABOVE FINISH FLOOR	GFI	GROUND FAULT CKT INTERRUPTER	UG	UNDERGROUND
AFG	ABOVE FINISH GRADE	GND	GROUND	UON	UNLESS OTHERWISE NOTED
AIC	AMPERES INTERRUPT CAPACITY	GRS	GALVANIZED RIGID STEEL	V	VOLT
AS	AMP SWITCH RATING	GWS	GANGED WITH SWITCH	VA	VOLT AMPERES
BFG	BELOW FINISH GRADE	IG	ISOLATED GROUND	W	WATT, WIRE
CB	CIRCUIT BREAKER	LTG	LIGHTING	WP	WEATHERPROOF (NEMA 3R)
CEC	CA. ELECTRICAL CODE	MC	MECHANICAL CONTRACTOR		
CKT	CIRCUIT	MCB	MAIN CIRCUIT BREAKER		
C	CONDUIT	MLO	MAIN LUGS ONLY		
(E)	EXISTING	MSB	MAIN SWITCHBOARD		
EC	ELECTRICAL CONTRACTOR	MTTB	MAIN TELEPHONE TERMINAL BOARD		
EF-#	EXHAUST FAN	(N)	NEW		
(EXN)	(E) IN (N) LOCATION	NIC	NOT IN CONTRACT		
(EXR)	(E) TO BE (R)	NL	NIGHT LIGHT		
(F)	FUTURE	P	POLE		
FA	FIRE ALARM	(R)	RELOCATED		
FACP	FIRE ALARM CONTROL PANEL	TBR	TO BE REMOVED		



ELECTRIAL SINGLE LINE DIAGRAM

GENERAL SITE PLAN NOTES

- TRENCHING AND BACKFILLING FOR ALL CONDUIT SYSTEMS SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR. ALL CONDUITS SHALL HAVE MINIMUM COVER REQUIREMENTS AS SPECIFIED IN CEC 300-5. THE INTENT OF THIS PLAN IS TO INSTALL CONDUIT SYSTEMS FOR SITE INFRASTRUCTURE FOR FUTURE ELECTRICAL UTILIZING THE TRENCHING AREAS THAT WILL BE USED FOR INSTALLING GAS,SEWER,WATER.
- LOCATIONS OF EXISTING UNDERGROUND (UG) UTILITY SYSTEMS SHALL BE DETERMINED BY CALLING UNDERGROUND SERVICE ALERT (USA). WHEN PLANNING UNDERGROUND WORK, AND BEFORE YOU DIG, CONTACT UNDERGROUND SERVICE ALERT (USA) AT LEAST 48 HOURS PRIOR TO EXCAVATION (WEEKENDS EXCLUDED) FOR THE LOCATION OF UNDERGROUND GAS AND ELECTRIC LINES OR EQUIPMENT.
- MAINTAIN REQUIRED CLEARANCES FROM ALL SANITARY SEWER, WATER AND STORM DRAIN PIPING. REFER TO CIVIL PLANS FOR EXACT LOCATIONS AND DEPTHS OF PIPING.

Plan Prepared By:



14113 Monterey Street
San Luis Obispo, CA 93401

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Engineer of Record:



THOMAS ELECTRIC, INC.
P.O. Box 1167 • 3562 Empire St.
San Luis Obispo, CA 93406
Phone: (805) 543-3850
Fax: (805) 543-3829
ast@thomaselec.com



REF. #17-8039 EXP. 06/30/21

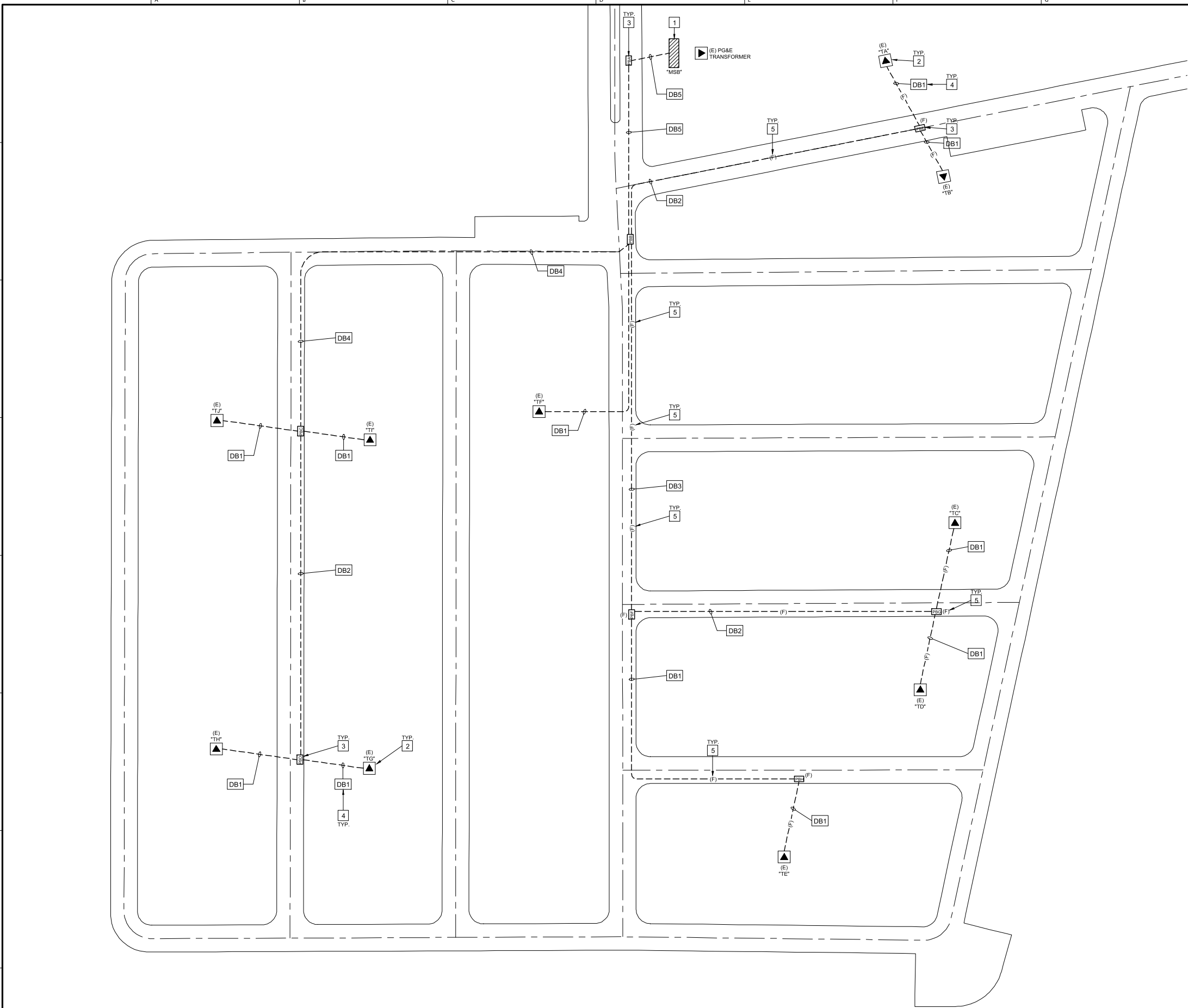
Project: CHUMASH VILLAGE SITE UTILITIES

GENERAL NOTES, LEGEND
AND ABBREVIATIONS

Revisions:

△	
△	
△	
△	
△	

Proj. Engr.: pm	Phone Ext.: 140
Proj. Mngr.: pm	Phone Ext.: 140
Date: 11/20/19	Scale: PER PLAN
A&V Job No.: 15800	



- REFERENCE NOTES**
- EXISTING 480V,3Ø MAIN SWITCHBOARD "MSB".
 - EXISTING UNIT SUB TRANSFORMER (480V TO 120/240V, SINGLE PHASE, THREE WIRE) AND DISTRIBUTION TO PEDESTALS AT SPACES.
 - PULL BOX FLUSH IN STREET, SEE SCHEDULE, (TYPICAL)
 - DUCT BANK DESIGNATION, SEE SCHEDULE, (TYPICAL)
 - DESIGNATES "FUTURE", TO BE INSTALLED IN SECOND PHASE OF PROJECT, (TYPICAL)

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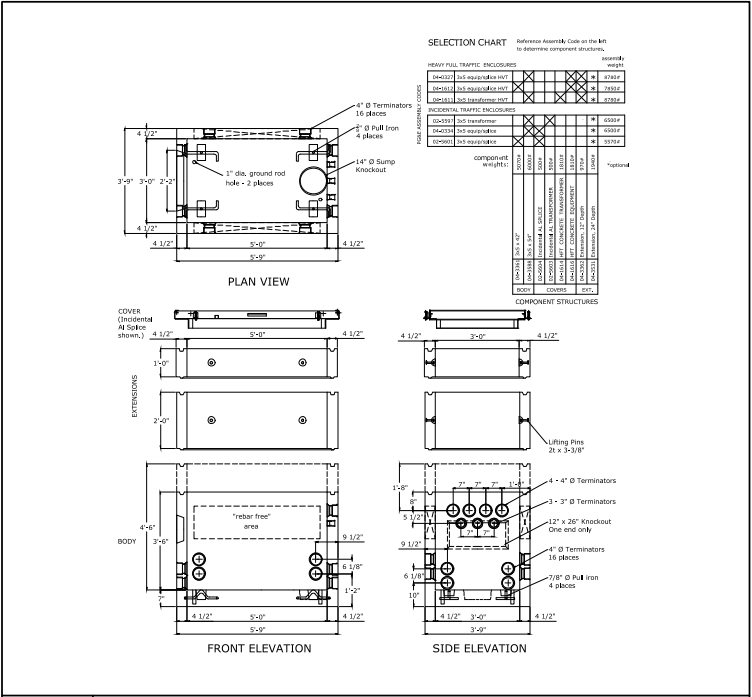
Engineer of Record:


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REF. #17-8039 EXP. 06/30/21

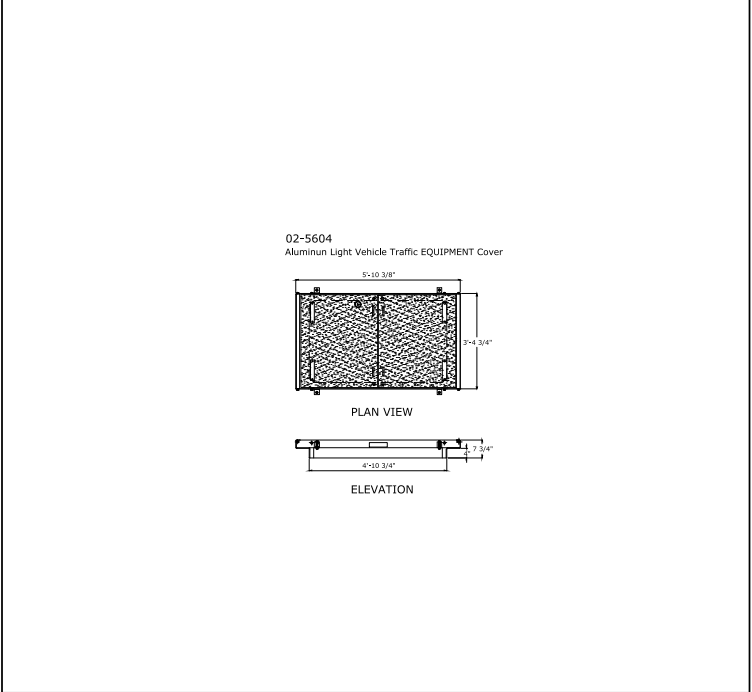
Project: **CHUMASH VILLAGE SITE UTILITIES**
ELECTRICAL SITE PLAN

Revisions:	
	
	
	
	
	
Proj. Engr.: pm Phone Ext.: 140	
Proj. Mngr.: pm Phone Ext.: 140	
Date: 11/20/19	Scale: PER PLAN
A&V Job No.: 15800	



1

PG&E #5 3' X 5' ENCLOSURES AND EXTENSIONS
SCALE: NTS



2

3' X 5' PG&E COVERS
SCALE: NTS

WIRING MATRIX

Xformer	Distance	Capacity	Volts	Amps	3% VD	Wire Size	Wire type	Actual VD	Parallel	C Size	% Fill
A	650	167 Kva	480 1 ph	348	456.5	250	Xhhw AL	2.66	6 + 1G	4"	18.66
B	650	167 Kva	480 1 ph	348	456.5	250	Xhhw AL	2.66	6 + 1G	4"	18.66
C	1000	167 Kva	480 1 ph	348	456.5	350	Xhhw AL	2.92	6 + 1G	4"	24.69
D	1000	167 Kva	480 1 ph	348	456.5	350	Xhhw AL	2.92	6 + 1G	4"	24.69
E	1050	167 Kva	480 1 ph	348	456.5	350	Xhhw AL	3.07	6 + 1G	4"	24.69
F	525	167 Kva	480 1 ph	348	456.5	250	Xhhw AL	2.15	6 + 1G	4"	18.66
G	1250	167 Kva	480 1 ph	348	456.5	350	Xhhw AL	2.74	8 + 1G	4"	32.92
H	1250	167 Kva	480 1 ph	348	456.5	350	Xhhw AL	2.74	8 + 1G	4"	32.92
I	900	167 Kva	480 1 ph	348	456.5	350	Xhhw AL	2.63	6 + 1G	4"	24.69
J	900	167 Kva	480 1 ph	348	456.5	350	Xhhw AL	2.63	6 + 1G	4"	24.69

DUCT BANK SCHEDULE

DESIGNATION	CONDUITS QUANTITY/SIZE	COMMENTS
DB1	(1) 4" PVC 40	SEE TRENCH DETAIL 1 E-4
DB2	(2) 4" PVC 40	SEE TRENCH DETAIL 2 E-4
DB3	(3) 4" PVC 40	SEE TRENCH DETAIL 3 E-4
DB4	(4) 4" PVC 40	SEE TRENCH DETAIL 4 E-4
DB5	(10) 4" PVC 40	SEE TRENCH DETAIL 5 E-4

PULL BOX SCHEDULE

DESIGNATION	SIZE	RATING	LABEL
PBA	3' x 5'	FULL TRAFFIC	ELECTRIC
PBB	3' x 5'	FULL TRAFFIC	ELECTRIC
PBC	3' x 5'	FULL TRAFFIC	ELECTRIC
PBD	3' x 5'	FULL TRAFFIC	ELECTRIC
PBE	3' x 5'	FULL TRAFFIC	ELECTRIC
PBF	3' x 5'	FULL TRAFFIC	ELECTRIC
PBG	3' x 5'	FULL TRAFFIC	ELECTRIC
PBH	3' x 5'	FULL TRAFFIC	ELECTRIC

GENERAL NOTES

- ALL CONDUCTORS TO BE LABELED AT MSB AND TRANSFORMERS.

EXAMPLE:

TRANSFORMER A - PHASE A
TRANSFORMER A - PHASE B

TRANSFORMER B - PHASE A
TRANSFORMER B - PHASE C

TRANSFORMER C - PHASE B
TRANSFORMER C - PHASE C



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San Luis Obispo, CA 93401

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Plan Prepared By:

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ast@thomaelec.com



REF. #17-8039

EXP. 06/30/21

Project: CHUMASH VILLAGE SITE UTILITIES

ELECTRICAL SCHEDULES AND DETAILS

Revisions:

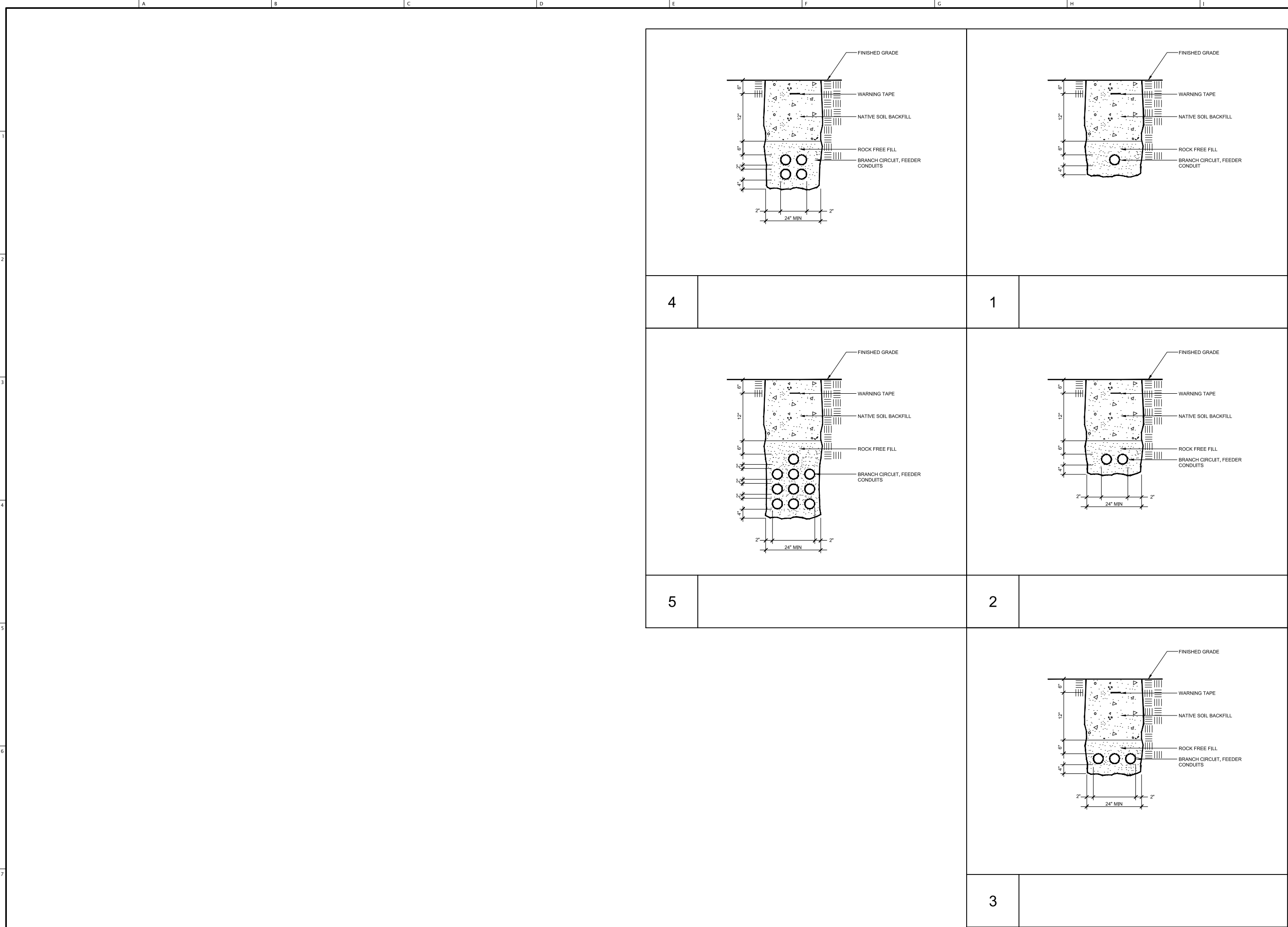
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Proj. Mngr.: pm Phone Ext.: 140

Date: 11/20/19 Scale: PER PLAN

A&V Job No.: 15800



TYPICAL FEEDER / BRANCH CIRCUIT CONDUIT TRENCH DETAILS

SCALE: NTS

Plan Prepared By:

**Ashley & Vance**
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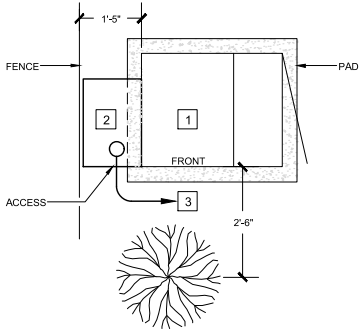

REF. #17-8039
EXP. 06/30/21

Project:

CHUMASH VILLAGE SITE UTILITIES

DUCT BANK DETAILS

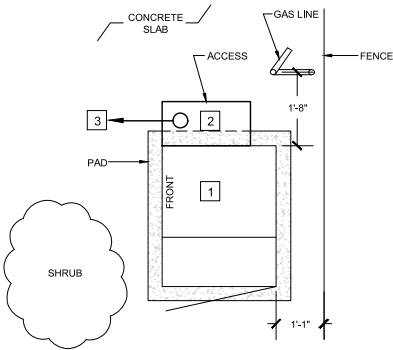
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Date: 11/20/19	Scale: PER PLAN
A&V Job No.: 15800	



- REFERENCE NOTES
- EXISTING 167 KVA TRANSFORMER WITH BREAKER PANEL FOR UNITS.
 - NEW 16" W x 24" H x 24" D NEMA 3R JUNCTION BOX.
 - NEW (1) 4" C WITH (6) 250 MCM XHHW AL + (1) 4/0 XHHW AL GROUND TO NEW UNDERGROUND VAULT.

TRANSFORMER TA

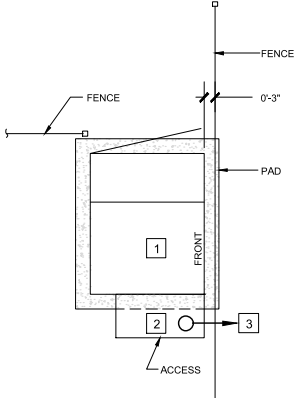
SCALE: 1/2" = 1'-0"



- REFERENCE NOTES
- EXISTING 167 KVA TRANSFORMER WITH BREAKER PANEL FOR UNITS.
 - NEW 24" W x 24" H x 12" D NEMA 3R JUNCTION BOX.
 - NEW (1) 4" C WITH (6) 250 MCM XHHW AL + (1) 4/0 XHHW AL GROUND TO NEW UNDERGROUND VAULT.

TRANSFORMER TB

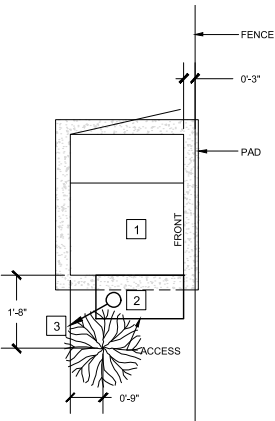
SCALE: 1/2" = 1'-0"



- REFERENCE NOTES
- EXISTING 167 KVA TRANSFORMER WITH BREAKER PANEL FOR UNITS.
 - NEW 24" W x 24" H x 12" D NEMA 3R JUNCTION BOX.
 - NEW (1) 4" C WITH (6) 350 MCM XHHW AL + (1) 4/0 XHHW AL GROUND TO NEW UNDERGROUND VAULT.

TRANSFORMER TC

SCALE: 1/2" = 1'-0"



- REFERENCE NOTES
- EXISTING 167 KVA TRANSFORMER WITH BREAKER PANEL FOR UNITS.
 - NEW 24" W x 24" H x 12" D NEMA 3R JUNCTION BOX.
 - NEW (1) 4" C WITH (6) 350 MCM XHHW AL + (1) 4/0 XHHW AL GROUND TO NEW UNDERGROUND VAULT.

TRANSFORMER TD

SCALE: 1/2" = 1'-0"

Man Prepared By:

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Engineer of Record:

Thomas
THOMA ELECTRIC, INC.

REGISTERED PROFESSIONAL ENGINEER
WILLIAM A. THOMA
NO. 10757
ELECTRICAL
STATE OF CALIFORNIA

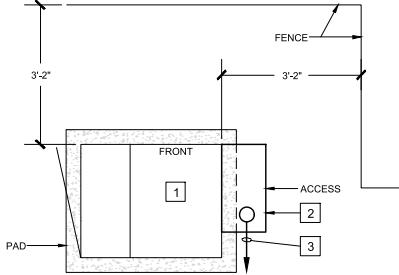
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Project: CHUMASH VILLAGE SITE UTILITIES

TRANSFORMER DETAILS

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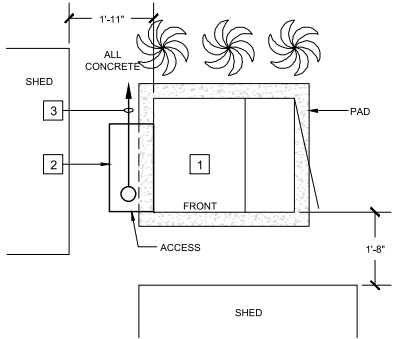
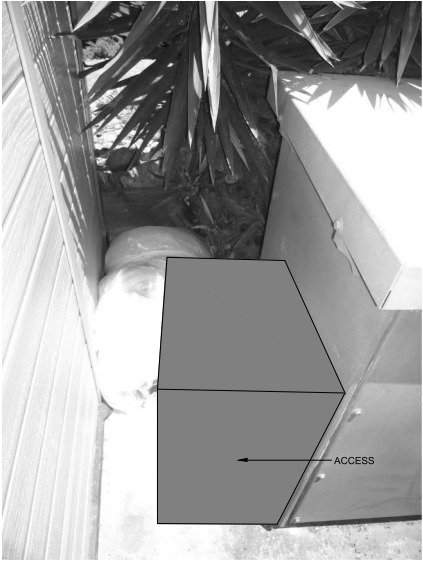


REFERENCE NOTES

- EXISTING 167 KVA TRANSFORMER WITH BREAKER PANEL FOR UNITS.
- NEW 24" W x 24" H x 12" D NEMA 3R JUNCTION BOX.
- NEW (1) 4" C WITH (6) 350 MCM XHHW AL + (1) 4/0 XHHW AL GROUND TO NEW UNDERGROUND VAULT.

TRANSFORMER TI

SCALE: 1/2" = 1'-0"

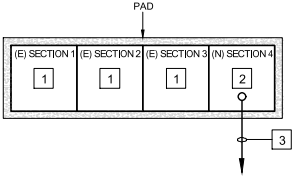


REFERENCE NOTES

- EXISTING 167 KVA TRANSFORMER WITH BREAKER PANEL FOR UNITS.
- NEW 12" W x 24" H x 24" D NEMA 3R JUNCTION BOX.
- NEW (1) 4" C WITH (3) 350 MCM XHHW AL + (1) 4/0 XHHW AL GROUND TO NEW UNDERGROUND VAULT.

TRANSFORMER TJ

SCALE: 1/2" = 1'-0"



REFERENCE NOTES

- EXISTING MAIN SWITCHBOARD, SECTIONS 1, 2 AND 3 - 1600A, 480V, 3Ø, 3W, DELTA. ALL SECTIONS - 36" W x 90" H x 36" D, NEMA 3R.
- NEW SECTION 4 - 36" W x 90" H x 36" D, NEMA 3R.
- NEW (10) 4"C TO NEW UNDERGROUND VAULT "A".

MSB

SCALE: 1/4" = 1'-0"

Man Prepared By:

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Engineer of Record:

thoma

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REGISTERED PROFESSIONAL ENGINEER

WILLIAM A. THOMA

NO. 10757

ELECTRICAL

STATE OF CALIFORNIA

REF. #17-8039

EXP. 06/30/21

Project:

CHUMASH VILLAGE SITE UTILITIES

TRANSFORMER DETAILS

Revisions:

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