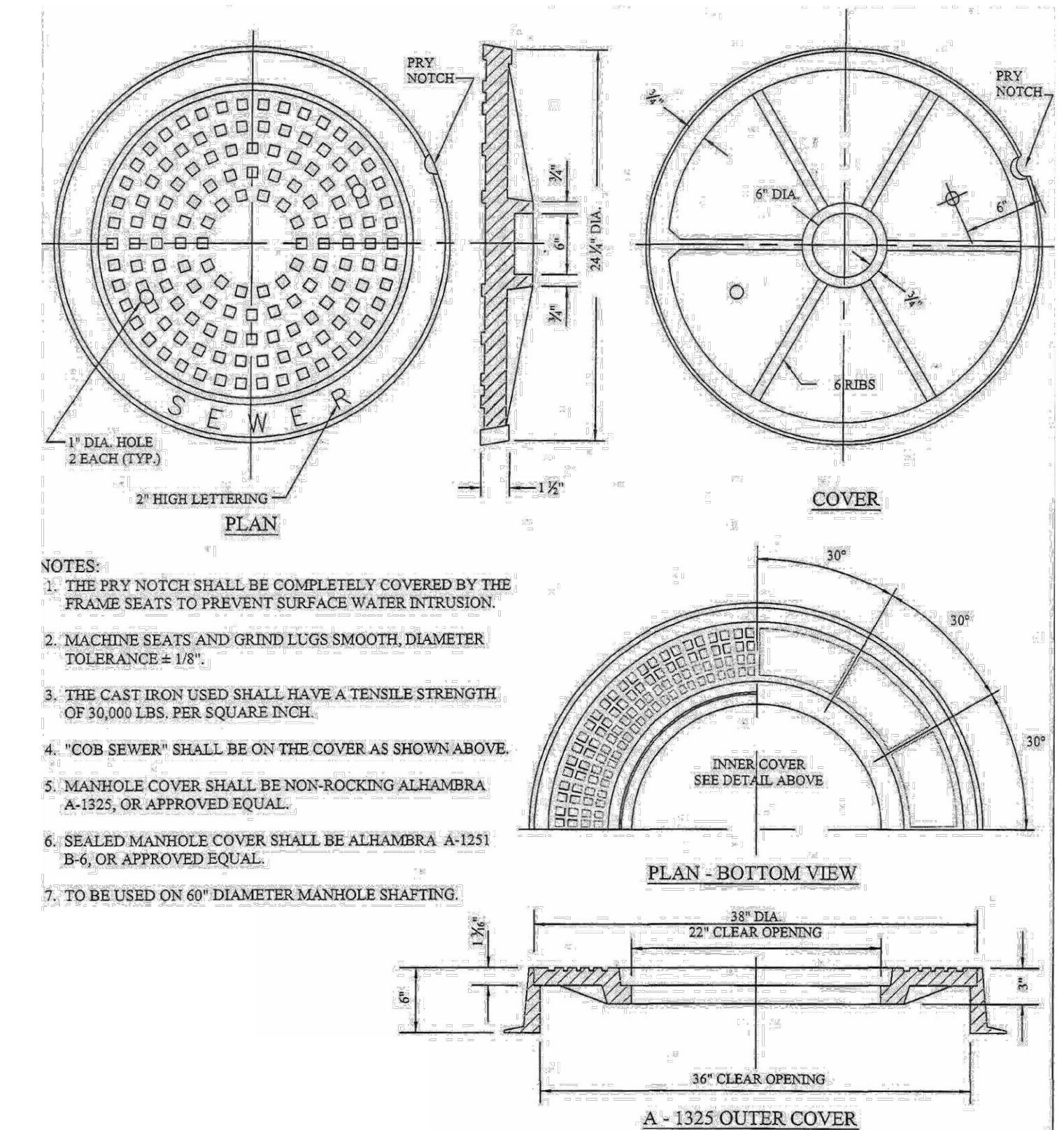
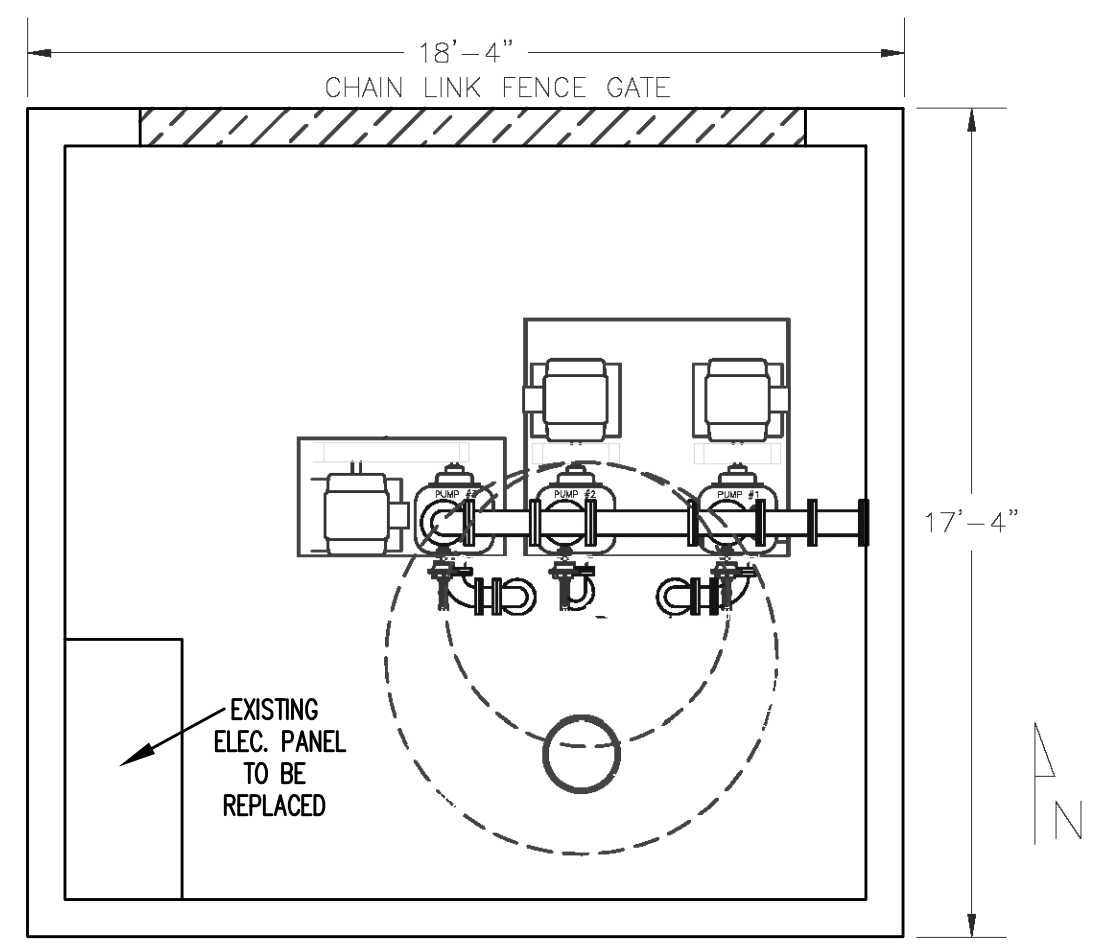


- GENERAL NOTES:
- MANHOLE SECTIONS SHALL BE PRECAST REINFORCED CONCRETE HAVING A MINIMUM THICKNESS OF SIX INCHES AND CONFORMING TO ASTM C-478 REQUIREMENTS FOR MATERIALS AND MANUFACTURE AND ASTM REQUIREMENTS FOR REINFORCEMENT.
 - VERTICAL WALL OF CONE SHALL BE OPPOSITE OUTLET SIDE OF MANHOLE.
 - CONE SHALL BE RAISED WHEN GRADE RINGS EXCEED 18".
 - SUPPORT COLLAR SHALL CONSIST OF CLASS "33" CONCRETE.
 - JOINTS SHALL CONSIST OF 1-2 CEMENT MORTAR, NEATLY STRUCK AND POINTED, 3/8" MIN. THICKNESS, OR RAM-NECK, EXCEPT FOR GRADE ADJUSTING RINGS WHICH SHALL BE 1-2 CEMENT MORTAR ONLY.
 - CONCRETE SHALL BE CLASS "23" CONCRETE WHICH SHALL ATTAIN A 28-DAY COMPRESSIVE STRENGTH OF 4000 PSI IN ACCORDANCE WITH ASTM C39/C39M-99.
 - SHELF SHALL HAVE A MEDIUM BROOM FINISH.
 - THE MAXIMUM DROP BETWEEN THE OUTLET AND INLET OF THIS STRUCTURE IS 0.60' FOR STRAIGHT THROUGH FLOW AND 1.00' FOR SIDE INLET FLOW.
 - THIS MANHOLE IS FOR DEPTHS GREATER THAN 3'-0" AND LESS THAN 20'. MAXIMUM CARRIER PIPE 24" INTERNAL DIAMETER.
 - TROUGH:
 - SHALL NOT HAVE A FLAT BOTTOM.
 - SHALL HAVE A STEEL TROWELED FINISH.
 - DIAMETER OF FEEDLINE SHALL NOT "FLARE OUT" WHERE IT JOINS THE MAINLINE TROUGH.
 - "JIFFY RINGS" SHALL NOT BE ALLOWED.
 - FOR STRAIGHT THROUGH FLOW THE "Y" SHALL NOT BE CONSTRUCTED UNLESS A STUB OR LATERAL IS SHOWN ON THE PLANS AS BEING REQUIRED.
 - PVC T-LOCK LINING MAY BE REQUIRED AS DIRECTED BY THE COUNTY.
 - MANHOLE RING AND COVER SHALL BE RAISED TO FINISHED GRADE AND SUPPORT COLLAR INSTALLED AFTER PAVING OR FINE GRADING.
 - EXFILTRATION RINGS SHALL BE CONSISTENT WITH PIPE MANUFACTURER'S RECOMMENDATIONS.

PRECAST MANHOLE **A**
 IMPERIAL COUNTY STD. DWG. 222 & 222A **C8**



MANHOLE FRAME COVER TYPE B **B**
 IMPERIAL COUNTY STD. DWG. 224A **C8**



PUMP HOUSE **C**
 NTS **C8**

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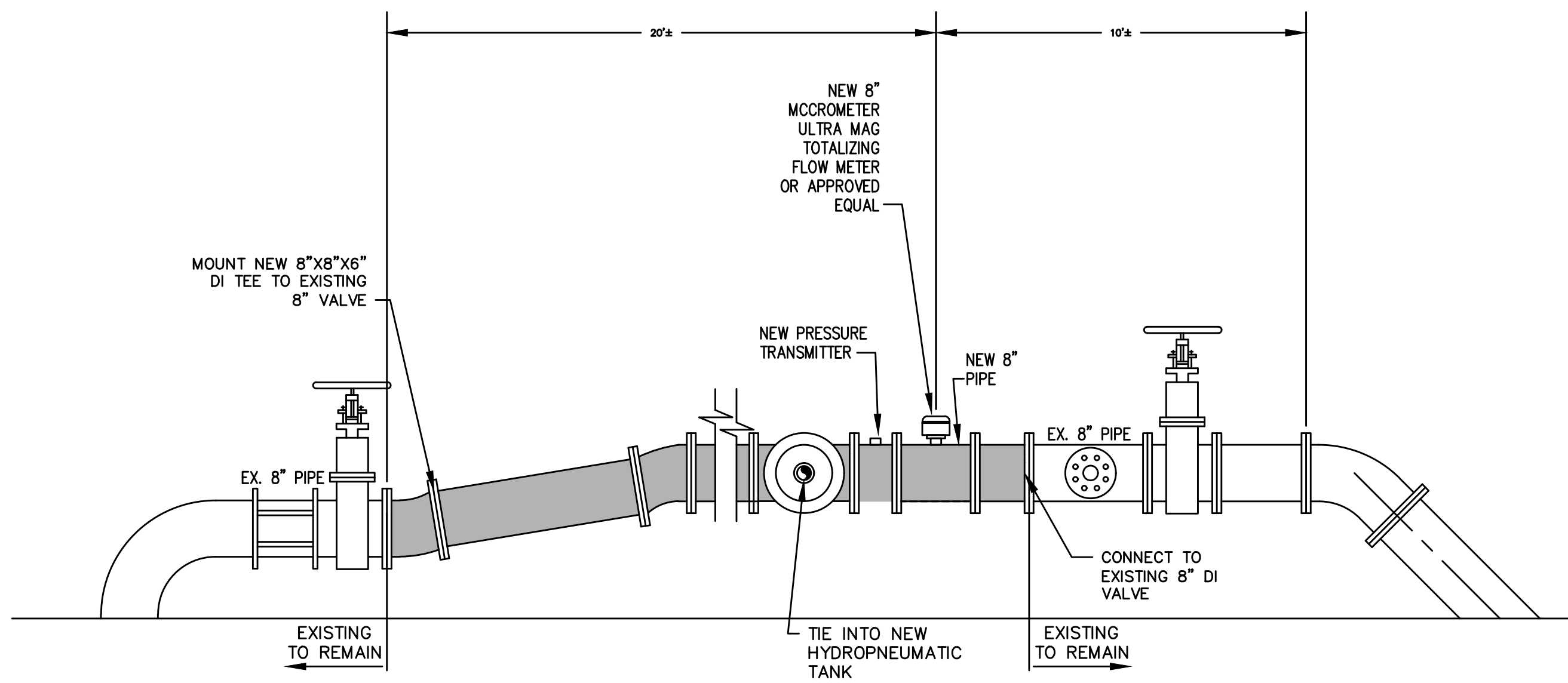


WINTERHAVEN WATER/SEWER IMPROVEMENT

SEWER SYSTEM IMPROVEMENT DETAILS	SCALE: AS SHOWN
	DATE: NOV., 2016
	DES. BY: EG
	DRAWN BY: ZF
	SURVEYED BY: RS
	JOB. No.: 016-0039
	SHEET 9 OF 17

C8

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Existing Pressure Tank - Elevation A
C9
NTS

PLANT CONTROL PARAMETERS:

1. THE LEAD LF PUMP SHALL ENERGIZE WHEN LINE PRESSURE DROPS BELOW 40 PSI. IF LINE FLOW IS LESS THAN 85 GPM, THE PUMP SHALL BE OPERATED AT THE MINIMUM FLOW SET POINT UNTIL LINE PRESSURE REACHES 60 PSI AND DE-ENERGIZED. IF FLOW IS GREATER THAN 85 GPM, THE PUMP SHALL BE OPERATED TO MAINTAIN A LINE PRESSURE OF 50 PSI. THE MINIMUM FLOW SET POINT SHALL BE 85 GPM. THE MINIMUM FLOW SET POINT CAN BE LOWERED IF NECESSARY TO KEEP PUMP STARTS BELOW 6 STARTS PER HOUR AT OPERATORS DISCRETION, BUT SHALL NOT BE SET BELOW THE MINIMUM PUMP SPEED (APPROXIMATELY 60 GPM @ 40 PSI)
2. IF FLOW IS GREATER THAN 85 GPM AND THE LEAD LF PUMP CANNOT MAINTAIN 50 PSI, THE LAG LF PUMP SHALL BE ENERGIZED AND BOTH PUMPS SHALL BE OPERATED TO MAINTAIN 50 PSI. IF LINE FLOW DROPS BELOW 120 GPM, THE LEAD LF PUMP SHALL BE DE-ENERGIZED AND BECOME THE LAG LF PUMP. THE PUMPS SHALL BE ALTERNATED AFTER EACH PUMP CYCLE.
3. IF THE LEAD AND LAG LF PUMPS ARE MAXIMUM SPEED AND CANNOT MAINTAIN A LINE PRESSURE OF 50 PSI, BOTH LF PUMPS SHALL BE DE-ENERGIZED AND THE LEAD HF PUMP SHALL BE ENERGIZED. IF SYSTEM PRESSURE CONTINUES TO DROP, THE HF LAG PUMP SHALL BE ENERGIZED. IF LINE PRESSURE CONTINUES TO DROP, THE EMERGENCY LINE PUMP SHALL BE ENERGIZED. THE HF PUMP(S) SHALL BE OPERATED UNTIL LINE PRESSURE REACHES 55 PSI AND DE-ENERGIZED. THIS HF PUMPS SHALL OPERATE IN ATRI-FLEX CONFIGURATION AFTER EACH PUMP CYCLE., THE LEAD HF PUMP SHALL BECOME THE EMERGENCY LAG PUMP. THE EMERGENCY LAG PUMP SHALL BECOME THE LAG PUMP, AND THE LINE PUMP SHALL BECOME THE LEAD PUMP.
4. THE WELL PUMPS SHALL BE OPERATED ON STORAGE TANK LEVELS AND SHALL BE OPERATED IN A LEAD/LAG DUPLEX CONFIGURATION TO MAINTAIN A MAXIMUM TANK LEVEL AS DETERMINED BY THE OPERATOR. THIS MINIMUM DISTANCE BETWEEN THE STORAGE TANK LEAD/LAG FLOAT SET POINTS SHALL BE 2 FEET, CONSULT THE OPERATOR ON DESIRED FLOAT SET POINTS.
5. THE AUTO-DIALER SYSTEM SHALL BE SET TO NOTIFY PLANT PERSONNEL OF ANY ABNORMAL OR EMERGENCY OPERATING CONDITION. COORDINATE WITH THE OPERATOR FOR DESIRED NOTIFICATION PARAMETERS.
6. SEE ELECTRICAL SHEETS FOR ADDITIONAL PLC/AUTO-DIALER INFORMATION.
7. SEE NOTE 10 ON SHEET E-2 FOR ADDITIONAL EMERGENCY POWER PARAMETERS.

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WINTERHAVEN WATER/SEWER IMPROVEMENT

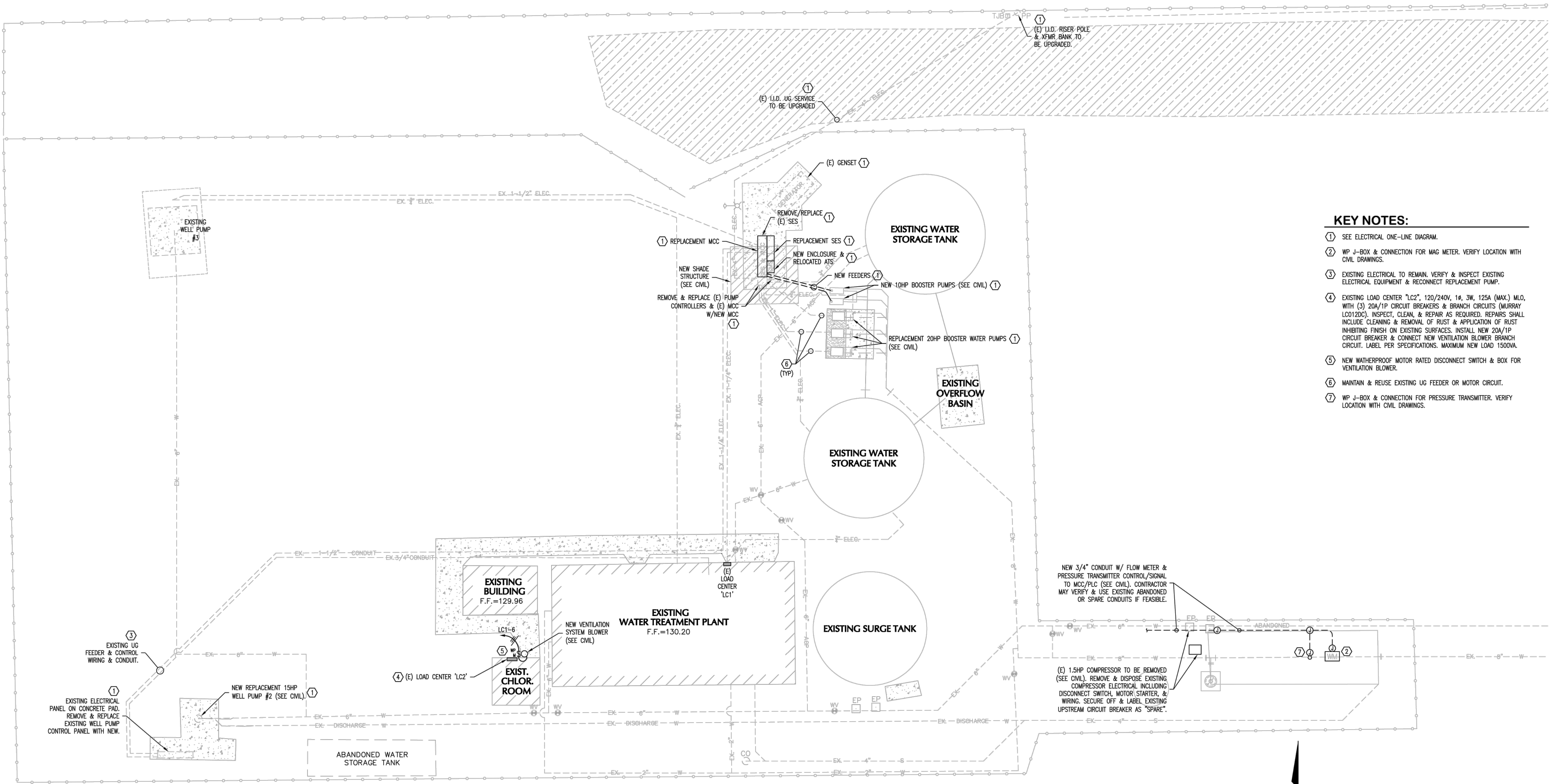
**WATER PLANT IMPROVEMENTS
DETAILS**



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Email: nei@nelaw.com

SCALE:	AS SHOWN
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DRAWN BY:	ZF
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JOB. No.:	016-0039
SHEET	10 OF 17

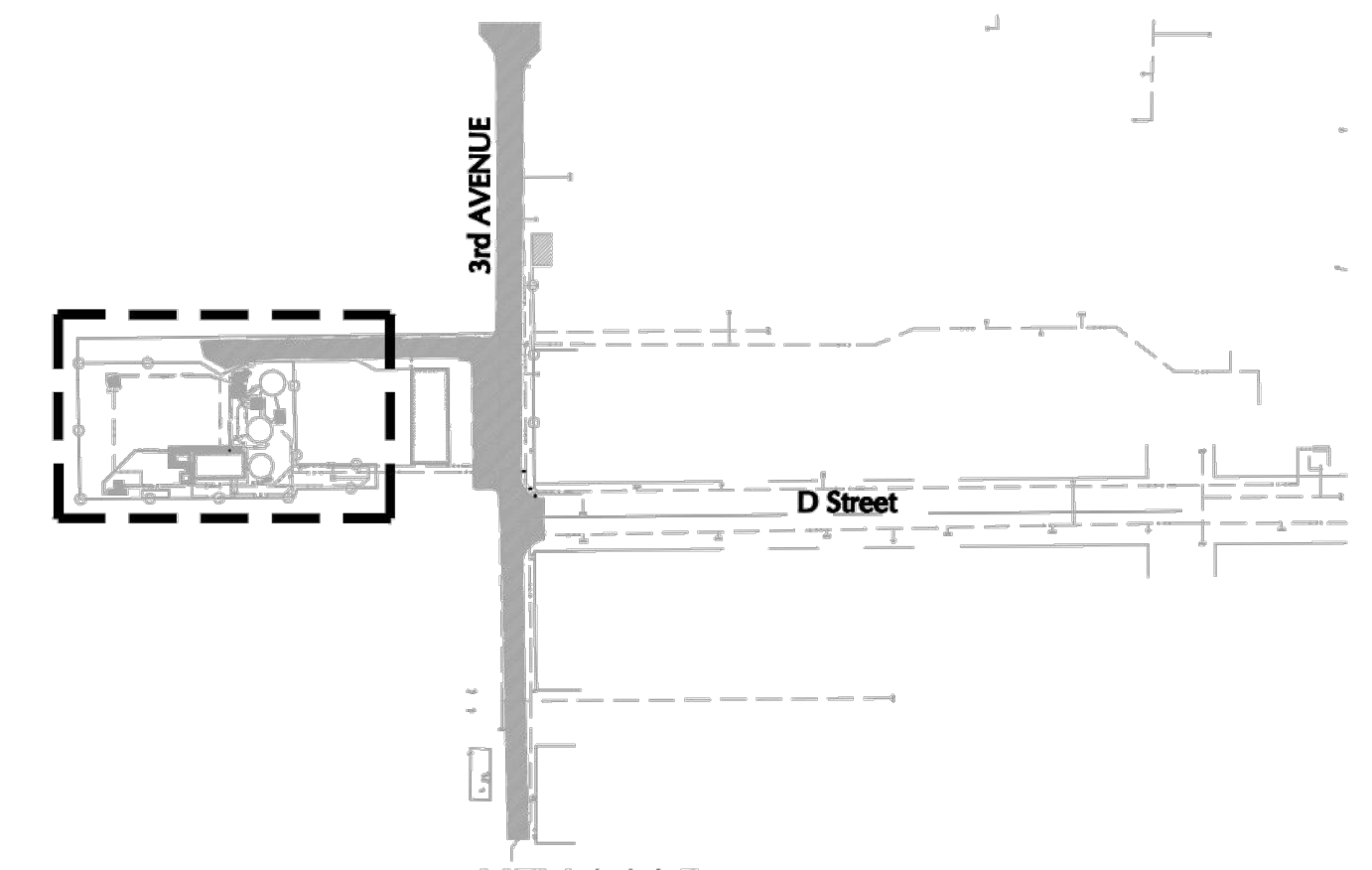
C9



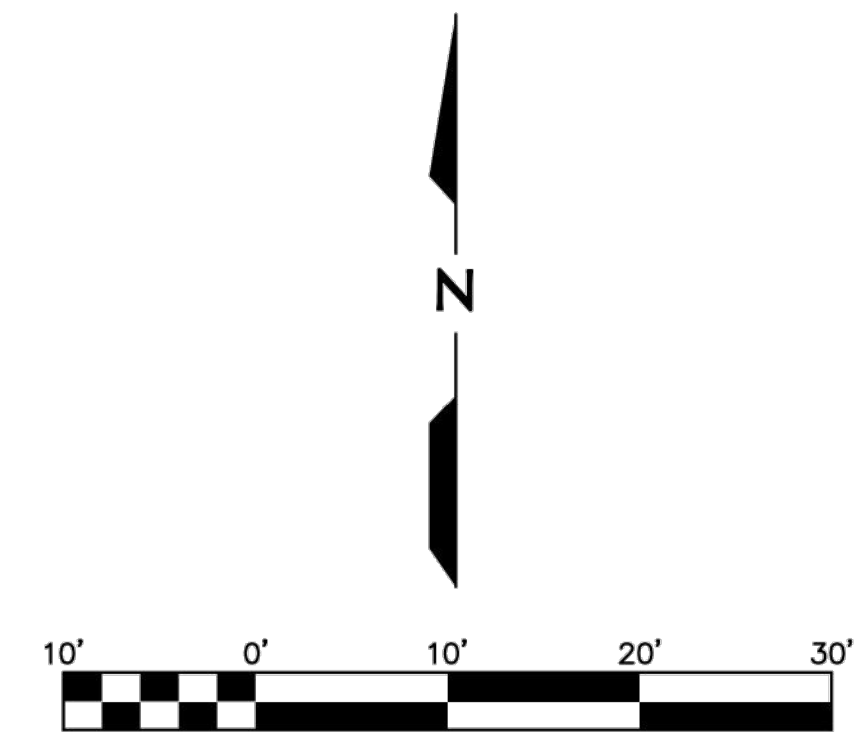
- KEY NOTES:**
- ① SEE ELECTRICAL ONE-LINE DIAGRAM.
 - ② WP J-BOX & CONNECTION FOR MAG METER. VERIFY LOCATION WITH CIVIL DRAWINGS.
 - ③ EXISTING ELECTRICAL TO REMAIN. VERIFY & INSPECT EXISTING ELECTRICAL EQUIPMENT & RECONNECT REPLACEMENT PUMP.
 - ④ EXISTING LOAD CENTER 'LC2', 120/240V, 1φ, 3W, 125A (MAX.) MLO, WITH (3) 20A/1P CIRCUIT BREAKERS & BRANCH CIRCUITS (MURRAY LC012DC). INSPECT, CLEAN, & REPAIR AS REQUIRED. REPAIRS SHALL INCLUDE CLEANING & REMOVAL OF RUST & APPLICATION OF RUST INHIBITING FINISH ON EXISTING SURFACES. INSTALL NEW 20A/1P CIRCUIT BREAKER & CONNECT NEW VENTILATION BLOWER BRANCH CIRCUIT. LABEL PER SPECIFICATIONS. MAXIMUM NEW LOAD 1500VA.
 - ⑤ NEW WATERPROOF MOTOR RATED DISCONNECT SWITCH & BOX FOR VENTILATION BLOWER.
 - ⑥ MAINTAIN & REUSE EXISTING UG FEEDER OR MOTOR CIRCUIT.
 - ⑦ WP J-BOX & CONNECTION FOR PRESSURE TRANSMITTER. VERIFY LOCATION WITH CIVIL DRAWINGS.

- ELECTRICAL GENERAL NOTES:**
1. ALL MATERIALS AND WORKMANSHIP TO BE NEW AND OF FIRST RATE QUALITY. MATERIALS TO BE UL LISTED AND APPROVED. ALL MATERIALS AND EQUIPMENT SHALL BE INSTALLED IN COMPLIANCE WITH THE CURRENT ADOPTED EDITION OF THE NATIONAL ELECTRICAL CODE AND ANY OTHER STATE AND LOCAL APPLICABLE CODES.
 2. ALL CEILING, FLOOR, AND WALL PENETRATIONS AND BOXES SHALL BE CAULKED/SEALED TO PRESERVE FIRE RATINGS AND WATER PROOF INTEGRITY.
 3. ALL ELECTRICAL CONDUCTORS SHALL BE COPPER, 90 DEGREE C TEMPERATURE RATING, MINIMUM SIZE IS NO. 12 AWG. ALL WIRING SHALL BE IN CONDUIT UNLESS OTHERWISE NOTED ON THE DRAWINGS. UNDERGROUND CONDUCTORS MUST BE RATED FOR 90 DEGREE C AS DEFINED FOR "WET LOCATION" BY THE NEC UNLESS NOTED OTHERWISE.
 4. A. ALL CONDUIT SHALL BE METALLIC ELECTRICAL CONDUIT UNLESS NOTED OTHERWISE ON THE DRAWINGS. MINIMUM SIZE CONDUIT IS 1/2". ALL CONDUITS AND BOXES SHALL BE CONCEALED ABOVE CEILINGS, IN WALLS OR UNDER FLOORS AS REQUIRED OR AS NOTED OTHERWISE ON THE DRAWINGS.
 B. UNDERGROUND CONDUIT SHALL BE MINIMUM OF SCHEDULE 40 PVC, 90 DEGREE C, RATED WITH MINIMUM OF TRENCH COVER PER NEC TABLE 300-5. ALL UNDERGROUND JUNCTION/PULL BOXES SHALL BE RATED THE SAME AS THE ASSOCIATED CONDUIT, MINIMUM SIZE UNDERGROUND CONDUIT IS 3/4".
 5. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF CONDUIT, WIRING, ELECTRICAL EQUIPMENT AND ASSOCIATED HARDWARE WITH THE INSTALLATION OF THE MECHANICAL EQUIPMENT AND OTHER TRADES. SEE THE MECHANICAL/CIVIL PLANS FOR EXACT LOCATIONS.
 6. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR COORDINATION AND INSTALLATION OF EXISTING SERVING ELECTRICAL TELEPHONE/TV COMPANY SYSTEMS AND SERVICE EQUIPMENT. UNDERGROUND TRENCH LOCATIONS MUST BE VERIFIED BY THE SERVING UTILITY. CONTACT WITH THE SERVING UTILITIES IS REQUIRED PRIOR TO INSTALLATION. THE CONTRACTOR IS RESPONSIBLE FOR EXISTING FIELD CONDITIONS AND PROVIDING A FULL FUNCTIONING ELECTRICAL SYSTEM.
 7. ALL LIGHT FIXTURES, RECEPTACLE AND JUNCTION BOXES, PANEL BOARDS AND ALL OTHER METALLIC ELECTRICAL APPLIANCES AND DEVICES MUST BE GROUNDED AS REQUIRED BY SECTION 250 OF THE NATIONAL ELECTRICAL CODE.
 8. MATERIALS & INSTALLATION SHALL COMPLY WITH REQUIREMENTS FOR INSTALLATION IN SEISMIC ZONE 4/DESIGN CATEGORY D.

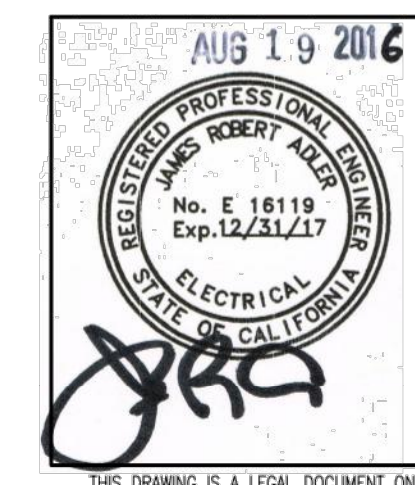
ELECTRICAL SITE PLAN



KEY MAP
N.T.S.



NO WORK SHALL BE DONE ON THIS SITE UNTIL BELOW AGENCY IS NOTIFIED OF INTENTION TO GRADE OR EXCAVATE.
 Underground Service Alert
 Call: TOLL FREE
 811
 TWO WORKING DAYS BEFORE YOU DIG.



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 JOB. No.: 16-036

WINTERHAVEN WATER/SEWER IMPROVEMENT

W.T.P. ELECTRICAL SITE PLAN

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SURVEYED BY: RS
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SHEET 11 OF 17

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