

Electrical and Electronic Systems:

This facility is maintained and operated by Deal Lake Commission. The project consists of electrical and electronic work as described herein for a gatehouse such as but not limited to replacement of existing door with a new white door shall be fiberglass all weather with raised panel appearance similar to existing door shall open out right hand swing, stain less steel hardware, new electrical service underground from JCP&L, new power panel, interior & exterior LED lighting, electric cabinet heater, new security system, CCTV, weather station with secure remote access, electric sluice gate actuators with remote control, new wireless broadband service, data equipment cabinet with accessories electric cabinet heater, and power ventilation.

All work shall comply with Electrical power, lighting and telecommunications shall be provided to the facility as specified below, in accordance with APPLICABLE CRITERIA, GENERAL TECHNICAL REQUIREMENTS, all IEEE (including Recommended Practice), UL Standards and all Army UFS requirements where the IEEE, UL and UFC's scope is applicable to this design effort and where itemized, in the combined interdisciplinary areas cited. Work shall conform to the current edition of all applicable codes, including but not limited to UBC, NEC, NFPA, ANSI, IES, NESC, Life Safety and Military Handbook will apply. Where differences appear, the strictest interpretation shall apply. National codes, building construction codes and life safety codes will be used where applicable; however, Army publications will take precedence over other published requirements. National or local codes will be referred to only in the absence of published Army or Department of Defense guidelines.

The contractor shall have the electrical work performed by a licensed electrical contractor licensed in the State of New Jersey, County of Monmouth and have a minimum 5 years experience performing work described herein and the contractor shall hire an electronic integrator having minimum 5 years experience in electronic work described herein electronic systems such as but not limited to CCTV, remote access equipment, broadband systems, hardware & software, networking. The contractors shall submit previous experience no more than three years old showing similar project experience. The contractor shall be responsible and coordinate all the electronic integrator's work. Recommend the contractor make a site visit to evaluate the project prior to submittal of bid.

See existing gate house photo below

City of Asbury, Village of Loch Arbour, Monmouth County, New Jersey
Deal Lake Commission Gatehouse.



Existing Deal Lake Commission Gate House located in the City of Asbury

Gatehouse Work:

The following is the scope of work for Deal Lake Commission Gate House located in the City of Asbury, Village of Loch Arbour, Monmouth County, New Jersey, Deal Lake.

The contractor shall remove the existing power panel and underground feeder supplied from Jersey Central Power & Lighting (JCP&L) pole-mounted transformers.

City of Asbury, Village of Loch Arbour, Monmouth County, New Jersey
Deal Lake Commission Gatehouse.



Existing JCP&L Pole Mounted Transformer for New Underground Service

City of Asbury, Village of Loch Arbour, Monmouth County, New Jersey
Deal Lake Commission Gatehouse.



Existing Electrical Service to be Removed & Raised

City of Asbury, Village of Loch Arbour, Monmouth County, New Jersey
Deal Lake Commission Gatehouse.



Existing JCP&L Meter & Main Circuit Breaker to be Removed & Replaced

City of Asbury, Village of Loch Arbour, Monmouth County, New Jersey
Deal Lake Commission Gatehouse.



Existing Damaged Underground Service to be Removed & Replaced

City of Asbury, Village of Loch Arbour, Monmouth County, New Jersey
Deal Lake Commission Gatehouse.

The contractor shall coordinate new service with JCP&L and provide load letter requires as required and install a new underground service from the existing JCP&L overhead transformers consisting of a 2 inch rigid steel PVC coated conduit having 4- #2 AWG (USE). A new 100 Amp, 208/120 V, three phase, circuit breaker panel with a surge protective device (SPD), bolt-in circuit breakers and 3R type weather proof enclosure. The panel shall be installed as high as possible to avoid the flood level previous experienced in the gatehouse, (mounted between old windows on east side) on a ¾” by 4 ft square (min) plywood backboard. The service shall be provided with a 60 Amp, 208/120V, three phase, 4 wire manual transfer switch with a Hubble plug connection (male & female mating plugs) with 10 ft #6 SO cable for an emergency generator connection. The contractor shall coordinate with the county as to the proposed backup generator to be used for the facility to enable testing of the system under generator connection or the contractor may be required to furnish a generator for testing purposes.

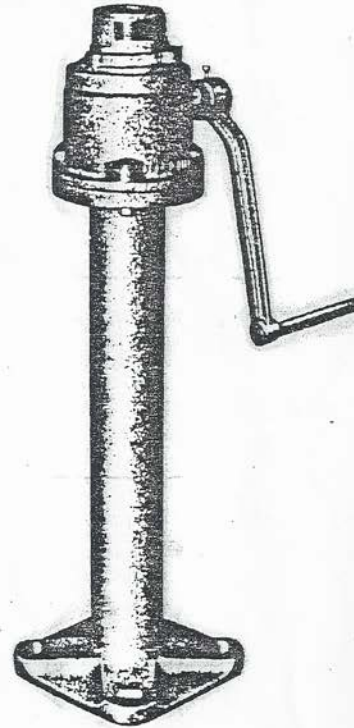
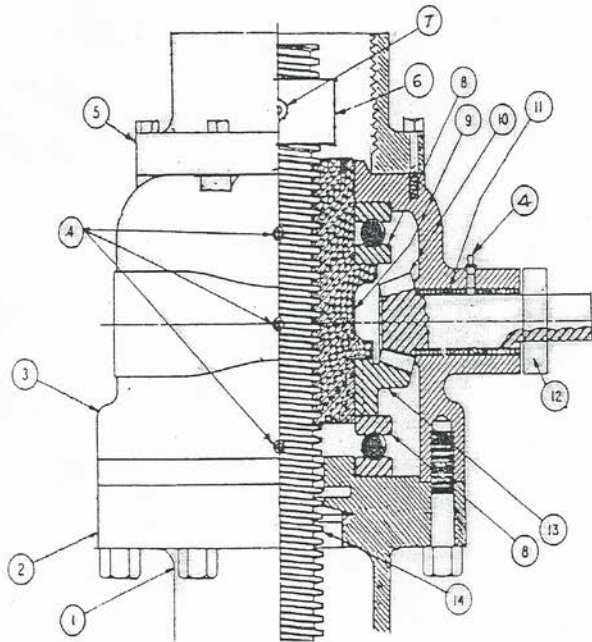
See proposed one line diagram for the facility.

The contractor shall remove the existing lighting for the building and provide LED lighting for the interior (Sealed LSI Industries LED EG3 Enclosed & Gasketed, 60W) & exterior lighting (Cooper Lighting wall pack, full cutoff, 4000K, 40 W or approved equal), receptacles, through wall or roof ventilation with thermostatic controls. Cooling set at 100 degrees F. The exterior lighting shall be controlled by a Hand-Off-Auto (HOA) switch (auto mode shall be astronomical time clock, photo cell facing north and internet on over ride mode). The exterior lighting shall be capable of being controlled remotely through an internet connection (see electronic system requirements) by the Deal Lake Commission designated office.

Electric Operated Gates:

The contractor shall provide two (2) new Rotorx IQ3 electric gate actuators or approved equal with new bases, gear box & stem gear, as required to install a Rotorx IQ3 electric actuator to operator. The contractor shall verify each gates operations and provide maintenance as necessary for lower friction of rail operation to avoid damage to gate actuator. The gates shall be capable of operating remotely via the Internet Paksacn Master Station or approved equal (see electronic system requirements) through City of Asbury, Village of Loch Arbour, Monmouth County, New Jersey at the Deal Lake Commission designated office.

**DETAIL and OPERATION INSTRUCTION
NORTH & SOUTH GATE ACTUATORS.
DEAL LAKE - Asbury Park, New Jersey**



PARTS LIST

- | | |
|------------------------|---------------------|
| 1 PEDESTAL C 1 | 8 BALL BEARINGS |
| 2 CAP SCREWS | 9 LIFT NUT |
| 3 BOWL | 10 PINION AND SHAFT |
| 4 GREASE FITTINGS | 11 BUSHINGS BRZ |
| 5 STEM COVER COLLAR | 12 COLLAR - SHAFT |
| 6 STOP NUT | 13 BEVEL GEAR |
| 7 SET SCREW ALLEN HEAD | 14 THREADED STEM |

(Opening)

Actuator — Rotation — Stem Th'd — Response

North Gate — Counter Clockwise — Left Hand — 8 Turns = 1" Gate Travel

South Gate — Clockwise — Right Hand — 8 Turns = 1" Gate Travel

**Existing Manual Actuator to be Motorized Replace as
Required for Electric Actuators**



Existing Manual Gate Actuator to be Motorized – One of Two

City of Asbury, Village of Loch Arbour, Monmouth County, New Jersey
Deal Lake Commission Gatehouse.



Existing Manual Gate Actuator to be Motorized- Two of Two

Electronic Systems:

The contractor shall provide a security alarm system with balance magnetic door switches, exterior mount strobe, tamper switch on electronic equipment cabinet, motion sensor, and keypad control within the building, which must be deactivated within 1 minute of entering the building. Alarm shall activate exterior strobe & sent to notify the locate police and county via internet and Email notification. A sign shall be located below the strobe indicating “If Strobe Flashing Call Asbury Police at phone # XXX-XXXX” (police phone number as required)

A new wireless broadband communication network connection shall be provided via a Version New Jersey Special contract, contact Captain Earl Gifford, Operations Commander, Township of Ocean Police Department
399 Monmouth Road Oakhurst, New Jersey 07755-1550 for information.

egifford@oceantwp.org www.oceantwp.org/police

The contractor shall provide a roof-mounted antenna for the Version broadband service to improve coverage, reliability and reception of the signal. The Version wireless broadband network shall be provided with a VPN, 128-bit encryption, password accessible for all remote Internet access services and HP network switch 1810 (eight port) or approved equal for all network device connections.

The shall provide a closed circuit television system (CCTV) consisting of a Digital Video Recorder (DVR), high definition (HD) Internet Protocol (IP) addressable 1/3 format color day/night cameras four (4) pan/tilt/zoom for exterior in a waterproof housing with heaters as shown on plans and one line diagram. The DVR shall be Pelco 8100 having eight inputs – 4 active/4 spare. The storage capacity shall be a min. 2 TB for 15 frames per min storage. The DVR shall be capable of being connected and viewed remotely at the Deal Lack Commission designated office via Version broadband secure network connection as described previously. (See CCTV one line diagram) The contractor shall install the weather proof electronic equipment wall-mounted cabinet with lockable door have tamper switch connected to alarm system, ventilation & heating. The cabinet shall house the Version broadband router, Remote access gate operation equipment, DVR, HP 1810 network switch and have ventilation fan cooling, power surge strip. A separate NEMA 4 cabinet may be required for the remote gate actuator controls, which shall be provided with power, cooling & heating. The contractor shall provide a weather station to measure outdoor & indoor temperature, wind speed with remote secure access, no moving parts Columbia 5285 NE Elam Young Pkwy, Suite C100, Hillsboro OR 97124, phone: 503-629-0887, fax 503-629-0898 **Email:** info@coumbiaweather.com or approved equal.

(See proposed equipment cabinet detail)

The electronic equipment cabinet shall be installed as high as possible but still be capable of being access for maintenance. The contractor shall submit for approval shop drawings for electronic equipment described herein with diagrams, equipment descriptions and

City of Asbury, Village of Loch Arbour, Monmouth County, New Jersey
Deal Lake Commission Gatehouse.

proposed testing plans and procedures. The government and Deal Lake Commission representatives shall witness the on site testing. The system shall be endurance tested for 30 days, if test failure occurs the repairs shall be made and the test shall be restarted for the 30-day period. The contractor shall demonstrate the remote access capabilities as required herein at the Deal Lake Commission designated equipment. The contractor shall provide a one year, 24 hour service for emergency repairs to the system, service shall be within 4 hours of notification and an additional extended warranty period of 3 year with emergency service as an optional bid line item available following the require contract one year warranty.

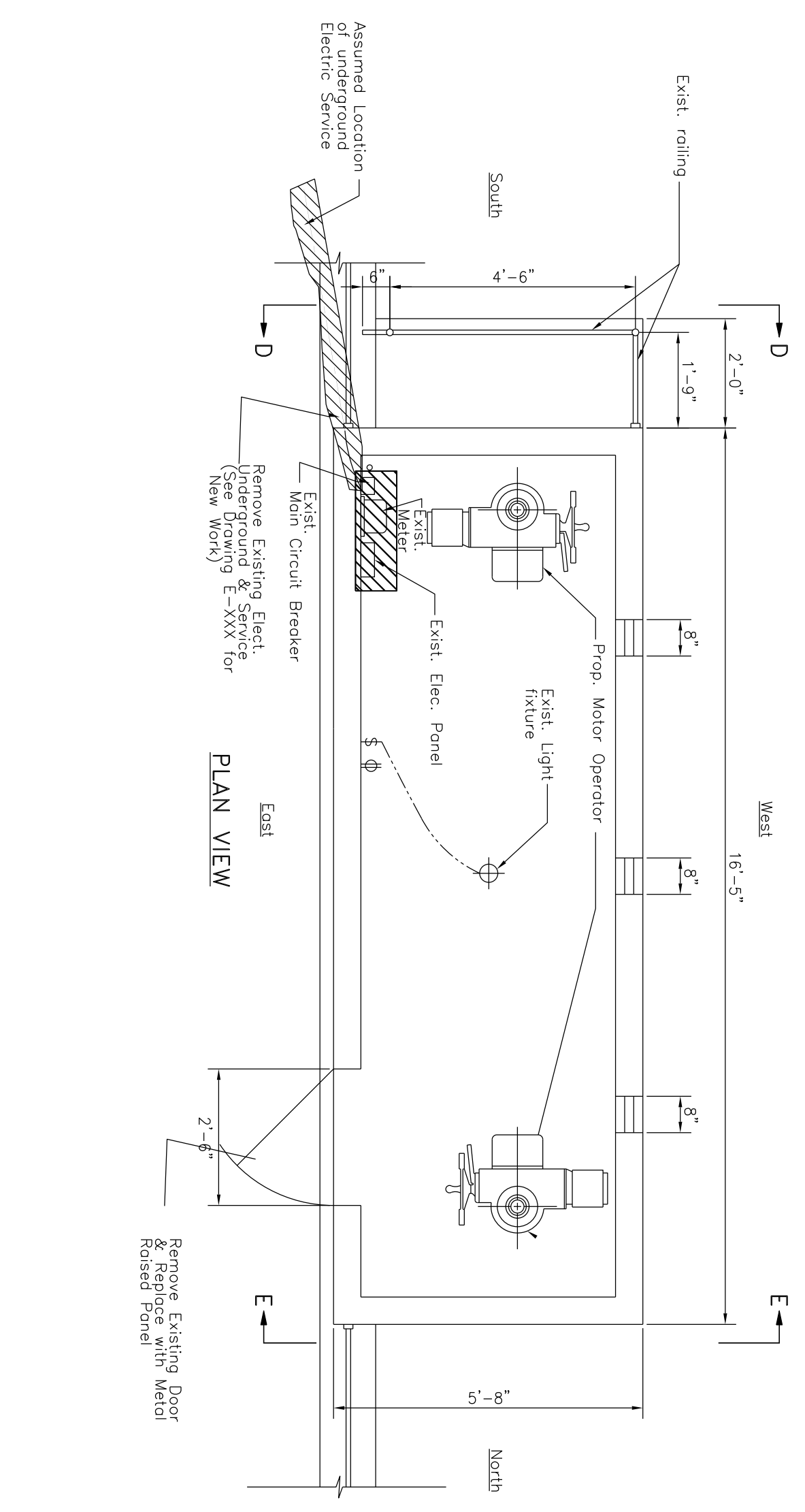
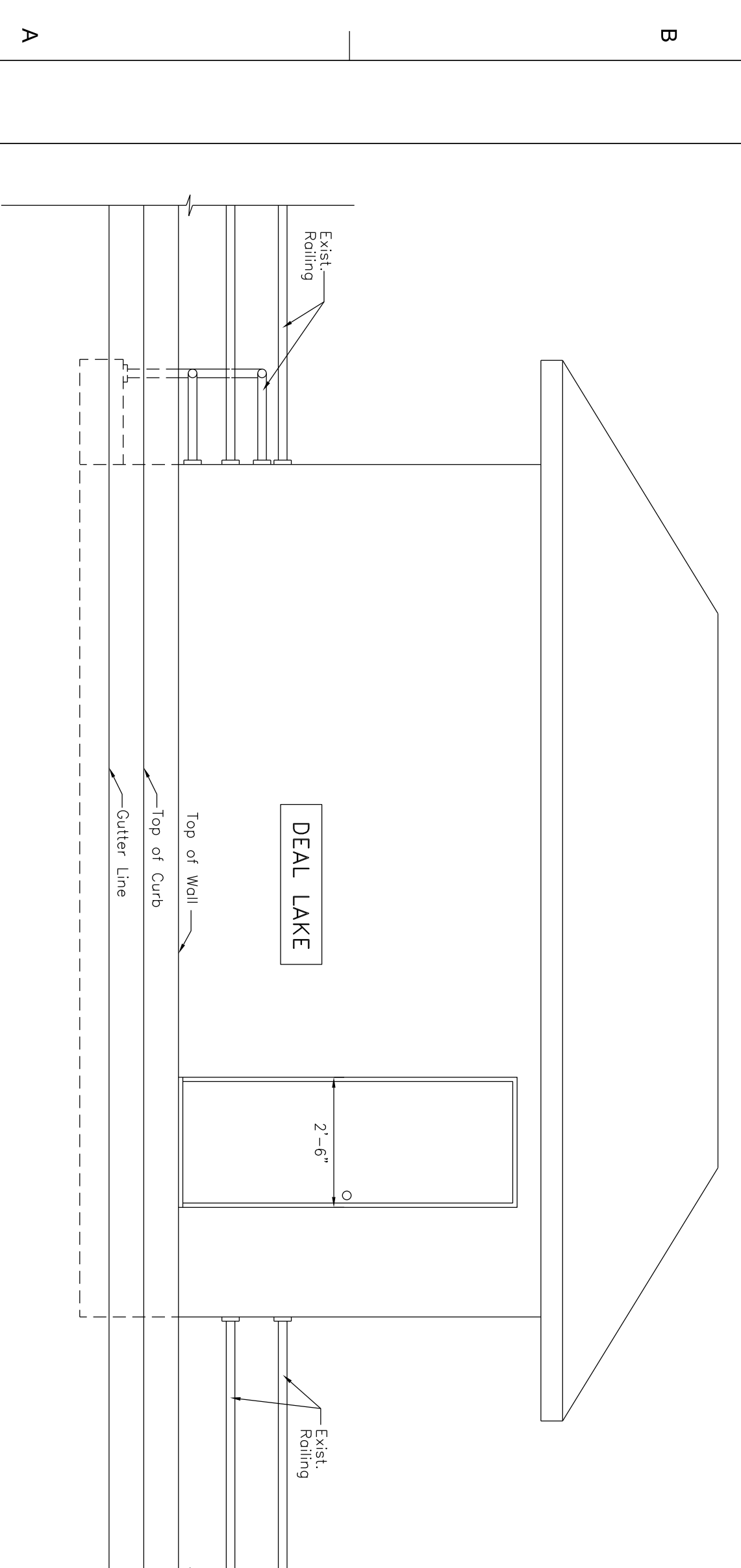
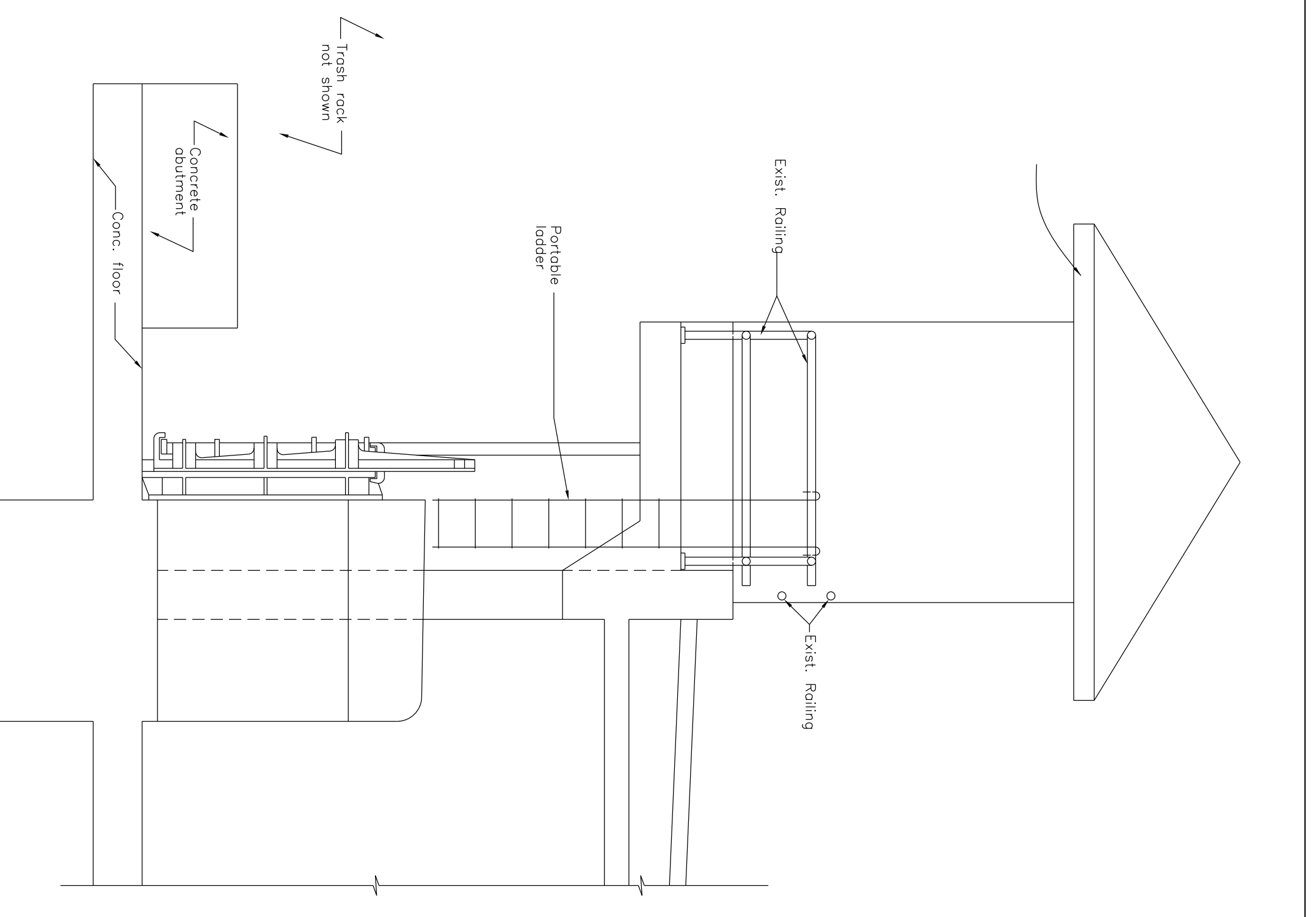
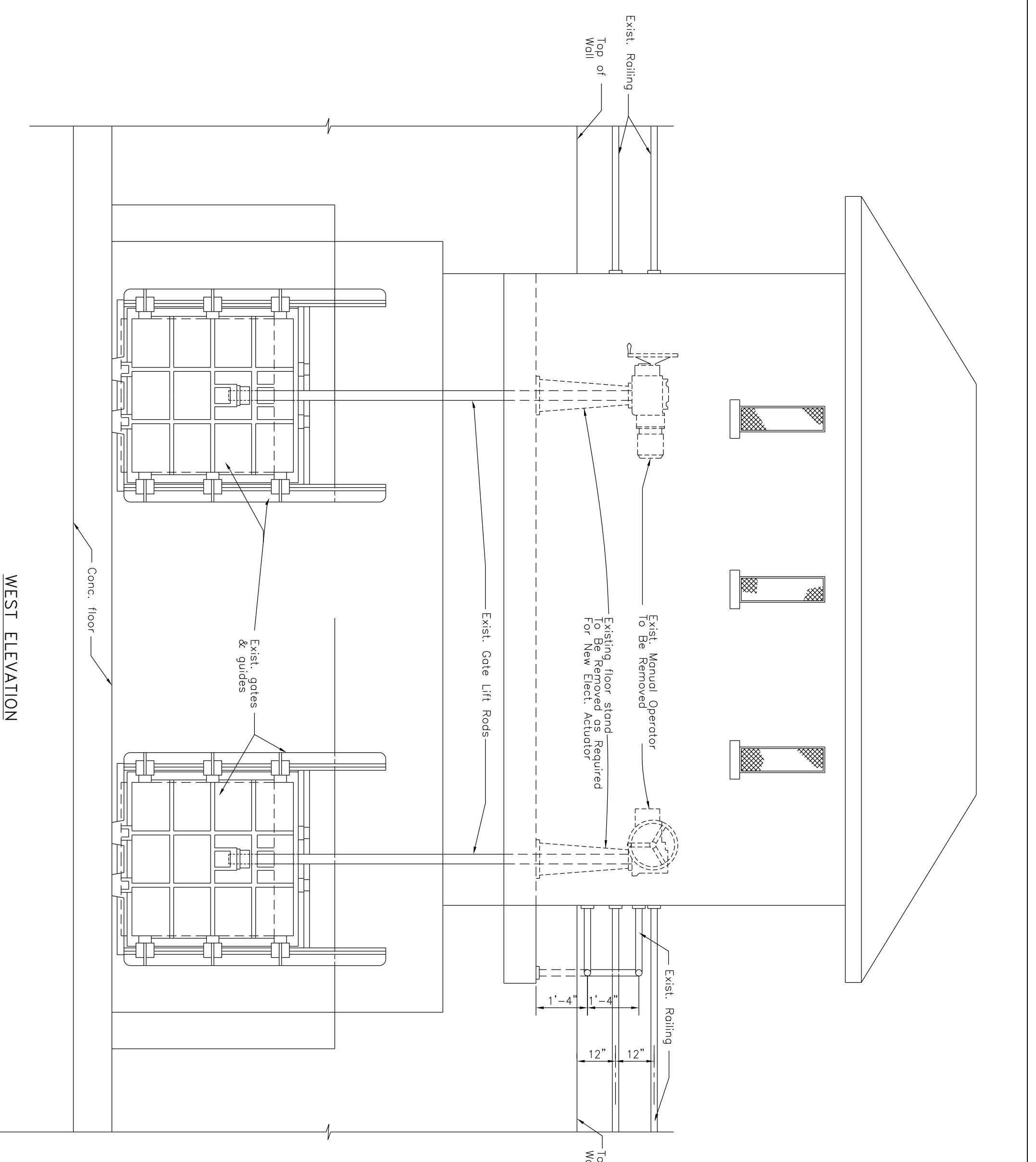
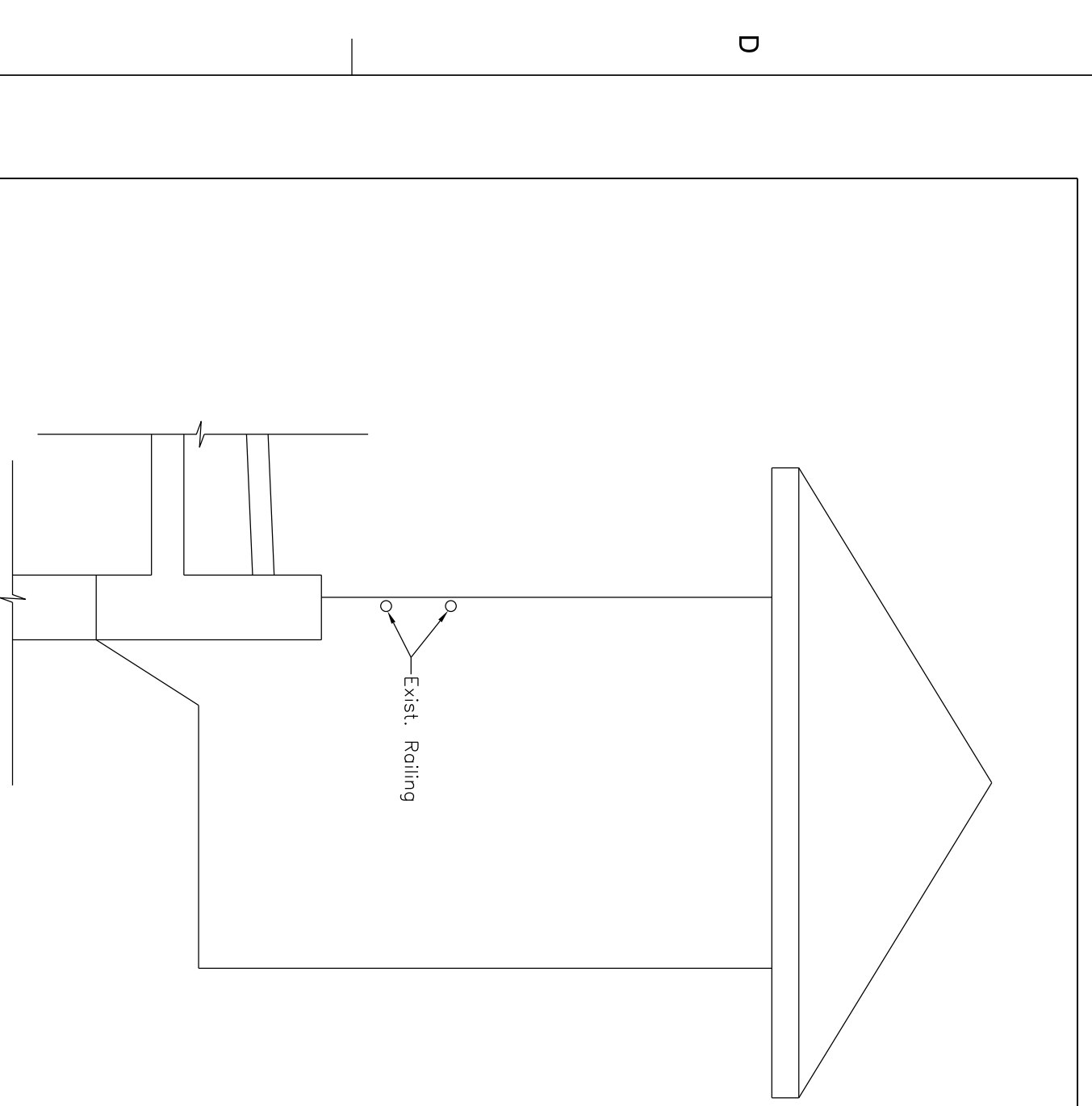
Shop Drawings:

The following submittal for approval are required but not limited to: new door, ceiling insulation, JCP&L information, Electric Panel, Circuit Breaker, Manual Transfer Switch, Generator Connection, Surge Protection device, switches, receptacles, wiring, conduits, lighting, electric heater cabinet, ventilation fan, maintenance platform, security alarm system Electric Gate actuators, gate remote control equipment, electronic equipment cabinet with accessories (power strip/surge protector, fans, etc.), Version wireless broadband router, DVR, cameras, weather station, remote access devices, hardware & software, unit wiring diagrams and configurations, network switch/hub, testing plans and procedures (prior the testing), training plans.

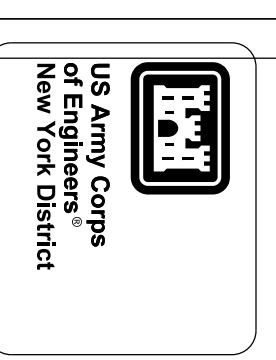
The contractor shall after approval of equipment shall supply (4) Four copies of operations & maintenance equipment manuals, final wiring diagrams for each piece of equipment as described in above shop drawing paragraph.

Training:

The contractor shall provide training for each system installed in this project security system, CCTV, gate operator, mechanical & electrical equipment, remote access to each system described herein for government and Deal Lake Commission employees.



GATE HOUSE DETAILS
DEAL LAKE COMMISSION
REPAIRS TO THE
DEAL LAKE GATE HOUSE
 LOCATED ON THE BOUNDARY BETWEEN
CITY OF ASBURY PARK &
VILLAGE OF LOCH ARBOUR, MON. CO., N.J.



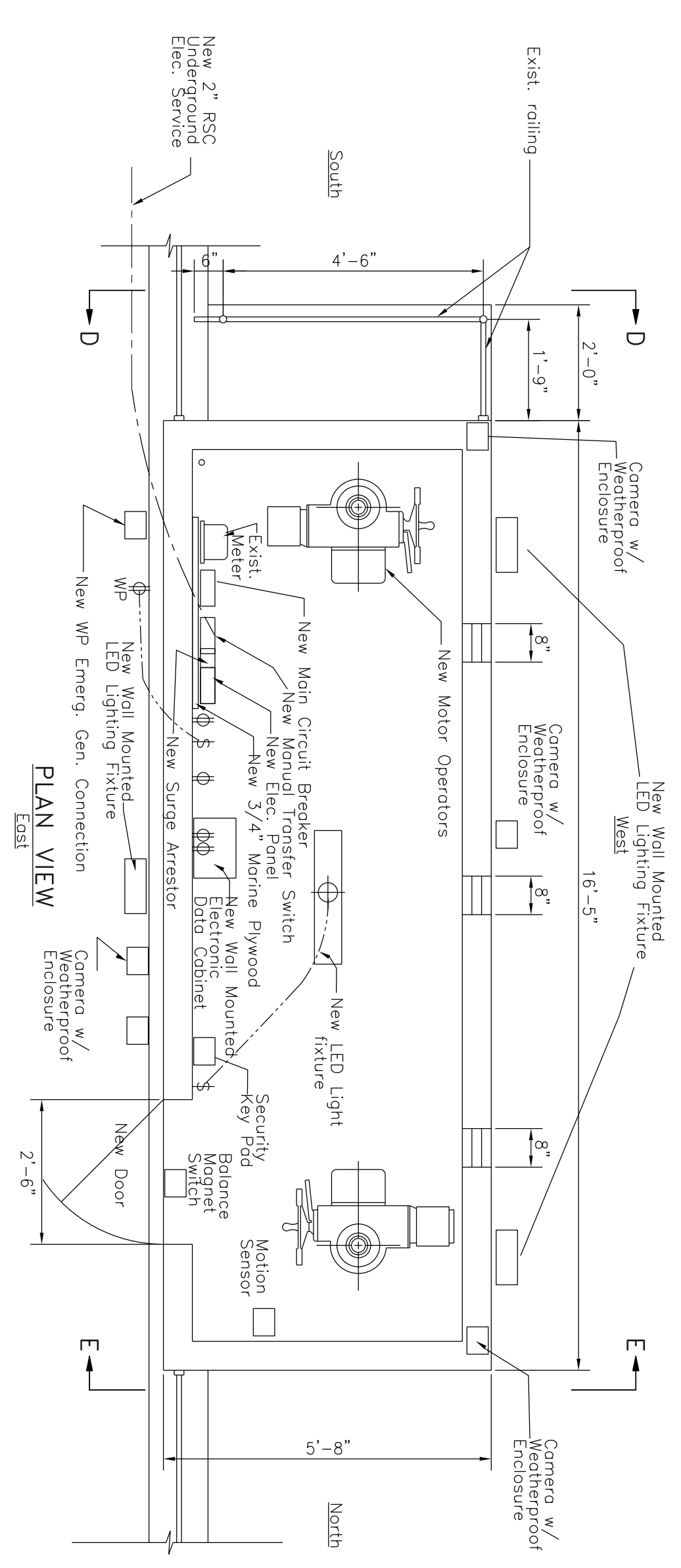
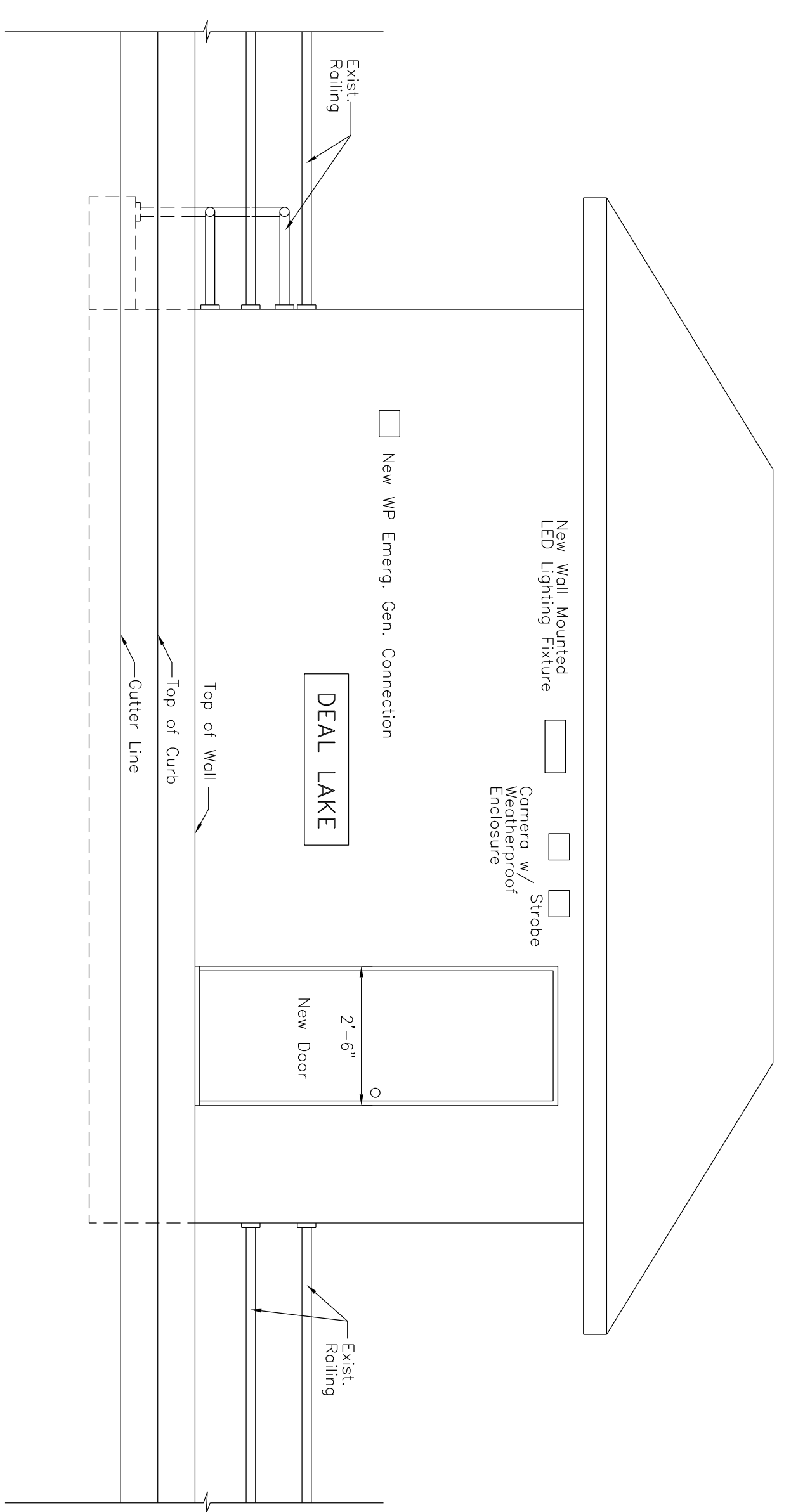
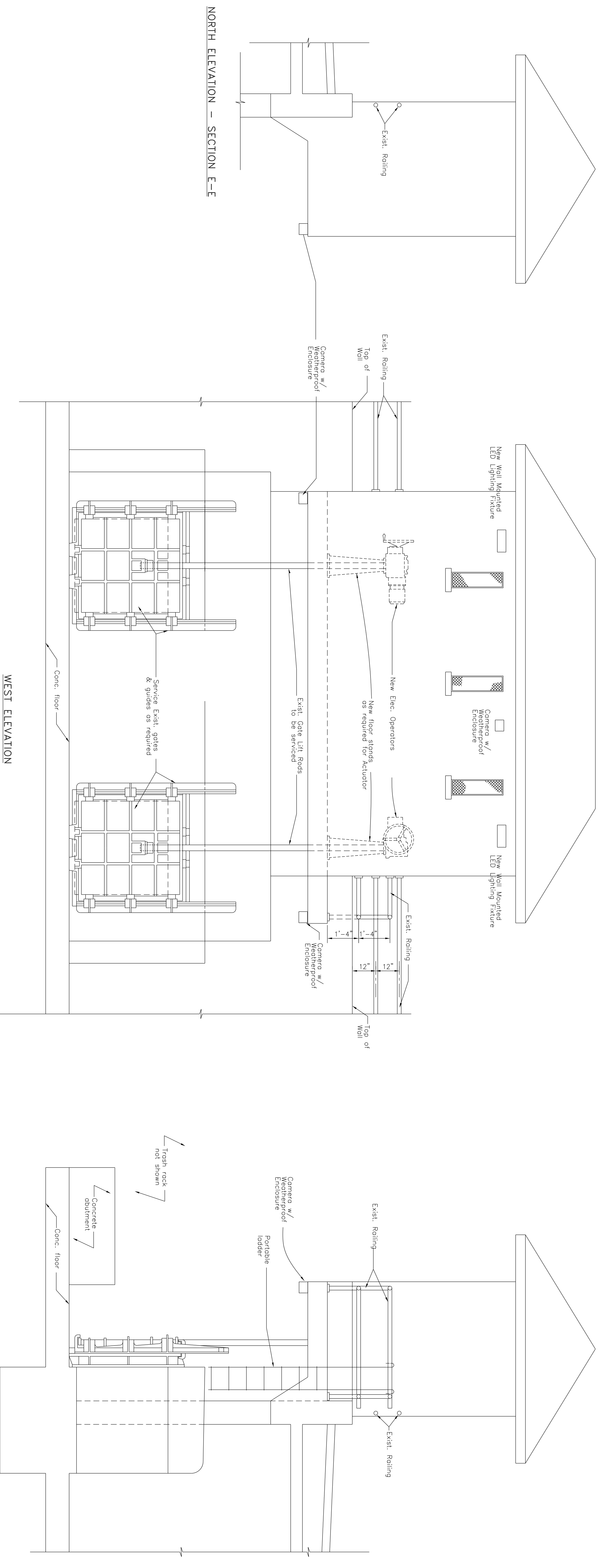
MARK	DESCRIPTION	DATE	APPR.	MARK	DESCRIPTION	DATE	APPR.

DESIGNED BY:		DATE: 21 NOVEMBER 2014	
DWN BY:	CKD BY:	SOLICITATION NO.:	
SUBMITTED BY:		CONTRACT NO.:	
PLOT SCALE:	ISSUE DATE:	FILE NUMBER:	
SIZE:	FILE NAME:		

HURRICANE AND STORM DAMAGE REDUCTION
 RARITAN BAY AND SANDY HOOK BAY
 PHASE II, CONTRACT 3
 PORT MONMOUTH, NEW JERSEY

U. S. ARMY ENGINEER DISTRICT
 NEW YORK
<http://www.nan.usace.army.mil>

SHEET IDENTIFICATION



GATE HOUSE DETAILS

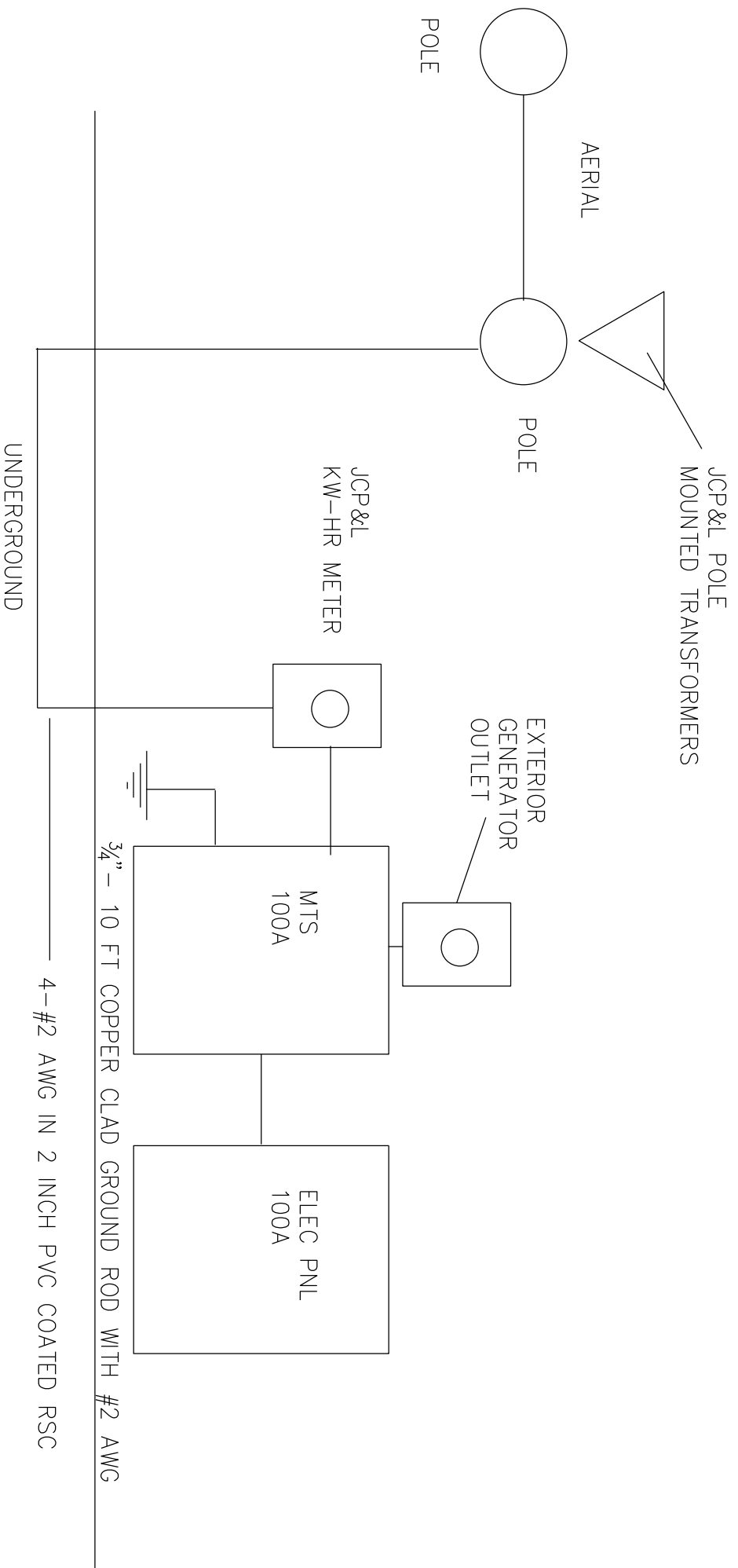
DEAL LAKE COMMISSION

REPAIRS TO THE

DEAL LAKE GATE HOUSE

LOCATED ON THE BOUNDARY BETWEEN
CITY OF ASBURY PARK &

VILLAGE OF LOCH ARBOUR, MON. CO., N.J.



ELECTRICAL ONELINE DIAGRAM

PANEL NAME: POWER PANEL
 SERVICE VOLTAGE: 120/208 VAC, 3 PH - 4W
 SOURCE NAME: JCIPL&L POLE MOUNTED OIL FILLED
 TRANSFORMER VIA UNDERGROUND CONDUIT

L - LOCKABLE CIRCUIT BREAKER
 SPD - SURGE PROTECTION DEVICE
 GFCI - GROUND FAULT CIRCUIT INTERRUPTER

BUS RATING: 100 A
 MAIN BREAKER: 100 A
 MOUNTING: SURFACE
 NEMA TYPE: NEMA 3R - SERVICE ENTRANCE RATED
 SPD: YES
 INTERRUPTING RATING 22 KAIC

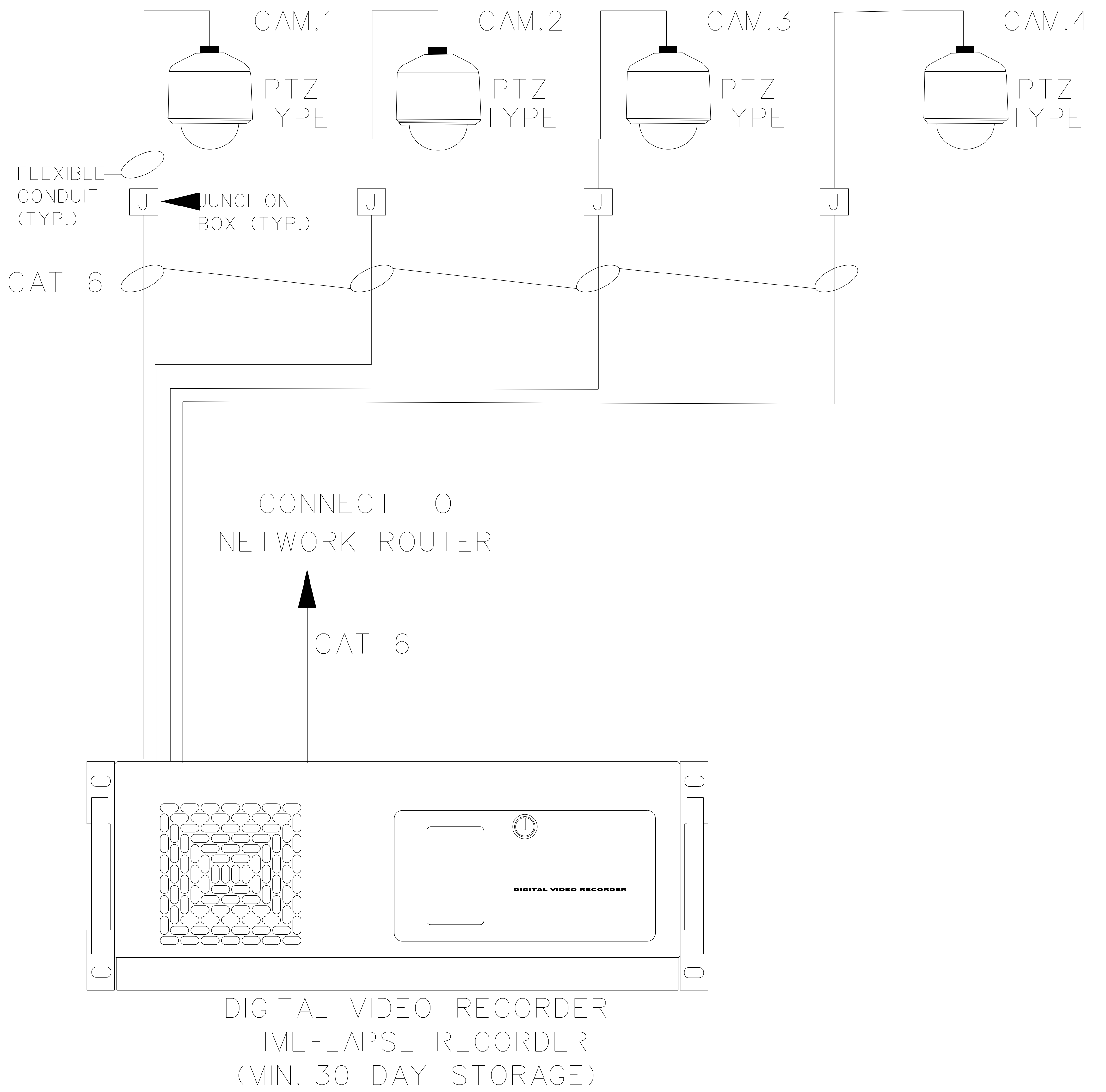
*36 POLE
 (ALL REMAINING POSITIONS
 NOT SHOWN ARE SPACES)

LOAD SERVED	NO. POLES	TRIP AMPS	WIRE SIZE	KVA / PHASE			CKT NO.	CKT NO.	KVA / PHASE			WIRE SIZE	TRIP AMPS	NO. POLES	LOAD SERVED
				A	B	C			A	B	C				
LIGHTING	1	15	12	0.5			1	2	-						
EXTERIOR RECEPT.		20 GFCI			0.72		3	4		-		*	*		SPD
INTERIOR RECEPT.		20 GFCI				0.4	5	6							
TELECOM RECEPT.		20		0.5			7	8	3.6						
TELECOM RECEPT.					0.5		9	10		3.6				20	3 GATE ACTUATOR
VENTILATION						0.5	11	12			3.6				
SPACE							13	14	3.6						
SPACE							15	16		3.6				20	3 GATE ACTUATOR
SPACE							17	18			3.6				
SECURITY SYST	1	15 L	12	-	-	0.5	19	20	0.5	-	-	12	15	1	VENTILATION FAN
SPARE	1	20	-	-	-	-	21	22	-	-	-			1	SPACE
SPARE	1	20	-	-	-	-	23	24	-	-	-			1	SPACE
				1.0	1.22	1.4			7.7	7.2	7.2				

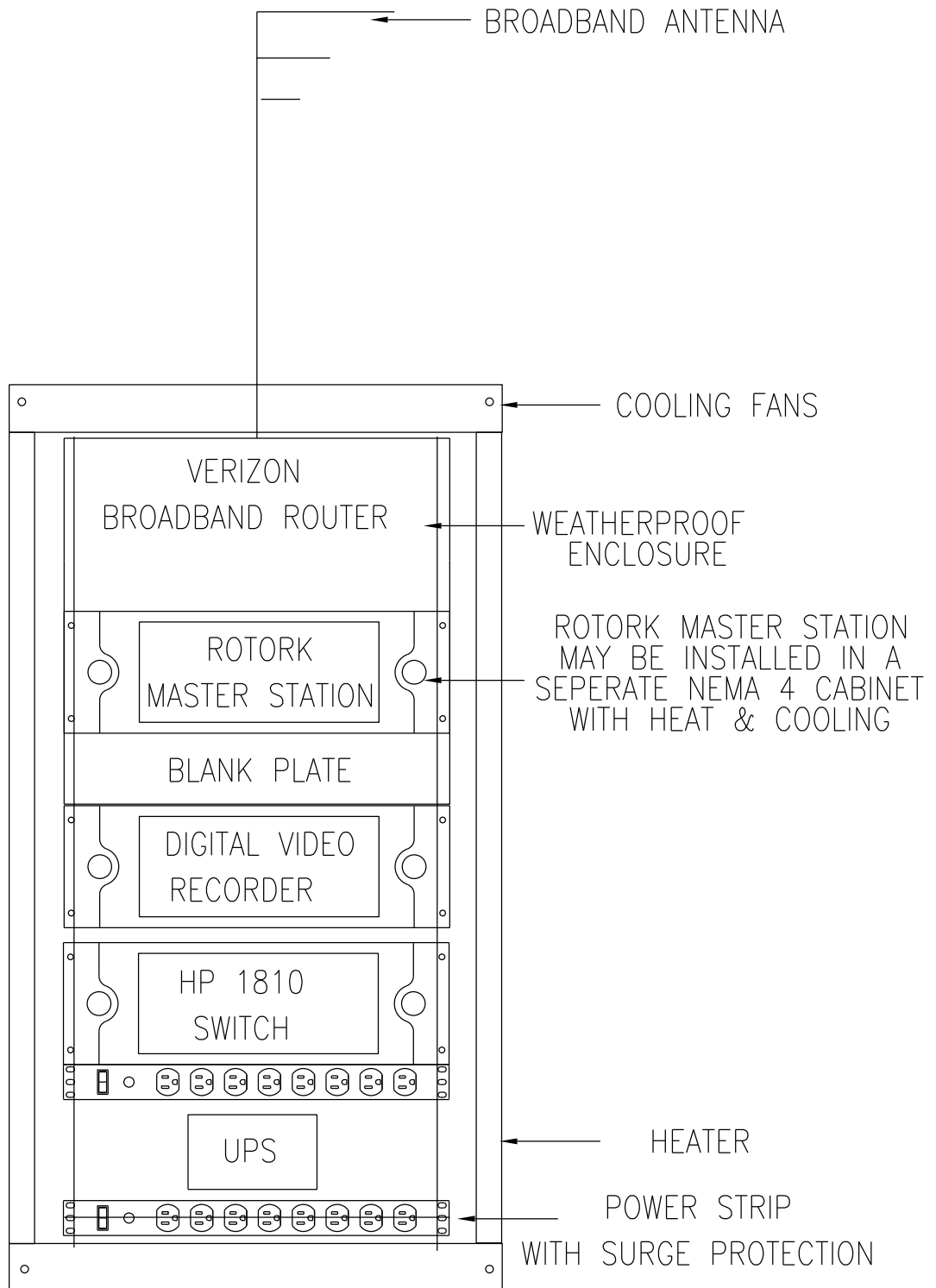
TOTAL KVA PHASE A: 8.90 A
 TOTAL KVA PHASE B: 8.42 A
 TOTAL KVA PHASE C: 8.60 A

*ALL REMAINING
 CIRCUIT BREAKER
 SPACES FOR 32 POLES

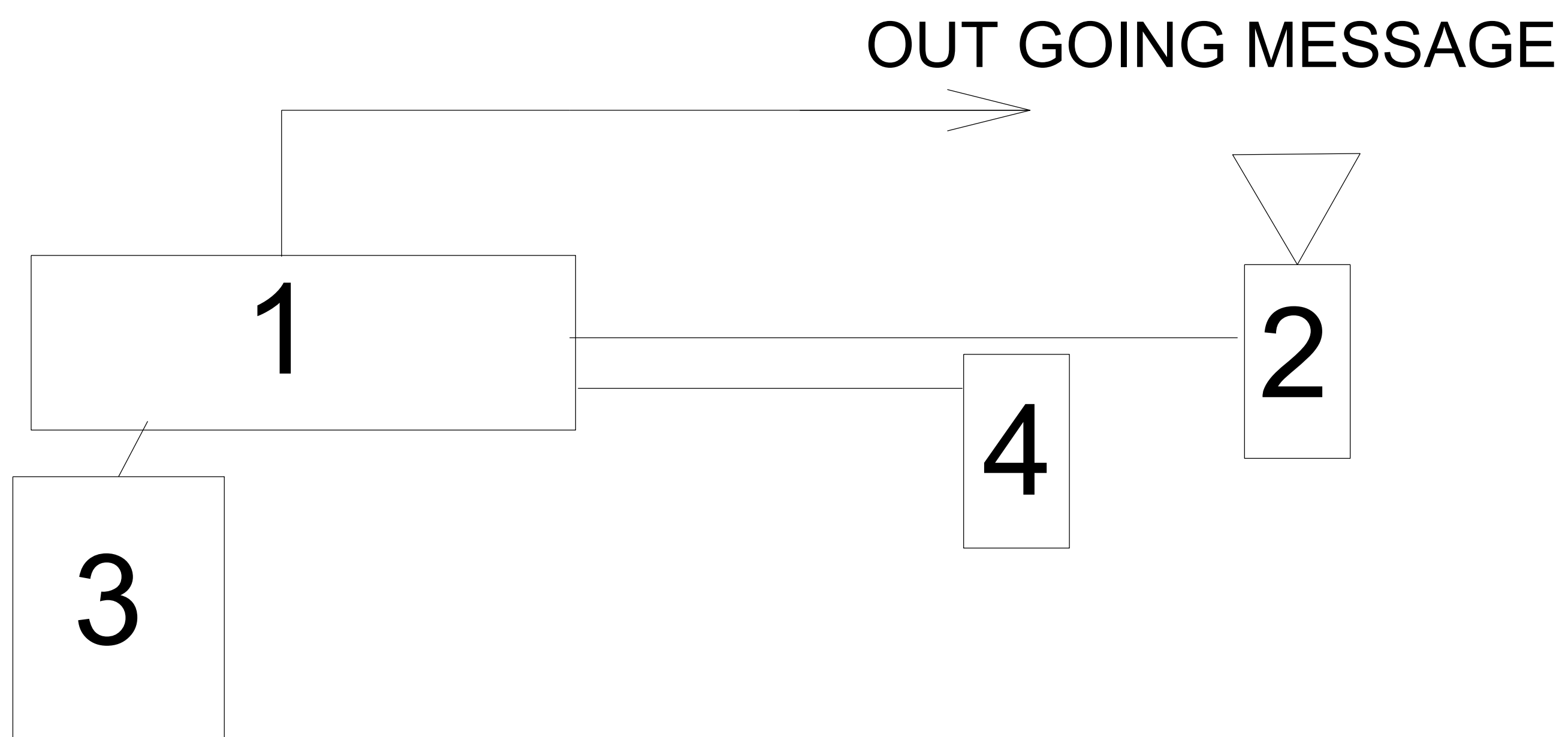
TOTAL CONNECTED: 25.92 KVA
 75% DEMAND: 19.44 KVA
 TOTAL DEMAND PLUS 25% SPARE: 24.3 KVA
 TOTAL AMPS: 68 AMP



CCTV DIGITAL VIDEO RECORDER



WALL MOUNTED
DATA
EQUIPMENT
CABINET



EQUIPMENT LIST

- 1- SECURITY CONTROL PANEL
- 2- STROBE
- 3- KEY PAD
- 4- MOTION SENSOR

SECURITY

SYSTEM
