

ELECTRICAL LEGEND	
	20W CEILING MOUNT LED LIGHT
	20W HANGING LED LIGHT
	SMOKE DETECTOR
	40W LED TUBE LIGHT 4'x4'
	40W LED LIGHT 4'x4'
	ONE WAY SWITCH 220V
	MULTI SOCKET OUTLET 220V
	10W WALL MOUNTED LED LIGHT
	80W CEILING FAN 220V
	SUB DISTRIBUTION BOARD
	MAIN DISTRIBUTION BOARD
	40W BATHROOM EXHAUST FAN
	CALLING BELL



## ENGINEER'S TEAM

430 E 8TH ST STE 8017  
HOLLAND MI 49423

ENGRTEAM.COM

SUPPORT@ENGRTEAM.COM

### OWNER:

8090 County Road 293 Hico  
Texas, 76457

### SEAL:

Release for construction

### ELECTRICAL LAYOUT PLAN

Drawn by: Engr. Al Amin

Checked:

Date: NOV, 24.

E. 1

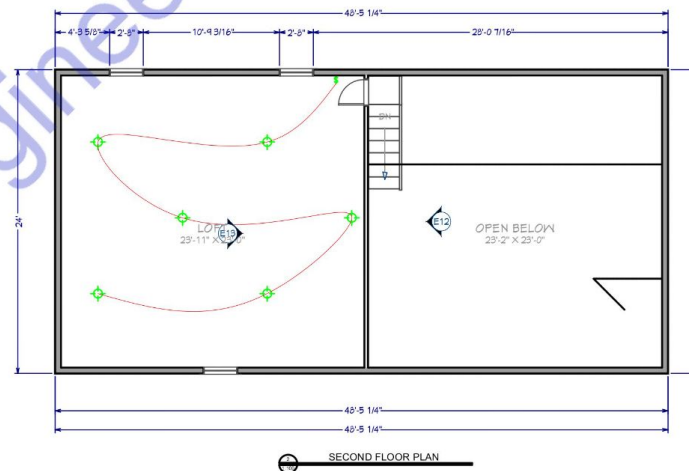
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#### Note:

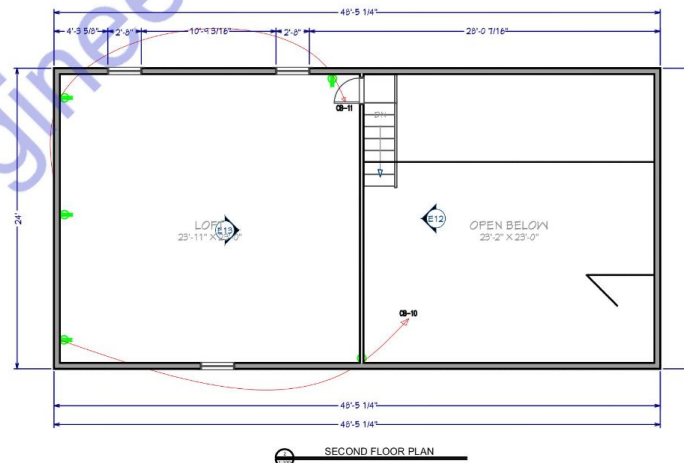
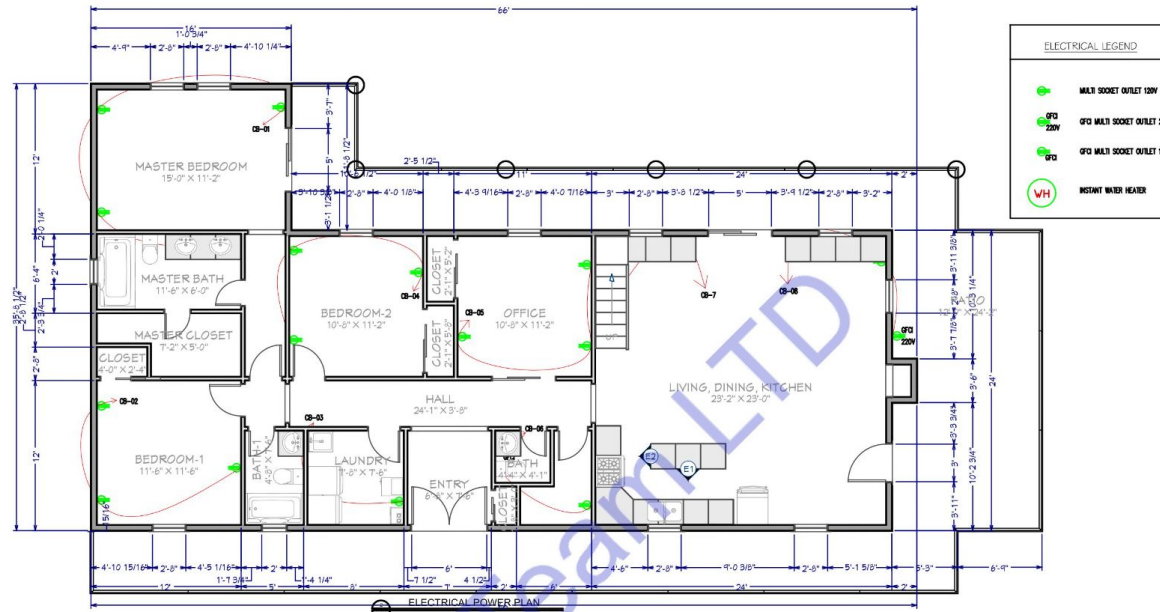
This Electrical Plan for the property located at 8090 County Road 293, Hico, Texas, 76457, adheres to the most current Texas state and local codes, ensuring both safety and compliance. The following standards were applied:

1. National Electrical Code (NEC) 2023: This electrical plan complies with NEC 2023, as adopted by the State of Texas, which governs electrical system safety standards and installations for residential and commercial buildings.
2. Texas Administrative Code - Title 16, Chapter 73: All licensing and installation requirements meet the Texas Department of Licensing and Regulations (TDLR) standards for electricians and electrical systems in accordance with the Texas Electrical Safety and Licensing Act.
3. Local Hico Amendments and Regulations: Additional local ordinances and any specific amendments or requirements for Erath County, where applicable, have been incorporated into the design to ensure full compliance with the regional standards.

These codes ensure that the design and implementation of electrical systems maintain the highest safety and operational standards, meeting Texas's regulatory and safety requirements.



SECOND FLOOR PLAN



Note:

This Electrical Plan for the property located at 8090 County Road 293, Hico, Texas, 76457, adheres to the most current Texas state and local codes, ensuring both safety and compliance. The following standards were applied:

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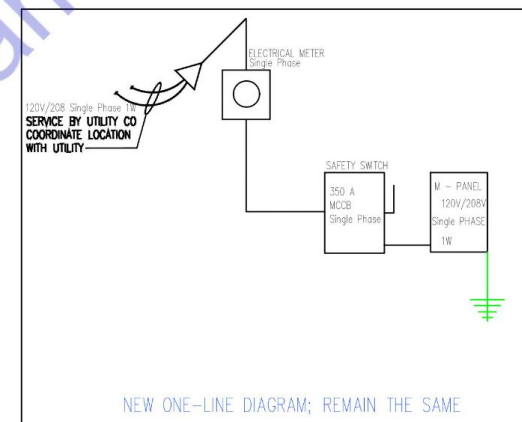
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120/240 VOLT SINGLE PHASE 2 WIRE ELECTRICAL SERVICE				
ITEM	CONN. LOAD (VA)	DEMAND F.	DEMAND LOAD (WATTS)	TOTAL (AMPS)
LIGHTING	1380	125%	1725	
WATER HEATERS	2000	100%	2000	
EQUIPMENT	5000	65%	3250	
HVAC LOADS	19343	100%	19343	
SUB-TOTAL			26318	
LARGEST MOTOR	0	125%	0	
TOTAL @ 120/208 V	27723		26318	220

 PANEL SCHEDULE & SERVICE CALCULATION

ELECTRICAL PANEL-MAIN											
LOAD SERVED	CKT #	TYPE	BKR TRIP	WIRE SIZE	PHASE A	PHASE A	BKR TRIP	WIRE SIZE	TYPE	CKT #	LOAD SERVED
HVAC-5.5 TONS	1		170	#5/D	19343	1380	15	#14	2		LIGHTING LOAD
CB-5	3		20	#12	500	2000	20	#12	4		WATER HEATER
CB-6	5		20	#12	1000	500	20	#12	6		CB-1
CB-7	7		20	#12	500	500	20	#12	8		CB-2
CB-8	9		20	#12	500	4000	40	#8	10		CB-3
CB-9	11		20	#12	500	500	20	#12	12		CB-4
CB-11	13		20	#12	500	500	20	#12	14		CB-10
TOTAL VA PHASE A						9160	32003				
TOTAL VOLT-AMPS						32000					
DIVIDE TOTAL VOLT-AMPS BY SYSTEM VOLTAGE (PHASE)						120	AMPS		267		
TOTAL CONNECTED LOAD (AMPS) @ 125%						334					
MAIN TYPE AND AMPERE RATING						350 AMP MCCB					
PANEL FEEDER SIZE - SEE RISER DIAGRAM											

Material	
Name	Watt
CEILING MOUNT ROUND LED LIGHT	20W
WALL MOUNT LED LIGHT	10W
CEILING MOUNT 2"X2" SQUARE LED LIGHT	40W
HANGING LIGHT	20W



 SINGLE LINE DIAGRAM



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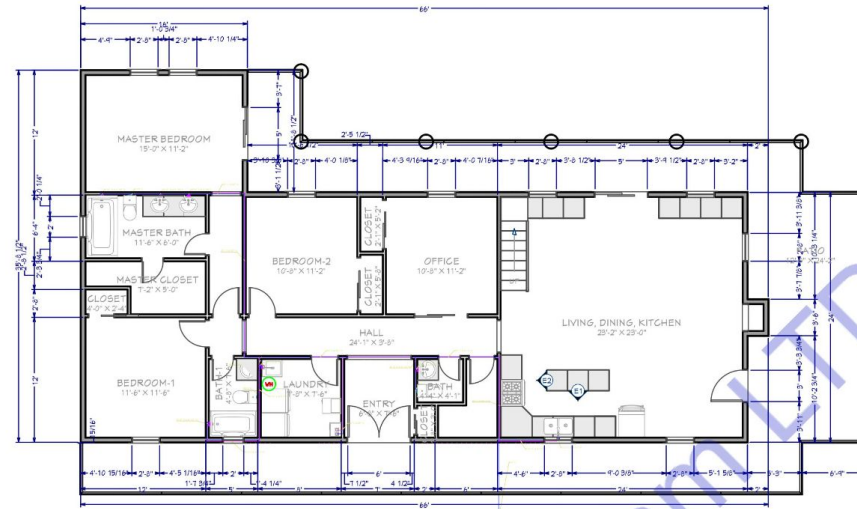
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### ELECTRICAL LOAD SCHEDULE PLAN

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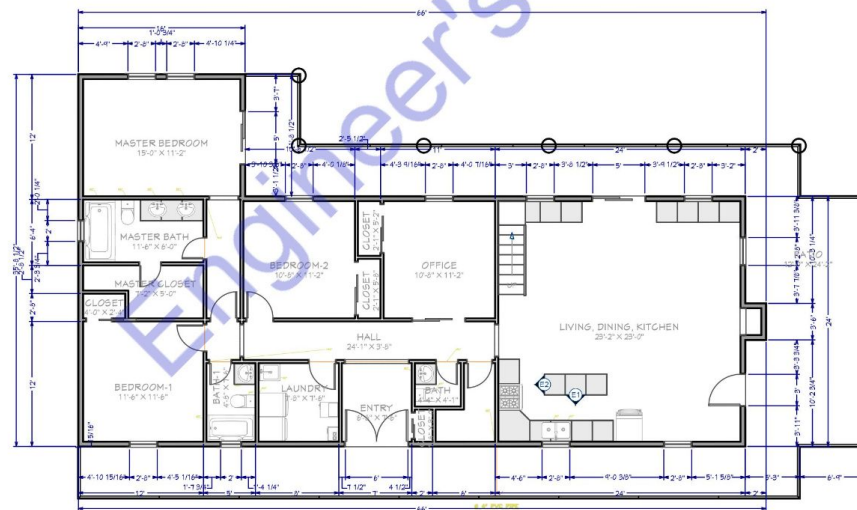
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FIRST FLOOR PLUMBING WATER SUPPLY PLAN

PLUMBING LEGEND		
	BALL VALVE (BV)	
	GATE VALVE (GV)	
	MIXING VALVE (MV)	
	FLOOR CLEAN OUT (FCO)	
	FLOOR DRAIN (FD)	
	HUB DRAIN (HD)	
	FLOOR SINK (FS)	
	PIPE TURNING UP	
	PIPE TURNING DOWN	
	EXISTING PIPE	
	NEW PIPE	
LINES TYPE LEGEND		
	COLD WATER LINE (CW)	
	HOT WATER LINE (HW)	
	SEWER LINE (SD)	
	GAS LINE (GD)	



FIRST FLOOR PLUMBING SEWERAGE PLAN

SEWERAGE LEGEND	
	WASTE WATER/ SEWER LINE (UPVC PIPE)
	TOILET WASTE/ SEWER LINE (UPVC PIPE)

**Note:**  
**Plumbing Plan Compliance Statement**  
 1. This plumbing plan for 8090 County Road 293, Hico, Texas, has been designed and developed in strict adherence to the 2021 International Plumbing Code (IPC), adopted by the Texas Department of Licensing and Regulation, which establishes standards for safe plumbing systems and ensures public health, water efficiency, and sustainability.  
 2. This plan complies with updated provisions, such as requirements for backflow prevention, high-efficiency showerheads with a maximum flow rate of 2.0 gallons per minute, and specific guidelines for drain waste and vent systems to enhance system functionality and reliability.  
 3. Additionally, the plan incorporates the Texas Plumbing License Law requirements and relevant accessibility standards as outlined by the ICC A117.1 standard, providing measures for universal access and maintaining plumbing infrastructure integrity as per state and federal guidelines.  
 This comprehensive compliance approach ensures the plan meets all necessary standards, supporting effective plumbing system performance and regulatory approval.



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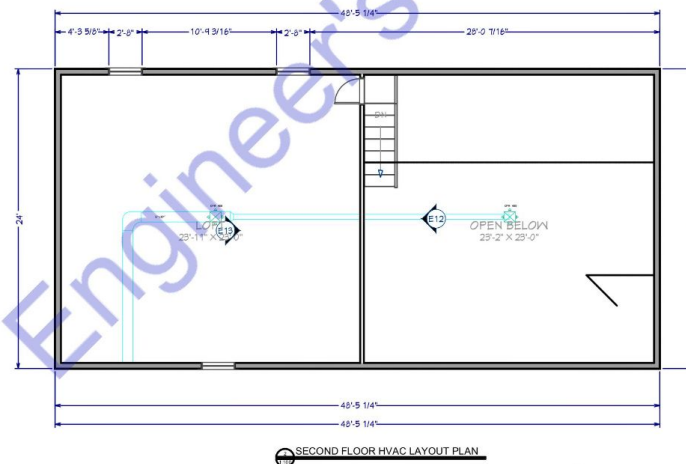
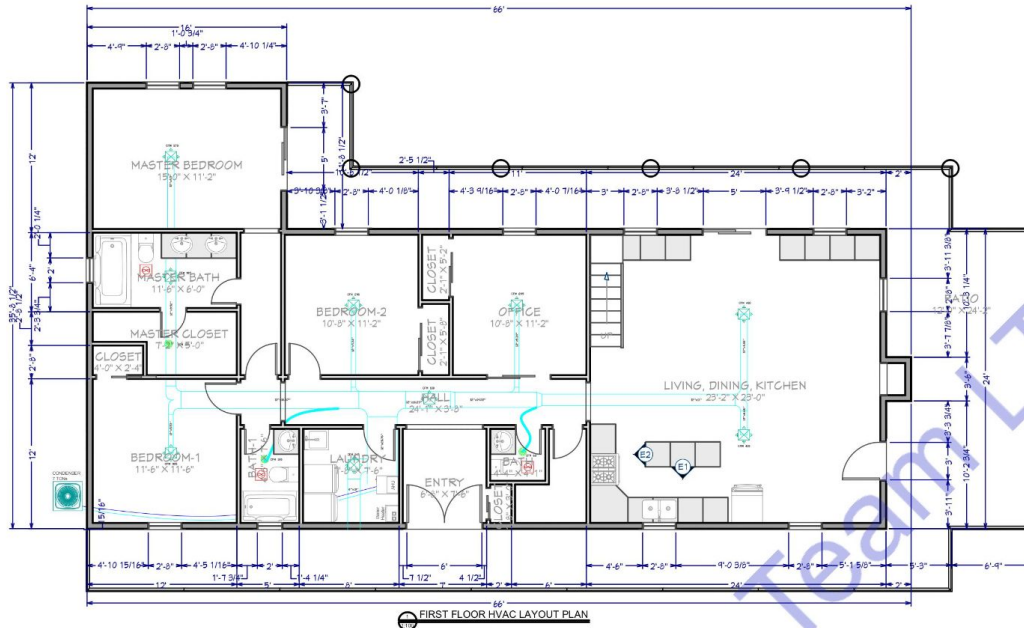
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## PLUMBING PLAN

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#### Note:

This HVAC plan has been designed to fully comply with the updated codes and regulations for the location specified, ensuring safe and efficient system operation. The following codes and standards have been applied:

1. International Mechanical Code (IMC) - 2018 Edition Compliance with the IMC is required under Texas state guidelines, addressing ventilation, ductwork, exhaust, and mechanical system requirements essential for health and safety.
2. International Fuel Gas Code (IFGC) - 2018 Edition This code regulates gas piping installations, including the supply of fuel for HVAC systems, ensuring safe handling and containment within the design.
3. International Energy Conservation Code (IECC) - 2018 Edition The plan incorporates the IECC standards for energy efficiency, which guide the insulation, ventilation, and mechanical system controls to optimize energy use in heating, cooling, and ventilation operations.
4. Uniform Mechanical Code (UMC) - 2018 Edition As per Texas Administrative Code, Title 16, Rule 875.100, either the IMC or UMC may be adopted; for this project, UMC requirements were considered to further align with HVAC best practices.
5. Each aspect of the HVAC system design adheres to the above codes, reflecting a commitment to quality, safety, and compliance with Texas Department of Licensing and Regulation (TDLR) standards.

This document ensures that the HVAC plan meets local and state regulatory requirements, offering a foundation for safe installation and operation.

Mechanical Legends	
	AIR HANDLING UNIT
	ROOF TOP UNIT
	OUTDOOR CONDENSER
	SUPPLY AIR DIFFUSER
	EXHAUST AIR DIFFUSER
	KITCHEN EXHAUST
	EXHAUST FAN
	SUPPLY AIR DUCT



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#### HVAC LAYOUT PLAN

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#### EXHAUST FAN SCHEDULE

MARK	SERVING	CFM	SP	WATTS	RPM	VOLTAGE	MAKE MODEL	NOTES	FAN TYPE
EF-1	BATHROOM	50	-	50	460	120/60/1	Brown/Tone 688		IN-LINE
EF-2	KITCHEN	1600	-	78	1291	115/60/1	HODDART 280-1000-FF		IN-LINE

NOTES:  
1. COMPLETE VIBRATION MOUNT.  
2. PROVIDE THERMOSTATIC CONTROL DEVICES.  
3. INTERLOCK TO OPERATE WHENEVER RTU'S OPERATE.  
4. MAINTAIN A MINIMUM CLEARANCE OF 36" FROM ALL INTAKE AIR FANS AND ALL ROOF TOP UNITS OUTSIDE AIR INTAKE OPENINGS.



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