# **Residential Electric Policy**



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\*All meter bases shall be Gallatin Dept. of Electric (GDE) approved meter bases, see GDE meter base policy. All meter base locations must be approved by GDE's Engineering Dept.

\*Aid to construction costs and fees are subject to change without notice. Please contact the GDE Engineering Dept. for updated cost.

## **Construction**

The complete use of underground electric facilities is required in all new subdivision developments and for all new residential electric services unless specifically waived in writing by the Gallatin Department of Electricity (GDE). Developers/Owners will be required to pay an aid to construction cost of \$3,670 per lot. Existing services that are relocated or changed from overhead to underground will only pay a cost of \$15 per foot if the extension is over 150'. The developer/owner will submit a final plat approved by the City of Gallatin Planning Committee, provide an electronic cad layout/plat, request an electrical layout from GDE, provide all ditching and conduit, transport and place all vaults and required ground sleeves with a gravel base, call GDE for inspection of all ditching and conduit, backfill one foot, place marking tape and complete backfill (See **GDE's Specifications**, pg.10 for requirements).. GDE will provide and install underground primary wire, transformers, primary connections, and switching cabinets.

Any residential lot that requires an electrical extension of more than 150' will be required to pay an additional aid to construction of \$15 per foot. The developer/owner will provide, install, own, and maintain all conduits. The owner shall also own and maintain all service wire on underground services above 400 amps. GDE will provide, install, own, and maintain all service wire for services 400 amps and below.

Provisions shall be made by the developer/owner (including ditching, backfilling, and conduit) to loop feed each primary line where practical as determined by GDE's Engineering Department. Overhead exceptions may be granted for major feeder lines as determined by GDE on a case-by-case basis. However, the standard will still be underground utilities. Overhead lines require a 30' clear easement provided by the developer/owner. Exceptions will only be granted in letter form. GDE will provide standard above ground switching cabinets.

When the development requires the main line to be more than 200 amps on the primary lines but less than 400 amps, as determined by GDE, the developer will pay an aid to construction charge of \$65 per linear foot for any additionally required feeder lines. When the development requires the main line to be more than 400 amps on the primary lines, as determined by GDE, the developer will pay an aid to construction charge of \$80 per linear foot for any additionally required feeder lines.

The developer shall be responsible for the cost of any line extension required to serve a development that is not within or adjacent to the current footprint of the Gallatin City limits and/or GDE's current service territory. Extension costs shall include: any expense of acquiring easements and needed right-of-way clearing as well as all construction labor and material necessary to reach the proposed development. Any cost associated with a development that is above and beyond GDE's standard construction shall be at the expense of the developer. Costs could be back feed or redundant service requirements by the developer or below grade switchgear, or the like. GDE will maintain ownership of all primary infrastructure such as wire and transformers and be responsible for any replacement costs.

## **Ownership/Repairs**

Meter bases, service conduit from meter base to GDE's secondary equipment, risers, and point of attachment are the customer's property and the customer's responsibility to supply, maintain, and repair. This includes tree trimming for overhead services. GDE owns and maintains (does not include tree trimming) overhead (OH) and underground (UG) service wire, except on UG services over 400 amps, and OH service connections. The customer installs, owns, and maintains the UG service conduit on all services, and service wire on underground services over 400 amps. The service size is the sum of all meter bases per building. Any meter bases with obstructed access or that have been enclosed by porches, decks, patios, fences, walls, screens, etc., will be required to be relocated by customer. Failure to do so during the allotted time provided by GDE will result in termination of service until work has been completed. Customers with direct buried service wire that must be replaced are responsible for conduit and ditch work. GDE will determine when direct buried service wire must be replaced. Residential customers changing out meter bases, risers, service entrance wires, or doing any major electrical work will be required to update service to GDE specs, pass any required City Codes electric inspections, as well as meeting all current National Electric Code (NEC) and National Electric Safety Code (NESC) requirements. Any overhead service installation must be approved by GDE's Engineering Department. A 30' clear path will be required for all overhead services.

## Apartments/Multi-Unit Dwellings

The complete use of underground electric facilities is required in all new multi-family/apartment complex developments unless specifically waived in writing by GDE. For single phase units, the developer/owner will be required to pay an aid to construction cost of \$1,260 per unit for new construction. For three phase units, the developer/owner will be required to pay the full cost of construction. The developer will submit a final plat, provide an electronic cad/plat layout, request an electrical layout from GDE, provide all ditching and conduit, transport and place all vaults and required ground sleeves with a gravel base, call GDE for inspection of all ditching and conduit, backfill one foot, place marking tape, and complete backfill.

The developer/owner will provide, install, own, and maintain all conduits. The owner shall also provide, install, own, and maintain all service wire on underground services above 400 amps. GDE will provide, install, own, and maintain all service wire for services 400 amps and below. The service size is the sum of all meter bases per building. Multi-tenant developments will be required to provide, install, and maintain service conduit and wire to all buildings if one building exceeds the 400-amp service size. GDE will not mix GDE service wire and customer service wire in these developments. All apartment/multi-unit dwellings shall have meter bases numbered to GDE specifications (see **Labeling for Multi Metered Installations**, pg.20). Multi-gang meter bases must be approved by GDE's Metering Department. Meter troughs will not be allowed (see **Secondary Termination Enclosures**, pg.5). GDE will provide and install underground primary wire, transformers, primary connections, and switching cabinets.

Provisions shall be made by the developer (including ditching, backfilling, and conduit) to loop feed each primary line where practical as determined by GDE's Engineering Department. Overhead exceptions may be granted for major feeder lines as determined by GDE on a case-by-case basis. However, the standard will still be underground utilities. Exceptions will only be granted in letter form. GDE will provide standard above ground switching cabinets.

## Modular and Manufactured Homes

Modular homes are defined as a house that comes in more than one piece and assembled on the home site. Manufactured homes are one-piece houses with axles, commonly referred to as "mobile homes" or "trailers". Meter bases may only be mounted on modular homes that have a permanent foundation, tongue removed, and are certified by the manufacturer that the building is rated for such an installation. These services will be underground. Homes not meeting these requirements and all manufactured homes will have underground service to a meter pedestal (pedestal must be approved by GDE's Metering Dept.) no more than 20' from building. Overhead service to risers or service poles will only be allowed if preapproved by the GDE Engineering Dept. The service poles will meet the minimum specs listed in **GDE Pole Setting Specs**, pg.10, along with all current NEC/NESC code requirements.

## **Secondary Termination Enclosures**

GDE shall not connect to any new troughs. Secondary termination enclosures (provided by the Customer) will be used on all new services requiring multiple meters where ganged meter bases are not used. Existing troughs shall be replaced with secondary termination enclosures under the following circumstances: adding new load, upgrading service, adding a new service, or replacing GDE's line side conductors.

Each individual service in the termination cabinet shall be labeled by unit number, suite number, or space number on the service cable for disconnect/reconnect purposes. The labeling must be approved by GDE's Engineering Department. All conductors shall be routed behind the termination cabinet busbars.

Enclosures are the property of the Customer. There is a requirement for a GDE lock on these enclosures. A GDE employee will unlock the enclosure for the Customer when necessary and upon request.

The following are acceptable part numbers for termination enclosures. Any enclosure not listed must be approved by GDE's Engineering Department.

CMC (Connector Manufacturing Company) Wall Mounted Three Phase							
		# of Cond. Per	Dimen	Dimensions - Inches		U.L. Listed Amp Rating	
Catalog Number	Max Wire Size	Phase	W	D	Н	Copper	Aluminum
LWTE21-500	500 kcmil	21	32	16	51	3800	3100
LWTE14-750	750 kcmil	14	32	16	51	3325	2695
LWTE14-1000	1000 kcmil	14	32	16	51	3815	3115
	N	1ilbank Multi-Po	sition Tap I	Вох			
		# of Cond. Per	Dimen	sions - In	ches		
Catalog Number	Max Wire Size	Phase	W	D	Н	U.L. Liste	d Amp Rating
UAP6094-O-NES	500 kcmil	16	25 5/8	16	43	3000	
UAP6095-O-NES	500 kcmil	22	32 3/8	16	43	4000	
UAP6096-O-NES	1000 kcmil	14	25 15/16	16	51	3300	

## A disconnect is allowed in front of the termination enclosure. A disconnect is not allowed between the termination enclosure and the meter base.

#### Gallatin Department of Electricity Approved Meter Bases

#### Self Contained

Size	Phases	lype	Milbank	Durham	Siemens	Eaton
200 Amp	Single	OH	U7021-DL-TG-BL	RS213N	UAT3/HQU4	UTRS202BCH
200 Amp	Single	UG	U1980-0-BL	UTRS223A	UAS8/UAS9 / HQW4	UTRS223ACH
225 Amp	Single	House Module			WCL204081T1RJ	
320 Amp	Single	OH	U1079-R-BL		HQST4	UTH4300TCH
320 Amp	Single	UG	U1797-0-K3L-K2L-BL		HQDSW/SWD 4	UTH43369UCH
320 Amp	Single	OH/UG	U2448-X	H4330T		UTH4330TCH
200 Amp	Three	OH/UG	U7423-RXL	H7213T	HQND 5	
200 Amp	Three	OH/UG	U9701-RRL-BL		HQST7/HQW7	
225 Amp	Three	Module			WCL2040B2T1RJ	
225 Amp	Three	Module			WCL2442B3T1RJ	
320 Amp	Three	OH/UG	U2120-X	UT-H7330-U	HQST 7	
320 Amp	Three	OH/UG	U2594-X		HQDSW/SWD 7	
600 Amp	Three	OH/UG	U4667-xt-9506		(K-7T) 9817-9506	CH9506K7
Instrum	ent Rate	d				
Size	Terminals		Milbank	Durham	Siemens	Meter Devices
20 Amp *	8	Single Phase	UC7235-RL	R6821-8K	9804-8542	
20 Amp **	13	Three Phase	UC7461-RL	STS13-2K	9837-8512	W110U54522-5
Dedeet	al Cania	Entropeo		-	-	-

GDE

P.O.Box 1555 Gallatin, TN. 37066 (615) 452-5152 (615) 452-6060 Fax

Submit information to:

bthornton@gdetn.com ahooae@adetn.com

Size	Terminals		Milbank	Durham	Siemens	Meter Devices
20 Amp *	8	Single Phase	UC7235-RL	R6821-8K	9804-8542	
20 Amp **	13	Three Phase	UC7461-RL	STS13-2K	9837-8512	W110U54522-5
Dodooto	ol Contine	Entrance				

#### Pedestal Service Entrance

Size Terminals Midwest

R281C1P6H 200 Amp 4

\*8 Terminal Base Requires Automatic Bypass Switch

\*\* 13 Terminal Base Requires test switch Durham # 1058 or Milbank # TS10-0111 (10 Pole)

\*\* 13 Terminal Base Must be prewired with test switch

#### Specifications and Notes

#### 1. NON-APPROVED METER BASES WILL NOT BE ENERGIZED BY GDE

2. Steel Construction and UL Approved with Label

3. Location shall be approved by GDE's Engineering Dept.

Shall be surface mounted and on a permanent structure controlled by the Customer.
 Shall not be in areas that are closed off by porches, decks, patios, fences, walls, screens, etc.

6. GDE shall have unobstructed access to meter base

7. Shall have a 6' clearance from any obstruction in front of meter base.

8. Shall be mounted 5'6" from ground to center of meter base

9. GDE/Customer service wire will enter left side of meter base, customer load wires will exit right side facing meter base

10. Shall be installed to National Electric Code (NEC) requirements.

11. Instrument Rated bases shall have shorting ability to remove meter

12. 600 Amp and above services REQUIRE advance notice to be given to GDE Meter Department. Call 615-527-7006 or 615-527-7005.

#### Instrument Transformers

1. All CT and PT's shall be provided by GDE.

2. Single Phase CT cabinet size shall be 38 x 38 x 12 with a 3/4 inch plywood backing for mounting of Instrument Transformers. Steel or aluminum construction.

3. Three Phase CT cabinet size shall be 48 x 48 x 12 with a 3/4 inch plywood backing for mounting of Instrument Transformers. Steel or aluminum construction.

CT cabinet must have provisions for a padlock.

Single Phase - Electrician shall provide 5 wires, (BLACK, RED, BROWN, ORANGE, WHITE)
 Three Phase - Electrician shall provide 7 wires (BLACK, RED, BLUE, BROWN, ORANGE, YELLOW, WHITE)

7. No marking tape shall be used on wires.

8. All CT and PT wires, 100' or less, shall be #12 copper conductor. Distances over 100' require approval from GDE.

Multi Ganged, Stacked meterbases, and Module Bases are APPROVED on a case by case bases.

## **Decorative Street Lighting**

The following guidelines are for use by the subdivision/development developer to assist with the installation of decorative street lighting on the Gallatin Department of Electric (GDE) system.

## Standards

Decorative street lighting designed and serviced by GDE will only be allowed in areas with underground electric primary and City roads. If the road is private, GDE will not design or service street lighting. Any private road street lighting will be metered according to GDE specs.

GDE's Engineering Department will design and show the street lighting layout on GDE's conduit plan. The following general standards will be followed for the street lighting design.

- 1. A light will be placed at all public street intersections, roundabouts, and 90° turns.
- 2. A light will be placed in all cul-de-sacs.
- 3. Standard spacing between lights will be approximately 300' with a max spacing of 400'.
- 4. Public alleys in residential neighborhoods will not have public street lighting provided.

## Overview

The developer is responsible for the installation of all lights, foundations, conduit, and wire. The developer will choose lights from GDE approved lights and provide GDE with one (1) spare decorative streetlight for each fifty (50) installed. The cost of the lights will be charged as aid to construction cost. This cost must be paid before GDE will release any material. Decorative lights can be picked up from GDE's warehouse once received. Decorative streetlights must pass a City Codes electrical inspection, meet GDE's specs listed in **GDE Decorative Light Specs**, pg.12, and meet GDE's inspections listed in **GDE Decorative Light Inspections**, pg.12, before being energized. The developer will be responsible for repairs during the first year the light is energized.

## Procedure to have lights energized.

A decorative streetlight will not be energized until passing a City Codes final electrical inspection and GDE's final inspection. After inspections have been completed, the developer or HOA may have the lights turned on to utilize the outdoor lighting. The lights will be billed monthly according to GDE's Outdoor Lighting Rate to the developer or HOA until lights are converted to the City of Gallatin account. Lights in residential developments will be converted to the City of Gallatin account once a permanent resident has service turned on to a house feeding from the same transformer as the decorative light. In commercial developments, the lights will be converted to the City of Gallatin account once the commercial building has been energized in the final tenant's name. However, the developer or HOA may choose not to use the decorative streetlights and wait until the lights have been converted to the City of Gallatin account before being energized.

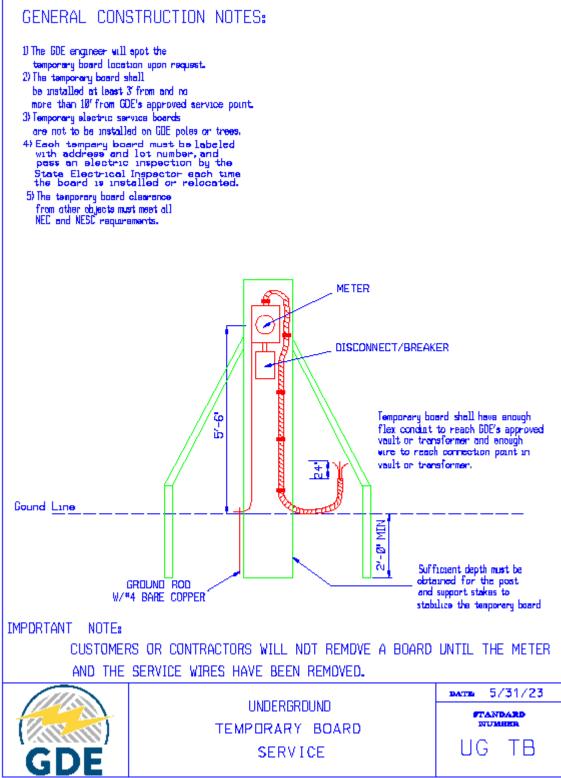
## **Temporary Electric Service Policy**

The Gallatin Department of Electricity (GDE) will provide electricity to customer owned temporary boards according to the following guidelines.

- 1. Temporary boards must be labeled with the address and lot number and pass an electrical inspection by the State Electrical Inspector each time the board is installed or relocated.
- 2. Temporary boards must be an underground fed temporary board unless approved by GDE's Engineering Department.
- 3. Temporary board location must be approved by GDE's Engineering Department.
- 4. Temporary boards that are approved for overhead installation shall be rigidly installed in the ground (2' min for post and braces) with braces or guys to adequately support the overhead service conductors and the weight of a 250lb man on a ladder, leaned against the temporary board. There shall be an eyebolt attachment for GDE's service conductors. The attachment point and ground clearance to service wire shall meet the National Electric Code (NEC) and National Electric Safety Code (NESC). The overhead temporary board shall not be installed more than 100' from GDE's approved pole.
- 5. GDE will charge a \$100.00 temporary board fee. This amount covers the installation and removal of the service wire. If additional trips are made, there will be extra charges. This charge does not include the meter service charge and deposit.
- 6. In addition to the cost from line 5, temporary boards requiring more than 100' of overhead service wire or when temporary construction is required, the total installation and removal cost will be paid by the customer before work begins. The cost to install a transformer to feed a temporary board will be \$400.00.
- 7. Customers or contractors will not remove a temporary board until the meter and service wires have been disconnected and/or removed.

\*Aid to construction costs and fees are subject to change without notice. Please contact the GDE Engineering Dept. for updated cost.

GDE PH. \* (615) 452-5152



Inspection	Inspection
Trench	*Shall meet all Occupational Safety and Health Administration (OSHA) standards
	*Shall be free of construction debris and large/sharp rocks
	*Shall be a straight line from GDE's secondary box to meter base
	*Shall not be located under any permanent structures
	*Backfill shall be soil free of material that may damage conduit or gravel.
Conduit	*Conduit will be inspected prior to backfilling ditch.
	*Service size 200-400amp 3" schedule 40 PVC conduit
	*Services above 400 amp will be inspected by City Codes.
	*Expansion joint required on all services below meter base
	*Conduit above ground shall be schedule 80 PVC
	*Only two 90° 24" radius Schedule 80 PVC elbows may be used.
	*30" minimum depth with a minimum 12" separation (vertical and horizontal)
	from other utilities (excluding AT&T/Comcast service drops).
	*Pull String required
	*Must be installed per NEC code requirements, and meet GDE's meter base
Meter Base	policy
Ground rod/wire	*Must be installed per NEC code requirements. (Driven in undisturbed soil)

## **GDE Underground Service Specifications**

\* All inspection requirements must be met as well as grading to within 3" of final grade before notifying GDE for an inspection.

# **GDE Pole Setting Specifications**

Pole Height	Set depth with dirt backfill
25'	5'
30'	5'
35'	5.5'

GDE Underground Primary/Secondary Specifications				
Inspection	Requirements			
Conduit	*Conduit will be inspected prior to backfilling ditch.			
	*All work shall be performed to GDE's conduit drawings and details.			
	*Primary conduit - 48" depth with minimum of 12" vertical and horizontal			
	separation from other utilities and a 5' separation when paralleled with other			
	utilities.			
	*Secondary conduit - 30" depth with minimum of 12" separation (vertical and			
	horizontal) from other utilities.			
	*90-degree elbows – 2 & 3" galvanized 24" radius			
	- 4" galvanized 36" radius			
	*Backfill shall be soil free of material that may damage conduit or gravel. If			
	clean backfill is not available, #67 gravel will be used.			
	*Conduit damaged before wire is installed must be replaced/repaired by			
	developer.			
	*All conduit installed in existing GDE equipment must be coordinated with GDE.			
	*GDE's Final Inspection Check List (pg13) must be completed, signed, and			
Final	returned to GDE before final inspection will be scheduled.			
T mai				

## **GDE Underground Primary/Secondary Specifications**

\* All inspection requirements must be met before calling for an inspection.

# **GDE Decorative Light Specifications.**

Material	GDE Specs
Conduit	*1" schedule 40 PVC (unless otherwise specified) with 24" radius elbows
<b>Decorative Fixtures</b>	*See Approved Light Fixtures
Decorative Pole	*See Approved Light Poles
Lamps	*See specs listed in Approved Light Fixtures
Photocell	*See specs listed in Approved Light Fixtures
Conductor	*NEMA Listed THHN/THWN Copper, 600v, 90° C
	#12, #4, or #6 AWG (must maintain less than 5% voltage drop from source).
Pole Base Fuses	
and Fuse Blocks	*Fuse link with fuse installed required in pole base.

# **GDE Decorative Light Inspections**

Note: The conduit, footing, and final inspections below are done by GDE and not by City Codes.

Inspection	Requirements
Conduit	<ul> <li>*Conduit will be inspected by GDE prior to backfilling ditch.</li> <li>*All work shall be performed to GDE's conduit drawings and details.</li> <li>*2'-0" depth with minimum of 12" separation (vertical and horizontal) from other utilities.</li> <li>*Backfill shall be soil free of material that may damage conduit or gravel.</li> <li>*Conduit damaged before lights are energized must be replaced by developer.</li> <li>*All conduit installed in existing GDE equipment must be coordinated with GDE.</li> </ul>
Footing	<ul> <li>*Shall be built to GDE Decorative Street Light Footing Detail (pg.23).</li> <li>*First GDE footing inspection shall be scheduled <b>before</b> concrete has been poured. Rebar, anchor bolts, ground wire, and ground rods shall be installed.</li> <li>*Second GDE footing inspection shall be scheduled <b>after</b> concrete has been poured.</li> <li>*Poles shall not be installed until second inspection has been completed.</li> </ul>
Final	*Light must pass a City Codes electrical inspection before scheduling the final GDE inspection. *All wiring, connectors, and fuses installed. *Poles plumb, level, and securely mounted. *Fixture oriented correctly with street. ("street side" embossed on fixture must be turned toward the street)

GALLATIN DEPARTMENT OF ELECTRICITY

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# **GDE Final Conduit Inspection Check List**

This checklist is to assist developers with the requirements for a GDE final conduit inspection. Please ensure the requirements have been met before signing, dating, and returning form to GDE for a final conduit inspection. This list is meant to be a guide and is subject to change without notice. Specifications available <a href="http://www.gallatinelectric.com/engineering">www.gallatinelectric.com/engineering</a>.

- \_\_\_\_1. Property Pins installed and labeled.
- \_\_\_\_\_ 2. Curbs installed.
- 3. Grade within 6" of final grade from back of utility easement to curb.
- 4. All GDE conduits and ground sleeves installed in utility easement.
- 5. All secondary vaults installed per GDE Secondary Vault Detail.
- 6. Ground sleeves installed per GDE Ground Sleeve Details.
  - 6A. Ground sleeves backfield to within 6" of top of pad.
  - \_\_\_\_\_ 6B. Ground sleeves level.
    - 6C. Conduits cut 12" below top of ground sleeve.
    - 6D. Conduits arranged in ground sleeve per the GDE Ground Sleeve Details.
    - 6E. No trash inside of ground sleeve.
- Conduits arranged per GDE Underground Distribution spec for underground primary construction, or

GDE Underground Secondary Conduit System spec for overhead primary construction.

- \_\_\_\_\_7A. 36" minimum spacing between GDE 3" secondary conduit and communication conduits.
- \_\_\_\_7B. 18" minimum spacing between GDE ground sleeve and communication conduits on underground primary construction.
- \_\_\_\_\_7C. 24" minimum spacing between pole and GDE 3" secondary conduit on overhead primary construction.
- 8. 1800lb minimum pull tape/mule tape in all conduits with 6' tail on each end.
- 9. All conduits installed per GDE Conduit Layout.
- 10. Any work done to unstop, repair, etc. after final inspection will be billed to developer at full cost.

Signature:

Date:

LIGHTING THE WAY FOR THE CITY OF GALLATIN SINCE 1939

