Policies and Procedures
For
Electric Utility Service

MADISONVILLE MUNICIPAL UTILITIES
ELECTRIC DEPARTMENT

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INTRODUCTION

This booklet is issued by MADISONVILLE Municipal Utilities (MMU) as a reference and guide for connecting and supplying electric services.

This information is for employees of MMU and customers (or prospective customers,) their agents or contractors, electricians, architects, etc.

These rules, regulations and requirements are for the purpose of safeguarding customers and providing adequate service to all customers.

The requirements contained herein are the minimum MMU requirements and in addition to compliance with these rules. All electrical installations must comply with the National Electrical Code (NEC), the National Board of Fire Underwriters, the National Electrical Safety Code (NESC), American National Standards Institute (ANSI), Institute of Electrical and Electronic Engineers (IEEE), Occupational Safety and Health Administration (OSHA), American Public Power Association (APPA), Underwriters Laboratories (UL) and such municipal laws and ordinances in force by the City of MADISONVILLE, Kentucky.

These rules are not necessarily all-inclusive and, in the events or situations, conditions arise that are not fully covered herein, the customer shall contact MMU to determine the applicable requirements.

These electric service requirements do not list the terms necessary or usage required to qualify a customer for a given rate. The general terms and conditions of the rates may be secured at the MMED office.

These rules and regulations may be revised, amended, supplemented or otherwise changed, and such changes, when effective, shall have the same force as the original rules and regulations and shall be posted on the City of Madisonville webpage as soon as practicable.

The failure by MMU to enforce any of the provisions of these rules and regulations shall not be deemed a waiver of its subsequent right to do so.

If conflict arise with other ordinances the more stringent ordinance shall apply unless prior approval is granted by MMED.

DEFINITIONS

The following words and terms when used in these rules shall have the meanings indicated below:

ANSI: American National Standards Institute

APPA: American Public Power Association

CITY: City of Madisonville

CUSTOMERS: Any individual, partnership, associations, firm, public or private corporation or governmental agency at a specific location receiving or requesting electric service.

ELECTRIC DISTRIBUTION SYSTEM: MMED's wires, poles, transformers and other equipment used to distribute electric energy in MMED's service area.

ELECTRIC LINE EXTENSION: Any addition to the electric distribution system to provide service.

ELECTRIC MAXIMUM DEMAND: The load supplied during the 15-minute period of maximum use during the month as determined by a demand meter, or as otherwise specified in the applicable Rate Schedule. The maximum demand will be determined by a permanently installed meter.

KYMEA: Kentucky Municipal Energy Association.

METER SETTING: The equipment, devices, fittings and appurtenances necessary for the purpose of measuring the quantity of the customer's use of electric services.

MMED: Madisonville Municipal Electric Department

MMU: Madisonville Municipal Utility

NEC: National Electric Code

NESC: National Electric Safety Code

OSHA: Occupational Safety and Health Administration

POINT OF DELIVERY: The point of connection of MMED's electric facilities to the customer's facilities, unless otherwise specified in the service application or agreement.

POWER (ELECTRIC): The time rate of generating, transferring or using electric energy, usually expressed in kilowatts. Apparent -- Power proportional to the mathematical product of the volts and amperes of a circuit. This product generally is divided by 1,000 and designated in kilovolt-amperes (KVA). It is comprised of both real and reactive power.

POWER FACTOR: The ratio of real power (KW) to apparent power (KVA) for any given load and time. Generally, it is expressed as a percentage.

REACTIVE: The portion of "Apparent Power" that does no work. It is commercially measured in kilovars. Reactive power must be supplied to most types of magnetic equipment, such as motors. It is supplied by generators or by electrostatic equipment, such as capacitors.

REAL: The energy or work-producing part of "Apparent Power". It is the rate of supply of energy, measured commercially in kilowatts. The product of real power and length of time is energy, measured by watt-hour meters and expressed in kilowatt-hours.

SERVICE: The availability of electricity by MMED to the customer whether or not such electricity is actually used.

SERVICE ENTRANCE: That portion of the customer's wiring, and other equipment necessary to provide a point of connection with MMED's facilities.

SERVICE WIRES: MMED's wires and other equipment for delivery of service from MMED's electric distribution system to the point of attachment to the Customer's facilities.

UL: Underwriters Laboratories, Inc.

AUTHORITY

The enactment of these rules, regulations and policies requires the approval of the City of Madisonville. As fee schedules, rates and other specific policies are updated, it will be the responsibility of the Electric Superintendent to make sure the policy manual is revised. Most changes other than fees and rate schedules are delegated to the Electric Superintendent, without requiring prior approval of the municipal governing body. The Mayor and City Council shall be kept informed on material changes. The Electric Superintendent's responsibilities include metering, operation, maintenance and control of municipal electric lines and electric property. The Superintendent sets the standards of quality for construction and maintenance of the electric system and plans for electric system changes or improvements.

PARTS OF ALL CONTRACTS

These policies are part of all oral and written contracts for providing and receiving utility service from the City.

CONFLICT

Provisions of a special contract or tariff between the City and a customer will take precedence over these policies.

NO PREJUDICE OF RIGHTS

Although the City and its customers may not always exercise the rights specified in these policies or available to them by law, that does not prevent the City or the customer from exercising those rights at a later time.

Policies and Procedures

Section I—General

These Rules and Regulations apply to the electric service supplied by MMU and are a part of the rate structure. Customers desiring information may contact the business office of MMU in person, by letter, telephone inquiry, or by email.

City of Madisonville
67 N. Main Street
Madisonville, Kentucky, 42431
Telephone: (270) 824-2100

Utility Office and Billing (270) 824-2102
77 N. Main Street
Madisonville, Kentucky, 42431

Electric Utilities Operations Center
609 McCoy Ave. Madisonville, Kentucky
(270) 824-2130

EMERGENCIES (after hours) (270) 821-1720 – Police Department

1. APPLICATION FOR SERVICE

Any applicant requiring Municipal Services must complete the necessary application prior to receiving service. Generally, residential applications will be processed promptly; providing applicant is able to provide all necessary information. General Service and Industrial applications may take up to 3 business days to process. Type of information required may include but is not limited to:

a. Applicant's Name
b. Location of the premises to be served
c. Previous Location(s)
d. Copy of Current Rental and/or Lease Agreement
e. Owner or Landlord Information
f. Picture Identification
g. Social Security Number
h. Federal ID number
i. Billing Address
j. Phone Number
k. Emergency Contact

Applicant must be at least 18 years of age to apply for service.

Should the service request be new and/or additional electric load, the applicant shall contact MMED Operations Center prior to making application.

A service contract is required for all non-domestic, general service and industrial customers. This contract will define any deposit, type of service, and other pertinent information. Contract will not be processed until all contribution-in-aid-of-construction or other applicable fees are paid.

All service agreements, except for temporary or short-term service, shall be for a term of five years or longer unless permanently terminated by the customer. At the expiration of such term, unless the agreement contains a definite extension provision, the service agreement shall be automatically extended indefinitely until canceled by either party. Applications for temporary or short-term service shall be accepted when MMU has capacity available at the point of delivery and in accordance with the provisions of the applicable service schedule.

2. MEASURING ELECTRIC SERVICE

For all Customers connected after March 1, 1966, the use of service at each point of delivery shall be metered separately. Whenever, for any reason, MMED furnishes two or more meter installations for a single customer, each point of metering shall be considered a separate service and be separately billed, including minimum service charges as outlined in the rate schedules.

3. RESALE/MISUSE OF ELECTRIC ENERGY

Electric service will only be offered to the ultimate consumer, except where such consumer is a temporary or transient occupant of an area normally held for rent as in hotels and motels. Electric service shall not be re-metered, resold or shared by others nor shall it be extended outside the premises/structure for service to other customers on or near the premises. Certain local and federal government entities are exempt and will be addressed on a case-by-case basis. MMED shall promptly disconnect or have disconnected the service in which any such violations occur.

4. SERVICE DEPOSIT

A two (2) month security deposit for electricity will be required of all general service, industrial, and residential Customers. All such deposits shall be in the form of cash or equivalent for residential, general service and industrial Customers and shall be paid prior to receiving service. An applicant seeking utility service authorizes MMU to use their Social Security or Federal Identification Number to be used to check their history and credit rating using an “On Line” facility. The payment history on an existing account may also be used to determine the deposit amount for a new account. The deposit amount may be adjusted based on the credit or payment history.

The Utility may require any Customer, regardless of credit history, to increase the deposit, if the Customer’s billing becomes delinquent. Upon termination of service, deposits, plus interest, may be applied against unpaid bills of Customer and if any balance remains

after such application is made, said balance shall be refunded to Customer. If during the application process a discovery that the applicant has an outstanding debt due MMU, such debt shall be paid in full before rendering service. If such discovery is made after rendering service, the outstanding debt will be immediately applied to the customer's bill as a delinquency.

a. Deposit Calculation

The initial deposit amount for all customers will be no less than two (2) times the estimated total monthly billing based on the highest three (3) months (averaged) of actual consumption, estimated average or manual calculation (whichever is higher). The consumption history will be derived from the previous 12 months of active history available at the account location.

Where no previous history is available and no estimated average can be established, the utility shall manually determine the deposit amount.

b. Residential Service

Such calculation will be based on 1,500 kilowatt hours (kWh) per month as a minimum monthly consumption; multiplied by the two (2) month requirement. Calculation shall include the monthly service charge, energy (kWh), demand (kW), power cost adjustment (PCA), taxes, and other applicable charges. Based on the applicants' credit history and facility usage the deposit may range from $0.0 to two (2) times the average of the highest 3 months of calculated/ estimated usage or account history.

c. General or Industrial Service

Such calculation shall be calculated at two (2) months for sixty (60%) percent of the installed service size or a two (2) month average high based on a comparable facility of similar type and service size, whichever is available. Calculations will be based on monthly consumption, energy, demand, PCA, taxes, and other applicable charges for a two (2) month period. A deposit deferral may be available, depending on applicants' MMU account history.

d. Multi-Property Owners (Automatic Transfer ofService)

MMU offers property owners that own rental facilities the option to have "automatic transfer" of utility services; with limited or no interruption of service. This service is intended to eliminate the curtailment of service by the renter where the property owner desires to keep the utilities(s) on. The curtailment order must be a standard "service disconnect request" ordered by renter, (non-payment or other permissible disconnect is ineligible). This limited service is not intended for permanent utility service or occupancy (cleaning and maintenance only). The initial deposit amount will be determined by the applicable deposit procedure. However,

the formula used to calculate the final deposit (if any) will be determined by paragraph "e" below. Rental Owners may make application for a "Multi-Property" service contract in advance or at the time of need. MMU makes no guarantee or assumes no liability as a result of this special service.

e. Credit Check and Deposit Determination

For all Residential or Multi-Property contract customers MMU will use an "on line" credit information service to determine the deposit amount. Accordingly, three (3) levels of credit risk will be utilized in determining the deposit:

1. **Green** – (low risk), no deposit is required for residential customers. In the event a termination of service occurs during the first eighteen (18) months of service, a deposit equal to 100% shall be deposited with MMU. A grace period of five (5) business days after actual service disconnect will be applied before the new deposit and applicable fees become effective.

2. **Yellow** – (medium risk), a 50% deposit is required for all residential customers. In the event a termination of service occurs during the first eighteen (18) months of service, a deposit equal to 100% shall be deposited with MMU. A grace period of five (5) business days after actual service disconnect will be applied before the new deposit and applicable fees becomes effective.

3. **Red** – (high risk), a 100% deposit required for residential customers.

Should no adequate credit history be available the deposit shall be 100% of the calculated value.

All deposits are based on the initial deposit formula and schedules. Should MMU determine that the original deposit calculation was under estimated, an additional deposit may be required.

f. Energy Services Contract

For customers other than residential an Energy Services Contract must be executed prior to rendering service. Application for service may be obtained at the Electric Operations Department, 609 McCoy Avenue or on line at https://www.madisonvilleliving.com/electric-department . For additional information call the Electric Department at 270-824-2130 or City Hall at 270-824-2102.

g. General Deposit Deferral

MMU may allow an existing general service customer who desires to relocate, expand or start a new business to defer part or all of the initial electric utility deposit, providing all the following minimum requirements are met:

1. A new Energy Services Contract application shall be completed and submitted to the Electric Department at 609 McCoy Avenue.
2. Applicant must have an existing active general service MMU account and have no more than two (2) late notices within the preceding twenty-four (24) continuous months of active service. Applicant must also be current on all MMU accounts.
3. Applicant applying for a deposit deferral adjustment must be the same person(s) currently listed on the existing MMU account.
4. Upon review and subject to approval by MMU, the applicant will be required to execute the Energy Services Contract and submit any deposit required as designated by MMU.
5. The remaining deposit balance, if any, will be added to the regular monthly utility bill in five (5) equal payments. In the event a utility billing late notice or delinquency occurs during the deferral period, all remaining deposits also become delinquent, and shall be immediately paid in full.
6. Only one (1) deposit deferral will be allowed per applicant within a 24 month period.

h. Transfer of Deposit

No transfer of security deposit will be allowed.

i. Interest on Security Deposits

MMU shall accrue interest annually on all customer security deposits retained by MMU at interest rates as outlined in the Kentucky Revised Statutes. During such period should the account experience two (2) or more late notices, such deposit will be retained until a continuous eighteen (18) months of clean history is achieved. When an account is terminated and all outstanding bills are paid, the security deposit (if any) shall be returned along with any interest due to the customer.

5. BILLING

MMU will process the billing of utility, sanitation and other applicable accounts within a scheduled timeline. Accounts with billing issues such as re-reads will be resolved as soon as practical. In any event, the city will make every effort to process the regular monthly utility bill within three (3) working days of the read date. Service bills will be rendered at regular intervals for all customers. MMU makes every effort to read each meter every 28 to 32 days. When MMU is unable to read the meter after reasonable effort, the customer shall be billed for an estimated consumption based upon the best information available. MMU will not prorate any kilowatt-demand (kW) that has been recorded by a meter or where estimated. See Section I; “Employee Access”.

The due date for payment on all bills will not be less than fifteen (15) days after the date of the bill. Bills paid on or before the due date will be payable at the net amount. Payments made after the due date will be subject to a late payment charge. The late payment charge for all Customers will be ten percent (10%) of the unpaid portion of all monthly charges, excluding facilities rental, arrears and taxes. If the due date falls on Saturday, Sunday or any holiday which the Utility observes, the next business day following will become the due date. If remittance is made by mail, the date received by the Utility becomes the date of payment. Regardless of payment method, Customer is solely responsible for the payment to MMU in a timely manner.

If the Customer violates any of these rules and regulations and/or becomes delinquent in the payment of the Customer's bill, MMU may employ an attorney or attorneys to protect its rights there under, and in the event of such employment following any violation by the Customer and to the extent allowed by law, the Customer shall pay reasonable attorneys' fees and expenses incurred by MMU, whether or not an action is actually commenced by law against the Customer by reason of the violation. The Customer agrees to indemnify MMU from all loss, damages and expenses, including attorney's fees incurred in connection with any suit or proceeding in or to which MMU may or become a party for the purpose of protecting or asserting any lien that it may have for the collection of any account owed.

a. Late Fees

The late payment charge for all Customers will be ten percent (10%) of the unpaid portion of all monthly charges, excluding arrears and taxes. Additionally, the following provisions will apply:

1. A late fee penalty may be waived if MMU fails to send the bill/invoice to the correct service or billing address on file.
2. Customer may be granted only one (1) late fee credit in any eighteen (18) month period. To be eligible the customer must have an active MMU account with no late penalties applied or waived in the previous active eighteen (18) months.
3. Regardless of customers' payment method, Customer is solely responsible for the payment in a timely manner.
4. Customers who prove as a primary source of income a once monthly Social Security or disability check will be exempted from late payment charges. Customer should request a Benefit Verification Statement via the following:

    i. Telephone the Social Security Administration @ 1-877-626-9912.
    ii. Apply in person – 4431 Hanson Road, Madisonville, KY (requires photo ID). Customer should receive documentation immediately if applying in person.

iii. Online – www.socialsecurity.gov

b. Extension

If an account becomes delinquent and subject to termination, an extension of five (5) business days may be allowed by MMU upon a request from the customer. To qualify, the customer must;

1. Have no less than twelve (12) months of continuous active service.
2. Have no delinquencies within the preceding twelve (12) months.
3. Submit payment of fifty (50) percent of the delinquent amount prior to the termination date.

This extension shall only be allowed once within any twelve (12) month period.

6. PAYMENT OF BILLS

Bills are to be paid at the main office of Madisonville Municipal Utilities at 77 N. Main Street or on line at https://www.madisonvilleliving.com/madisonville-municipal-utilities other locations designated by the City from time to time.

Customers of Madisonville Municipal Utilities may, at their option, choose to use one or both of the following plans as a convenience in payment of bills.

a. Automatic Bank Draft

A plan whereby the Customer authorizes Madisonville Municipal Utilities to draw a draft on the customer's bank account to cover the net amount of their utility bill each month. These drafts are to be drawn at the time of billing each month. The Automatic Bank Draft plan places the responsibility for timely payment of the Customer's bill on the Utility and relieves the Customer of the possibility of having to pay a late payment charge due to oversight. The Customer will receive a bill each month, which will be marked "Paid by Bank." If two (2) Bank Drafts are returned for any reason within any twelve (12) month period, Customer will be removed from Automatic Bank Draft service.

b. Levelized Payment-Plus

Levelized Payment-Plus is a simple summation of your present monthly utility billing, your previous eleven billings, any ending credit or debit, and a small percentage leveling factor for payment equalizing. The sum is divided by 12 giving you the current month billing. Once the average utility amount is determined Levelized Payment-Plus is designed to keep your monthly statements within a reasonable range. The difference between actual and average billings will be carried in a deferred balance that will accumulate both debit and credit differences for the duration of the plan (12 consecutive months). This plan does assist the monthly billing by better controlling higher than average winter or summer bills.

1. To be eligible for the Levelized Payment-Plus program the customer must:

    a. Have lived at their current residence for at least twelve (12) continuous months.
    b. Have no more than one (1) late notice during the previous twelve (12) months.
    c. Have a zero (0) balance at the time of application.
    d. Agree to pay the full Billing amount each month by the due date.
    e. Complete the utility Levelized Payment-Plus Agreement and Billing Application.

[**]*By living at your current residence for 12 months, the Levelized Payment amount becomes a more accurate reflection of your usage. Without the potentially high and the low consumption months, the amount may be inaccurate for the monthly averages.*

2. **Enrollment**

    Customers can sign up at any time, but it is required that the customer have at least twelve (12) months of continuous utility use at requested level billing address, and a zero (0) balance on their account.

3. **Payment Changes**

    The Levelized Payment amount can change if the customer uses more or less in utilities than in the past. For example, if you use more electricity by running your furnace or air conditioner longer than usual during the peak season months, the payment amount may change to offset a potentially-higher amount. Adjustments are made monthly to prevent large debit or credit balances, so you are paying an amount closer to your actual usage.

4. **Extra Payments**

    If a customer believes their utility usage may be more than projected, they can add additional money to their account.

5. **Closing a Levelized Payment Account**

    Either MMU or the customer may cancel the agreement covering the levelized payment plan at any time. All credits or debits must be paid in full at the termination of the agreement. If the customer terminates utility service(s) at their current location or does not make required payments by the due date, they will be removed from the Levelized Payment program. If the customer is removed from the program due to poor payment history, they must wait (12) months from the time the account balance is brought current before being eligible in returning to the program.

6. **Voluntary Cancelation**

    The customer may cancel at anytime without penalty. However, returning customers must meet the enrollment criteria.

7. **Location Specific**

Levelized Payment amounts are based on a residence and usage patterns. A new/different home may require more or less utilities than the previous home. MMU requires twelve (12) months of service at the new residence before Levelized Payment can begin.

8. **Calculations for Levelized Payment-Plus**

A summation of your present monthly utility billing, your previous eleven billings, any ending credit or debit, and a (10%) leveling factor for payment equalizing. The sum is divided by 12 giving you the current month billing.

9. **Delinquent Payment**

The Levelized Payment amount must be paid each month. If the payment is not received by the due date, there will be a penalty added to the customer's account. If the account balance is not paid, MMU may remove the customer from the program and the account must be paid in full at that time. Only one (1) late notice may be allowed within a twelve (12) month period. If a second late notice occurs, customer will be removed from the Levelized Payment plan.

10. **Utility Bill Information**

The customers "monthly utility bill" will disclose their usage and billing information for the previous month.

7. NON-PAYMENT OF BILLS

a. Bills are due and payable within fifteen (15) calendar days after billing. If a customer does not pay a bill within the due date shown on the original bill, the customer shall be considered delinquent in payment. MMU may discontinue service thereafter by giving the customer at least 48 hours written notice by U.S. Mail, postage prepaid, to the last known address of the customer.

b. Discontinuance of Service for Nonpayment of Utility Service - If full payment of the utility bill has not been received by Madisonville Municipal Utilities on or before five (5) business days from the due date of the original bill, all services will be promptly terminated.

c. Prior to re-establishing service due to Termination for Delinquency, a one-month (1) deposit shall be paid. The deposit amount will be the estimated total monthly billing, based on twelve (12) months history at the current address. A grace period of five (5) business days after actual service disconnect will be applied before the new deposit becomes effective. In the event no history is available, MMU will estimate or apply the standard minimum deposit; whichever is higher.

In addition to the revised deposit requirement, all delinquent bills, late fees, service charges and other applicable charges must be paid in full prior to reconnection of service.

d. Prior to re-establishing service due to Termination for Meter Tampering, a two- month (2) deposit shall be paid (no grace period). The deposit amount will be two (2) times the estimated total monthly billing, based on the highest three (3) months consumption average. The consumption history will be derived from the previous 12 months of active history available at the account location. In the event no history is available, MMU will estimate or apply the standard minimum deposit; whichever is higher. In addition to the revised deposit requirement, all delinquent bills (up to 15 year history), late fees, service charges, tampering charges and other applicable charges must be paid in full prior to reconnection of service.

e. Termination of service during severe weather conditions may be limited.

f. Refusal of Service for Non-Payment of Former Services - Service may be refused to any Customer who has a delinquent account with the Utility for any past service. If an application for service is approved for a former customer who still owes for past service, the balance due for the past service will become a previous balance on the new account established by the applicant. If a customer has service at more than one location and terminates service at one of the locations, any delinquent balance resulting from the termination will become a previous balance on billing for another location, which the Customer is being served. Service may be refused if it is evident to the Utility that the applicant is living with a former customer who still owes for former services rendered by the Utility.

g. Discontinuance or Refusal of Service for Reasons Other Than Nonpayment MMED may refuse to connect service or may discontinue service for the violation of any of its Rules and Regulations, Schedule of Rates and Charges or any contract between the Utility and the Customer. The Utility may discontinue service to the Customer for theft of electricity or water or for the possession of theft devices on the premises of the Customer. The discontinuance of service by the Utility for any cause does not release the Customer from obligation to the utility for any services rendered.

h. Lessee or Sub-Lease - In the event utility service is provided to a tenant, lessee, sub-lessee or other person or entity occupying the property who is not the entity who contracted with the city for services, the city has the right to collect the delinquent charges, interest and late fees from the person or entity that actually contacted the city for the services. Payment by that person or entity shall be due within fifteen (15) days of receipt of notice of the delinquent billing. If it shall appear that the delinquent occupant has moved from the premises, service may be restored to any new occupant of the premises, provided such new occupant is not delinquent in the payment of any bill for utility services furnished by the city.

i. Medical Statement - In the event MMU has given written notification that electric service will be terminated or disconnected for nonpayment of a utility bill, the Utility will delay the termination of service for a period of 15 calendar days provided that prior to the termination of service MMU receives a written statement from a medical doctor or other qualified healthcare provider stating that an occupant or occupants of the premises have an illness or other medical condition and that termination of utility service would be life-threatening or pose a substantial risk of harm to such occupant or occupants.

Even if an appropriate statement from a doctor or other qualified healthcare provider is received by MMU prior to the termination of electric service, MMU shall have the right to terminate such service after the initial 15 days grace period unless a partial payment plan acceptable to MMU is agreed upon and payments are made on a timely basis pursuant to said plan. In any event, MMU makes no guarantee or promise of continuous electric service, and emergency backup systems shall be the customer's responsibility.

j. Before service to the premises is discontinued, the customer shall be entitled to a hearing before the Mayor or before whomever the Mayor shall appoint if a request for a hearing is made in writing and such written request is received by the Mayor prior to the disconnection of service.

k. Collection of Unpaid Bill - MMU shall pursue the collection of unpaid bills by all legal remedies including the use of collection agencies and courts to collect the unpaid charges. Any unpaid balance is subject to the account information being reported to a Credit Bureau.

8. BACK BILLING

In the event an error in billing has occurred, the customer is responsible for the electric energy and demand in error. The city will render a corrected bill in which the customer will be given equal time to pay the unpaid portion. In any event, the back billing shall not exceed a twelve (12) months usage history.

9. SERVICE CHARGES

The following charges will be applied by MMU to cover the cost of connecting or reconnecting a meter or service; **see notes 1 and 2 below:**

	Description of Service	**Charge**
a.	New Connects - Connecting utility services at any location where services have been previously disconnected by work order or where the billing account name and/or account number changes, except as noted below (during normal working hours)	$25.00

Note: In the event that a spouse wishes to do a name change only on a good credit (no deposit involved) account where there has been no change in location and no meter readings are required necessitating a service call, there will be no connection fee charged.
Landlords who have established and maintained good credit with the Utility may, who have established a multi-property contact, have service read into their name when a renter request a service disconnect at no charge. The readout must be done in conjunction with the renter request and not require an additional dispatch of an employee and truck.

b. Delinquency service fee – Applies to any account failing to make payment before cutoff date. Must be paid and posted to account before account can be reconnected.
Minimum $25.00

c. Reconnects after hours will be performed on a case by case basis.
Minimum – $150.00

d. Disconnecting and reconnecting utility services to any account that has been illegally reconnected by customer after the account was disconnected by MMED. In addition, all meter tampering charges shall apply, as contained elsewhere in MMED Policies and Procedures. Minimum $150.00

e. Any miscellaneous service call that requires dispatching an employee and pickup truck for the convenience of the customer (during normal working hours). Minimum $25.00

f. Any miscellaneous service call that requires dispatching an employee and bucket truck for the convenience of the customer (after normal working hours). Minimum $50.00

g. Temporary service fees for temporary overhead service installation ..... Minimum $60.00

h. Processing fee for checks returned by the bank due to insufficient funds. When a check is returned to MMED by the Customer's bank, a twenty-five dollar ($25.00) service charge will be applied and service will be subject to disconnect for non-pay and all appropriate fees for reconnect will apply. If a customer has two (2) returned checks within a 12-month period, the Utility will no longer accept personal checks

from the customer for a 12-month period.
Minimum..... $25.00

i. Trouble Calls - The Customer will pay twenty dollars ($20.00) during MMED's normal office hours and sixty dollars ($60.00) at other times for service calls to their premises providing the trouble proves to be in the facilities for which the customer is responsible. These charges will appear on the customers' next monthly billing.

Minimum .....$20.00-$60.00

10. TEMPORARY SERVICE CONSTRUCTION CHARGES

The minimum construction charges for temporary, single phase, overhead service drops made from existing transformer installations without adding additional facilities shall be as follows:

	Overhead	Underground
100 amps or less	$60.00	$100.00
101 to 200 amps	$75.00	$150.00

The minimum non-refundable construction charge for a temporary service requiring the installation of a single transformer and service drop from an existing primary and pole, will be $250.00 and is to be paid in advance.

Where underground temporary services require the installation and/or removal of facilities to supply service, the applicant will be required to pay the cost to provide such service.

Normally, such service is available adjacent to the underground transformer or secondary pedestal at no charge.

Any temporary services not covered by one of the above provisions will be installed for the customer with the charge based upon the estimated up and down charge for the service. The total amount of this estimated cost shall be paid prior to the installation of the temporary facilities.

In addition to the above mentioned charges, there is an additional charge of $25.00 for each time MMED is called out by the customer to connect or disconnect a temporary service but is unable to perform this work because the customer is not ready for the service to be

connected or disconnected, the service entrance does not meet MMED's standards and/or the service has not been inspected. Temporary services are to be inspected the same as any other service by the electrical inspector. All such work shall comply with the latest edition of the N.E.C., MMED, N.E.S.C., and other applicable codes. As with all installations the grounding electrode must meet or exceed 25 ohms or less. Multiple electrodes shall be augmented to achieve the proper grounding requirements.

Note: MMED requires no less than two (2) - 8 feet × 5/8 inch, 13-mil copper-clad ground rod, driven in undisturbed soil. All grounds shall meet 25 ohms or less.

11. RECONNECTION CHARGE

When service is disconnected for nonpayment of a bill or any violation of these service regulations, MMU will require the customer to pay all costs of disconnection and reconnection, but not less than the applicable reconnection fee of ($25.00) for meter disconnect and ($60.00) if MMED has to cut the service wires or de-energizing the supply, before service is re-established all appropriate fees will be applied. Service will not be reconnected on a holiday, weekends, or during non-operating hours. MMU will make every reasonable effort to reconnect said service within two business days during normal business hours or after 3pm if requested (after hours fees shall be applied).

12. DISCONNECTION OF SERVICE

a. Disconnection on customer's request.

MMED will normally disconnect service upon two working day's written notice.

b. Disconnection by MMED.

Service may be refused or disconnected by MMED for any of the reasons listed below:

1) Without notice in the event of a condition determined by MMED to be hazardous.
2) Without notice in the event of customer use of equipment in such a manner as to adversely affect MMED's equipment or MMED's service to others.
3) Without notice in the event of tampering with the equipment furnished and owned by MMED.
4) Without notice in the event of unauthorized use.
5) For violation of or noncompliance with the MMED's ordinances.
6) For failure of the customer to permit MMED reasonable access to its equipment.
7) For nonpayment of the account provided MMED has made a reasonable attempt to collect per MMED policies and procedures.
8) For failure or refusal to provide a requested deposit.
9) For the customer to fail to furnish or to withdraw such permits or rights of way as shall have been specified by MMED for rendering service.

Unless otherwise stated above, the customer may be allowed a reasonable time (up to 30 days) to meet any electrical deficiency, before service is disconnected.

13. RIGHT OF HEARING AND APPEAL

The Customer has the right to request a hearing with the City Administrator or a person designated to act in the Supervisor's absence to resolve questions pertaining to the amount billed the Customer by the Utility or pertaining to the Customer's rights to be served by the Utility.

The Customer can make the request by calling the City Administrator (270) 824-2100, by writing or by coming to the office of **Madisonville Municipal Utilities, 77 N. Main Street, P. O. Box 705, Madisonville, KY 42431.**

Scope - The Rules and Regulations and applicable rate schedules are a part of all contracts for receiving electric, water and sanitary sewer service and applies to all services provided by MMED, whether the service is based upon contract, agreement, signed application or otherwise. The Rules and Regulations for Customer Service shall be applied without regard to race, color, creed, sex, national origin or marital status.

14. METER TEST AND ADJUSTMENT

MMED will test its meters for accuracy of registration, based on time in service, sample testing, or other approved criteria by MMED. MMED will periodically test meters based on guidelines determined by the Kentucky Public Service Commission. Such test may require the momentary interruption of electrical service in order to complete the test. MMED will attempt to notify the customer at the time of removal, when practical. However, MMED does not guarantee continuity of service and assumes no responsibility in such interruption of service.

MMED will also make special meter tests when requested by the customer. Upon receipt of payment for such test, MMED will schedule the metering facility for test. When an average error of more than 2 percent fast is determined by a meter test, MMED will make a refund. Where the meter error average is more than 2 percent slow, the customer shall pay the difference. The billing adjustment will be made only for one-half the period intervening since the last test, but in any case not to exceed twelve months. Where the amount due MMED is greater than the average monthly consumption, the customer will be given an equal time period to repay the un-metered portion. In case of special test any meter test shows the average registration of the meter to be in error more than 2 percent fast, MMED will bear the cost of the test. If the amount of error is less than 2 percent, the customer will be charged the applicable meter test fee.

a. A fee of twenty- five dollars ($25.00) per test is hereby imposed for the testing of single-phase non-demand electric meters.

b. A fee of seventy-five dollars ($75.00) per test is hereby imposed for the testing of all self-contained three-phase electric meters and single-phase demand meters.

c. A fee of one hundred fifty dollars ($150.00) per test is hereby imposed for the testing of all transformer rated meter installations.

d. If it is determined by the city that the electric utility meter was malfunctioning, then there shall be a refund to the consumer of all amounts of money paid to the city for such test.

15. EMPLOYEE ACCESS

a. POLICY OBJECTIVE:

To establish rules and procedures for the protection and safety of MMU employees that enter onto private property in the performance of their assigned duties.

b. POLICY STATEMENT:

Properly identified employees of MMU shall be granted safe, non-hazardous access to customer's premises at all reasonable times for the purpose of reading meters, testing, repairing, removing, or exchanging any or all equipment belonging to MMU.

c. POLICY RESPONSIBILITY:

1) It shall be the responsibility of each employee to abide by this policy.

2) It shall be the responsibility of the Meter Reader Supervisor in conjunction with the Electric Department Superintendent to enforce this policy.

d. POLICY PROCEDURE:

1) Employees shall report unsafe conditions and/or conditions that limit access to the electric meter on customer's premises, which include, but are not limited to exposed wiring, low overhead wires, bushes, tree limbs, locked doors/gates, bad dogs/other vicious animals, meter tampering, etc.

2) The Meter Reader Supervisor shall maintain a current list of customers with unsafe conditions and/or conditions that limit access to the electric meter.

3) Where an unsafe and/or limited access condition exists, the Meter Reader Supervisor shall:

a) Notify customer by regular mail of the existing condition, and ask for a meeting to discuss how the problem may be resolved.

b) If the condition is not resolved and/or a meter reading cannot be obtained normally, the electric usage shall be calculated at 150% of the

estimated usage. Customer shall be rendered an electric bill for the estimated usage.

c) If requested by the customer, a second attempt shall be made to read the customer's electric meter. However, a fifteen-dollar ($15) charge shall be added to the customer's electric bill to cover the cost of a special meter reading.

d) If the estimated electric bill is not paid by the normal due date, the normal collection procedures shall be applied by the Billing Department.

e) An electric customer with unsafe and/or limited access conditions may be granted two (2) consecutive months estimated electric usage. On the third (3rd) month, MMED shall apply any means necessary to gain proper access to obtain a current meter reading, including termination of electric service.

f) Nothing contained in these rules and regulations shall limit the City from immediately curtailing service due to the inability to access its facilities or unsafe conditions.

16. MOVING, INSTALLING OR RELOCATING MMED EQUIPMENT

Whenever MMED shall make changes in its equipment or facilities for the convenience of the customer or requesting party, the cost of the work shall be billed to and paid by the contractor, customer or other agreeable party. Upon receiving such request, MMED will render an estimate of the project cost. Should the applicant agree to proceed with the request they shall pay the cost estimate prior to commencement of work. Upon completion of the project, the customer/contractor will be invoiced actual cost. Should the estimated cost not cover the actual work performed by MMED, the applicant shall pay the balance due. Should the estimated cost exceed the actual expense incurred, MMED will refund the difference.

Only authorized MMED employees may remove facilities, cut wires, cut meter seals, raise wires, or handle any wires or facilities belonging to MMED.

17. COST CALCULATIONS

All cost estimates for services and work to be performed will be calculated at MMED’s rates in effect at the time of such estimate and shall only be valid for 60 days. Estimate will include but is not limited to; labor, equipment, engineering, overhead, and materials. Upon completion of the services performed, a final project cost shall be prepared and the applicant is solely responsible for any cost difference.

18. USE OF ELECTRIC SERVICE ON CUSTOMER’S PREMISES

The Customer will be responsible for properly maintaining all electric facilities on customer's side of the meter. The Customer will be responsible for payment of all electricity that is registered, used or estimated on the meter serving customer's premises.

19. INTERRUPTION, RESPONSIBILITIES, AND LIABILITY

MMED will use reasonable diligence in supplying current, but shall not be liable for breach of contract in the event of, or for loss, injury or damage to persons or property resulting from interruptions in service, excessive or inadequate voltage, single-phasing, or otherwise unsatisfactory service, whether or not caused by negligence. When service is suspended for the purpose of making necessary repairs or changes in facilities, such suspension may be made without notice but those customers seriously affected shall be where possible notified in advance, except in cases of an emergency. Should time permit and the customer elect to install or use portable generation, such generation shall be at the customer's expense and conform to all applicable codes and regulations covering generation installations. MMED shall not be liable to the customer for any damages occasioned by such suspension of services.

The Customer assumes all responsibility for the electric service upon the Customer's premises at and from the point of delivery of electricity and for the wires and equipment used in connection therewith. Additionally, the customer will protect and save the City harmless from all claims for injury or damage to persons or property occurring on the Customer's premises or at and from the point of delivery of electricity, except where said injury or damage will be shown to have been occasioned by such electricity or said wires and equipment, except where said injury or damage will be shown to have been solely by the negligence of the City.

20. NOTICE OF TROUBLE

MMED provides 24-hour emergency service in the event of service interruptions or other problems associated with the service rendered. The Customer should call MMED immediately if the problem is on the utility side of the demarcation point of service delivery (utility side of the metering). Customer shall notify MMED immediately should the service be unsatisfactory for any reason, or should there be any defects, trouble, or accidents affecting the supply of electricity. Such notices, if verbal, should be confirmed in writing.

a. Customer Problem

Conditions such as faulty or tripped breakers, blown fuses, or other normal interrupting equipment for which the customer shall check before calling MMED to investigate, are subject to billing.

21. RIGHTS-OF-WAY and EASEMENTS

The customer shall provide, without cost, a Right-of-Way and/or Easement for the equipment or facilities of MMED, over, across, under and upon the property owned or

controlled by the customer, such as is necessary and incidental to the supplying of service to such customer.

Such Right-of-Way shall be in the form of a recorded easement suitable to MMED. Normally a 30-foot wide easement is required for overhead distribution lines. MMED will review the customer's plans and determine such requirements. The customer shall provide and maintain safe and convenient access to the meter or equipment and shall permit entry thereto by employees of MMED at all reasonable times for the purpose of inspecting, reading, testing, repairing, replacing or removing the meter or equipment used in connection with the service

Easement widths

Minimum widths of electric construction methods are tabulated below; however, in no case will these guidelines be a substitute for sound engineering judgment.

Minimum Easement Width

Type of line	Distance
Single-phase and three-phase (overhead) 12 kV	30 feet
All underground 12 kV	15 feet
Up to 600-volt underground	15 feet
Up to 600-volt overhead	15 feet

The City of Madisonville reserves the right to request easement widths at greater widths than those described in the referenced table if, (a) the electric line is installed at heights exceeding 35 vertical feet, or (b) the City of Madisonville proposes possible present or future system extensions or improvements, or (c) other utilities are to be located within the easement, or (d) MMED requires greater widths for equipment or facilities to be installed.
Developer or Property Owner must provide a recorded plat showing each utility easement.

22. ELECTRIC LINE PLACEMENT

Generally, electric lines shall be located 5-feet off the back of the curb on curbed streets and 5-feet inside the right of way on streets without curbs. Consideration of possible conflicts with other utilities shall be required so the electric line can be built without modification during or afterconstruction.

23. EMERGENCY SERVICE

Occasionally MMED may make emergency and/or temporary repairs to provide service to allow the customer to continue his/her operations, with the understanding that permanent repairs must be made by the customer as soon as possible. If such repairs are not made within the period agreed to, MMED reserves the right to disconnect service until permanent repairs have been made. The customer will be billed for this service.

24. EMERGENCY GENERATOR

Where auxiliary or standby emergency generator service is installed by the customer or his

designee, service shall be approved by MMED. Customer must provide a readily accessible service disconnecting means and overcurrent protection between the customers' main distribution panel and the utility supply. A padlock lockable disconnect switch must be used to prevent possible feedback into the utility main power line. The customer must provide the utility an open point with lockable separation between the customers' facilities and the utility supply. Parallel operation of the customer's generator will not be allowed except where expressly granted by written contract, and where MMED approved suitable automatic protective equipment and appropriate metering devices are used.

Portable generators shall not back feed the customers facility or be connected in any manner allowing electricity to do so. Appliances and other equipment shall be connected directly to the generator. The means of turning off the electrical main(s) switch or breaker and back feeding the facility is strictly forbidden. City personnel shall perform any removal or installation of the utility's electric metering facilities.

In all cases, the installation shall conform to the latest edition of the National Electric Code, as well as, all State and Local Codes. Where MMED determines faulty or dangerous conditions may exist due to the use of such equipment, the Customer or Owner of such equipment shall discontinue such use thereof.

25. USE OF SERVICE BY THE CUSTOMER

All wires, apparatus and equipment of the customer shall be selected, maintained and operated in accordance with applicable local, state and federal codes or laws, MMED rules and regulations, and in accordance with minimum standards of the National Electrical Code and the National Electric Safety Code. The customer shall not employ or utilize equipment, appliances or devices having characteristics, which may cause interference with or adversely affect MMED's service to other customers. The customer shall pay the cost of correcting conditions that cause such interference. When conditions are not corrected, MMED shall have the right to discontinue service until the necessary corrections are made.

When polyphase service is supplied, the customer shall control the use thereof so that the load at the point of delivery will be maintained in reasonable electrical balance between the phases.

26. ATTACHMENTS TO POLES

Attachments, wires, fiber lines, communication lines or equipment, antennas, pipes, conduits, gas locator equipment or signs, posters, banners, balloons, ropes, signs, strings, lumber, switches, arresters, conduit, boxes, meters, sports equipment, clothes-line and or any attachment what-so-ever may not be placed on MMED poles or other CITY property without written permission from the City. Any such attachments discovered shall promptly be removed. Upon written notification by MMED should satisfactory arrangements not be made for the prompt removal, MMED will remove the attachment at the owners' expense. MMED assumes no liability in the removal of the attachment and holds the owner solely responsible for all damages and or loss because of the removal.

a. Where the customer's facilities are attached to MMED poles such as wires,

cables, electrical boxes, metering facilities etc., that are in service, MMED will notify the customer in writing that such attachments are to be removed and relocated to the customer's permanent point of attachment. All such electrical boxes, wires, cables etc. beyond the point of metering are considered customer facilities, even if attached to MMED poles and equipment. In areas where the facilities are in vault rooms or fenced areas, the facilities are to be upgraded to code requirements.

The customer will be allowed up to thirty-days (30) to relocate the facilities. However, in case of emergencies or circumstances where such notifications are impractical or impossible, the customer will be required to remove such facilities immediately. In any event, MMED will not replace or allow the re-attachment of the facilities to MMED poles or equipment. In the event the customer fails to comply with the request MMED may take the necessary action to correct the conditions at the customer' sole expense.

27. CUSTOMER'S RESPONSIBILITY

The customer is expected to take reasonable care of MMED equipment located on his/her property. The customer will be responsible for any and all damage to or loss of MMED's property located upon his/her premises unless occasioned by causes beyond his/her control, and shall not permit anyone who is not an employee of MMED to remove or tamper with the equipment. A meter seal or security device will be properly installed on all metering equipment and shall not be removed or broken.

28. DANGEROUS CONDITIONS

The customer is requested to call or notify MMED immediately when any of MMED's equipment appears unsafe or dangerous. This applies to equipment inside or outside the customer's premises and particularly to broken or fallen wires. The customer is requested; if possible, to post someone in the vicinity of the dangerous location to warn individuals (particularly children) who may pass until MMED's personnel arrive. In any event, the caller must stay clear of the hazard and must not attempt to take corrective measures, which would in any way pose a risk to themselves or others.

29. CONNECTIONS

All connections, permanent or temporary between MMED's lines and the customer's wiring shall be installed and/or removed by a MMED representative.

30. SECURITY LIGHTING

A customer making application for security lights must execute a contract with the Utility for a period of not less than specified in the contract. The Utility will inspect the site to determine if such request can be met. Any light installed must be readily accessible by MMED personnel and equipment to maintain and service the light. If agreeable, MMED will install the desired size photo-electrically controlled security light and furnish the electricity for a flat monthly rate as shown in the Outdoor Lighting Rate Schedule. If these fixtures can be installed on existing utility poles, no installation charge will be made. If additional poles and

or facilities are required, the Customer will pay a non-refundable cost for the installation prior to receiving the security light service.

31. STREET LIGHTING

The City requires street lighting in all new subdivisions. MMED will design and specify the street lighting needs in new subdivision meeting the standards for such. MMED may offer three different type poles and lights, all of which are standard for roadway lighting. The developer is responsible for conduit installation if applicable and all material cost to install said street lighting. MMED will provide labor and equipment for street light installation. Upon approval by MMED the lights shall be installed. In some areas of the city, street lighting is already provided. Whenever a streetlight fails to properly operate MMED will make every attempt to repair, or have repaired, the light within five (5) working days of adequate notification. However, the city makes no guarantee to the use of the light and assumes no liability thereof.

32. SALE OF ELECTRICAL MATERIALS

Normally MMED will not sell materials to others that are available through regular sources. However should a condition exist that the Electrical Superintendent deems such sale is reasonable, such sale will include the current cost or replacement cost, whichever is greater, plus no less than ten (10) percent overhead cost. In any event, MMED does not warrant the merchandise and make no guarantee as to the use thereof. Where MMED invoices for reimbursement of damages, accidents, relocation of facilities or other such reimbursable projects, the ten (10) percent overhead charge shall apply.

33. CONTRACT EMPLOYEES

MMED may from time to time contract various types of work. The contractor shall employ only competent, efficient employees and shall not use any unfit person or one not skilled in the work assigned to him/her; and shall at all times maintain good order among his/her employees. Such employees shall comply with all applicable rules and regulations of the utility as permanent employees of the utility in general.

Whenever MMED or the City of Madisonville informs the contractor in writing that, in its opinion, an employee is unfit, unskilled, and disobedient or is disrupting the orderly progress of the work; such employee(s) shall be promptly removed from the work and shall not again be employed. Under urgent circumstances, the Electrical Superintendent, and the City of Madisonville may orally require immediate removal of an employee for cause, to be followed by written confirmation.

34. ELECTRICAL INSPECTION REQUIREMENTS

Kentucky's Uniform Building Code requires electrical inspection of certain new buildings and prohibits electric utilities from extending permanent service before a certified electrical inspector has approved the electric installation.

Additionally, all electrical work and installation of any electrical apparatus, material or device

whatsoever, for use in connection with electricity for light, heat, power, or communications, shall be inspected by the Electrical Inspector.

When such installation, repair or alterations of electrical wiring or equipment have been completed, the Electrical Inspector shall be notified thereof and such inspection shall be completed by services are rendered.

The Inspector shall conform to all rules, regulations and guidelines of Title 815, Chapter 35 – Electrical Inspectors, of the State of Kentucky, or latest revision and be certified to inspect within the City of Madisonville and meet all city and county requirements.

The fee schedule for Electrical Inspections and permits shall meet all city and county requirements.

The Kentucky Building Code (KBC) covers the general construction, including structural quality, mechanical systems, electrical systems and life safety from hazards of fire, explosion and other disasters. The Code also encompasses the National Electrical Code and the Kentucky State Plumbing Code.

MADISONVILLE MUNICIPAL ELECTRIC DEPARTMENT is able to connect permanent service only after a certified electrical inspector has personally inspected and granted a certificate of approval to facilities requiring inspection. Such inspection shall include the applicable approval/failure sticker attached to the service entrance equipment, clearly visible to workers. Sticker to include signature, certification number and project, and location, stating the system has been inspected for compliance with the National Electrical Code. Upon completion of the inspection, the inspector shall promptly notify the applicable Utility Company advising of same. A written copy of all inspections performed by the inspector shall be delivered to MMED prior to MMED rendering service.

Normally MMED inspects only the service entrance and meter location, but MMED reserves the privilege, for protection of its facilities and safeguarding its service to others, to inspect the customer's installation at any time and to refuse service whenever such installation, in its opinion, fails to meet minimum safety and operating standards. No inspection by MMED or failure to object to the customer's installation shall render MMED liable for injury or damage resulting from any defective installation of customer facilities. When a municipality requires permits for, or an inspection of, new installations, MMED will not make service connections until such permit is obtained and the installation passes the required inspection. Anytime the electric service is disconnected and/or de-energized for repairs or electrical changes by the customer, all such work shall be inspected prior to re-connection and/or re-energize of service. In the event the electric service has been de-energized for a period of 12 months or longer, an electrical inspection by the City's Authorized Inspector shall be performed at the customer's expense.

35. CERTIFIED ELECTRICAL INSPECTORS

The Kentucky Department of Housing, Buildings and Construction are responsible for certifying electrical inspectors. Local governments designate which certified electrical

inspectors are authorized to conduct inspections subject to their authority. In the event the local government designates no electrical inspector, any certified electrical inspector may perform the inspection.

The City of Madisonville will determine who shall serve as the inspector(s) within its service territory.

36. REVISIONS

The Rules, Regulations, and applicable rate schedules may be revised, amended, supplemented or otherwise changed from time to time, without notice. Such changes, when effective shall have the same force as the present Rules, Regulations, and applicable rate schedules.

SECTION II

ELECTRIC UTILITY SERVICE

1. AVAILABILITY AND CHARACTERISTICS OF ELECTRIC SERVICE

The electric service supplied by MMED is alternating current, sixty (60) hertz. Standard voltage classes offered to the customers under MMED rate schedules are as follows:

a. 120 volts, two-wire, single phase. (60 Amp maximum capacity) * restricted use.
b. 120/240 volts, three-wire, single phase.
c. 120/208 volts, four-wire, three phase.
d. 120/208 volts, three wire, single phase - limited availability.
e. 120/240 volts, four-wire, three phase.
f. 277/480 volts, four-wire, three phase.

Higher voltage service can be made available for approved loads upon application to MMED.

When three phase service is supplied only one of the following classes of three-phase service, 120/208V, 120/240V and 277/480V will be supplied to a customer.

MMED reserves the right to require the balancing of the load on 3 wire and 3 phase systems.

Service entrances wired for three phase, 120,240-volt service shall have the high voltage-to-ground phase, i.e., “wild leg”, installed on the rightmost terminal of the meter base, as viewed facing the meter socket.

Each phase and conductor shall be marked as follows:
“neutral”..... white
“ground”..... green
“A” phase……blue
“B” phase……brown
“C” phase……orange

The “ABC” conductors shall be placed from left to right as viewed facing the meter socket or cabinet.

All power and energy uses to a building, structure or facility at any one location shall be taken through one point of delivery. Any exception shall require prior approval by MMED.

The service connection, transformers, meters, and equipment supplied by MMED for each customer have a defined capacity, and no addition to the equipment or load connected thereto will be allowed except by consent of MMED and appropriate contract.
Failure to give written notice of additions or changes in load, and to obtain MMED's consent for same, shall render Customer liable for any damage, or cost to upgrade any of MMED's lines or equipment as a result of the additional or changed installation.

a. Non-standard service

Customer shall pay the cost of any special installation necessary to meet his/her peculiar requirements for service at other than standard voltages, or for the supply of closer voltage regulation than required by standard practice. It is the responsibility of the customer to secure information from MMED pertaining to the type of service available at a particular location prior to wiring of his/her electrical system because the service available to any customer depends upon the location, character and size of the customer's load.

MMED makes every attempt to follow the AMERICAN NATIONAL STANDARDS C84.1-1989 as it applies to nominal, minimum, and maximum voltages.

b. Delivery

MMED is not responsible for any damage caused by turning on Electric utility services. It is the customer's responsibility to turn off all electrical devices that control such energy prior to requesting electrical service.

Should MMED determine that all devices are not in the "off" position, service will not be rendered. If an additional trip is necessary to deliver service, the customer is subject to additional charges.

c. Application

The customer shall submit to MMED a written request for electrical service along with a complete plat of the development. This request and plat shall outline which areas are to be developed first, second, third, etc., which type housing or commercial installation is proposed, anticipated construction schedules and proposed locations of all utilities. MMED will not start any construction until the plat is recorded and written authorization from the developer has been submitted to MMED. All significant easements points, lot corners and control points must be installed prior to MMED staking of proposed construction, trenching or inspection of underground conduit system.

2. DAMAGE TO FACILITIES

Any damage caused to MMED's facilities during construction periods shall be the

responsibility of the customer/developer along with the expenses incurred restoring proper service. Damage incurred after completion of construction shall be the responsibility of the person(s) or firm(s) causing such damage.

3. OVERHEAD DISTRIBUTION (GENERAL PROVISIONS)

An overhead electric service may be provided by MMED at the customer's request, providing the following requirements are met. However, MMED is not obligated to supply overhead electric service when in the judgment of MMED; such service will be impractical or contrary to good operating practices.

For NEW overhead electric service with loads of 300 KW or greater and requiring 300 KVA transformers or larger, the service shall be provided with the use of a pad-mounted underground transformer. The total electric load and design information is required as soon as practical to the utility. Electric service and equipment installation will be installed as soon as material procurement and delivery has been established. The user requesting the electric service shall deposit with MMED an amount equal to fifty (50%) percent of the delivered cost of the pad mounted transformer and construction materials before MMED places a purchase order for same.

At such time as the new service requiring the 300 KVA or larger pad mounted transformer is fully connected and all other deposits, fees and etc. are paid, MMED will refund to the user all remaining monies, if any, deposited with MMED toward the purchase of the pad mounted transformer and material. However, should a prospective user requesting such electric service change or decide not to use such service after MMED issues a purchase order for the transformer and materials, then the prospective electric user shall forfeit all monies deposited for procurement orders pertaining to project.

a. New Residential Overhead Services

MMED may install overhead electric to any residential customer within any subdivision designated as an overhead development. A designated overhead area to consist of:

1) In new overhead subdivisions, primary overhead lines shall be installed along the front of the lot lines by MMED.

2) Individual service laterals from the pole to a meter base located on the customer's dwelling will also be installed by MMED. The meter base, riser, and attachment point is to be provided by the Customer. The meter base installation and maintenance of connections and all wiring internal to the residence are the sole responsibility of the customer. The type and specifications of the base will be provided by MMED. Said meter base location to be designated by the Electric Superintendent or his representative.

3) The customer shall provide the necessary recorded easements suitable for the installation of such poles, transformers, wires, guy's and other facilities

necessary to supply power.

4) Clearances for all facilities shall be strictly followed. Illustrative drawing will be provided upon request.

b. New General Service and Industrial Overhead Service

MMED may install for any general service or industrial customer with a load of no greater than 300 KW, an overhead electric service upon request. This type service to consist of the following:

1) The overhead service may be provided entirely through the use of overhead secondary cables from an overhead power source. MMED may install the overhead service conductors necessary to extend from the overhead facilities to a metering location on the customer's building.

2) The meter location shall be determined by the Superintendent of Electric Utilities, or his designee. The customer will install at the metering location a meter base after a building permit has been obtained. The customer shall be responsible for the attachment of said meter base installation and maintenance thereof, the connections and all wiring internal to the establishment.

3) Prior to commencement of installation, the customer shall confirm the exact needs for all metering and the location for the electrical service.

4) If the electrical load dictates that the overhead electrical service should be provided through the use of underground primary cables and a pad mounted transformer, MMED will install a primary underground feed from an overhead primary source on or near the customer's property line to the pad-mounted transformer. The location will be determined jointly by the Superintendent of Electric Utilities or his representative and the customer. The customer will be responsible for the applicable underground facilities cost and installation.

c. Determination of Deposit and/or Contribution-in-Aid-of Construction

When requests for secondary and/or primary electric service are made which require upgrade/extension of MMED's facilities, MMED may make such upgrade/extension only upon receipt of an appropriate deposit covering 100% of the estimated cost of providing such service. If the electric upgrade/extension results in a net increase in the sale of energy and demand on MMED's electrical distribution system, such customer or developer may be eligible for certain refunds, providing the following is met:

1 MMED and the customer/contractor will enter into a five (5) year "Electric Construction Refund Agreement" including terms and conditions for the construction and guidelines for possible refund of construction deposit monies.

2 Refunds of construction deposit monies, if applicable, will be in the form of an annual credit applied to monthly billing units (e.g. demand and/or energy charges). In the event the customer/contractor does not have a utility account with MMED,

the refund will be sent to the original depositor.

3 MMED shall establish a base for existing energy and demand for purposes of determining annual credits. In any event the minimum base for energy and demand shall be the greater of; (a) the customer's current average monthly usage or, (b) sixty (60) % of the present service capacity before modifications. Such capacity will be the total aggregate of all existing and or removed facilities. Such monthly minimum base percentage will be calculated on a usage of four hundred seventy-five (475) hours monthly. Example; 200 amp single phase service @ 60% = 120 amps @ 240 volts = 28.8 kW monthly minimum demand; 28.8 kW x 12 months = 345.6 kW annual minimum demand. 28.8 kW x 475 monthly hours = 13,680 kWh monthly x 12 months = 164,160 annual kWh. For three phase power multiply by 1.732. If an applicants' tenant relocates from an existing MMED service location at any time during the five (5) year period, no refund or credit will be given unless an actual net increase in energy and demand sales is determined by MMED.

4 Only the incremental value for additional electric usage will be used as a factor in determining the annual credit. The customers' peak demand and energy are the only billing components used for refund purposes.

5 Each twelve (12) calendar months MMED will verify that a net increase/decrease in electrical sales has occurred in the previous twelve (12) months.

6 If a net increase is determined, a partial annual refund/credit will be made to the original depositor. A net decrease will not trigger any refund.

7 The refund will be based solely on excess sales over and above the applicant's original energy and demand usage at the time the agreement is executed.

8 The refund shall not exceed twenty (20%) of the annual excess sale of energy and demand for the preceding twelve (12) months, less all applicable taxes, power cost adjustments, customer charges and etc. Cost calculations will be based on the retail cost of electricity as determined by the City's current rates.

9 Depositor's refund/credit will be allowed to the original applicant for the first consecutive five (5) years only. The contract may not be assigned or transferred to any other person, firm or corporation. Should the applicant/customer's electrical service be terminated for a period exceeding thirty (30) days, the contract shall automatically, without notice, terminate.

10 Such credit/refund shall not exceed the customer/contractor's original construction deposit amount. If the credit/refund is returned in full before the date of contract expiration, the contract shall terminate.

11 Interest will not accrue on any construction funds deposited or refunded.

12 Should the line extension (primary voltage only) have available capacity that other new customers along the public rights-of-way may be served from the new extension, such additional new electrical sales will be credited to the original customer/contractor, at the same rate and duration first established above. Such new customer must be an additional new electrical load to MMED's electric system and be a net sale over the contract base already established. Existing customers relocating or transferring from another MMED service location will not be used as new customer load. Division of existing structure for the purpose of increasing tenancy will not qualify for refunds.

13 At the end of the five year period, all funds still on deposit with MMED shall be forfeited to MMED and will become a non-refundable contribution in aid of construction (CIAC) project.

14 MMED shall make the final determination of any and all credit due based solely on the additional sale of electrical energy and demand usage as outlined within.

15 In the case where a line extension is required, existing electrical service must be available in order to qualify for a refund.

16 Where only a portion of the project cost is required by the applicant/customer this refund clause shall not apply, only such projects where a 100% contribution is collected are eligible.

d. Overhead Facilities to New Developments

Upon MMED's approval of a proposed development plan, the developer may request overhead facilities to be installed. The customer's contribution will be MMED's standard installation and fee requirements.

In the event the developer decides to alter his/her development after the plan has been accepted and the overhead facilities have been procured and/or installed, the developer will be responsible for costs for labor, equipment, and materials less salvage value for usable facilities as required for the new development plans.

MMED may extend its facilities to provide single-phase electric service within new residential subdivisions, only to the extent necessary to serve residences under construction or to be constructed within a 12-month period.

e. Mobile Homes Not In Parks

Service shall be supplied to the customer's weather head and meter installation in accordance with the policy and procedures contained elsewhere in this manual Service pole installation shall be of such physical design so as to withstand the strains of the service drop and shall conform to current codes. Poles for overhead service shall have adequate height for proper clearance and be at least 25 feet in length, 5 feet in well-tamped soil and at least 20 feet out of the ground. Where required, the customer shall install suitable guying. The pole shall be pressure treated wood, no less than 6 inches in

diameter at the top. MMED shall provide basic detail specifications for such installations.

f. New Mobile Home Park Overhead Service

MMED may furnish overhead service to Mobile Home Parks where:

1. Primary overhead lines can be installed in front lot design.

2. The system, with the exception of metering centers, shall be installed on front lot lines as determined by MMED. The metering center shall be a 2- gang meter center and be located near the rear of the mobile home but no greater than seventy-five (75) feet from the edge of the street pavement, unless MMED and the Owner agree to a different multiple gang meter center or a lesser distance from the street pavement. All gang meter centers shall be of factory design, UL listed, and pre-approved by MMED.

3. For all overhead facilities, customer must provide a right-of-way suitable for MMED to install and maintain its facilities. The right-of-way may be in the form of utility easements shown, a recorded final plat, a blanket easement deed, or a dedicated easement deed.

4. Ownership and maintenance of meter sockets shall be the responsibility of the customer.

5. The customer shall furnish all multiple ganged meter sockets. MMED will provide basic specifications for installation of all multiple ganged metering centers.

6. The owner or tenant shall provide, install, and maintain meter centers in accordance with City's standard design, constructed of a non-corrosive metal (i.e., aluminum, stainless steel, galvanized steel).

7. Prior to energizing any transformer designed to service multiple meter centers, all such centers shall be permanently in place if practical.

8. Fees. Applicable service connection and deposit fees required.

9. When more than two (2) meter sockets are approved for installation No meter sockets shall be less that 36" or more than 60" above finish grade when installed in a vertical configuration. Single or double sockets are to be 60 inches to the center of the meter socket where installed horizontal. Measurement shall be taken from the ground to the center of the meter socket.

10. All meter sockets shall be plumb.

11. All meter centers shall be imbedded in concrete of sufficient quantity to ensure that the meter sockets will remain plumb.

12. Poles for overhead service shall have adequate height for proper clearance and be at least 25 feet in length, 5 feet in well-tamped soil and at least 20 feet out of the ground. Where required the customer shall install suitable guying. The pole shall be pressure treated wood, no less than 6 inches in diameter at the top.

4. SERVICE ENTRANCES

a. Type and Number of Service Entrances

MMED will install only one set of service wires for the class of service supplied. Only one (1) type and voltage will be supplied per structure. Service entrances for residences shall have a capacity of at least 100 amperes at 120/240 volts, three-wire, single phase. For all services over 100 amperes a lever type bypass-metering device shall be included in the meter socket or a service rated disconnect shall be installed on the customer side to be acceptable.

All meter sockets used must meet MMED's minimum requirements, including but not limited to grounding, ampacity, bypass device, type, color, UL approved and construction material. "Used" materials shall not be provided or installed unless prior approval from MMED has been obtained. Normally such material will not be allowed.

b. Entrance Locate

Before any service entrance is installed on any building, the customer, builder or his/her authorized representative shall obtain from MMED approval of the proper location where the service entrance shall be made.

c. Overhead Service Entrances

The customer or contractor shall install entrance conduits for the class of service supplied. No other wires shall be placed in these conduits. The customer shall ensure that the riser is of sufficient strength and height to support all attachments. MMED shall attach to the uppermost 12 inches, however no other permissible attachment shall be closer than 12 inches from electric. Where possible, only MMED electric cables should attach to the electric service entrance riser. Telephone, CATV service, Satellite, Internet or any other service provider should find an alternate attachment source. The customer shall extend his/her wiring a minimum of three (3) feet from the outer end of the entrance and the neutral wire shall be clearly identified.

Should the conductors not be properly marked the service will not be connected.
All risers through the roof shall be a minimum of 2" metallic rigid electrical conduit, 36" above the roof with an approved weather head. All installations shall meet the minimum clearances in accordance with the applicable section contained

elsewhere in this manual.

d. Underground Service in Overhead Areas

MMED may connect its electrical facilities to underground service conductors from its overhead distribution system. The customer shall provide the proper underground service entrance. The customer is responsible for installing the conduit system and other applicable equipment as required by MMED. When an underground conduit system is installed by the customer to serve residential, general service and industrial loads, the underground installation requires MMED approvals.

5. OVERHEAD SERVICE WIRES

With the exception of mobile home parks, MMED may install and maintain without cost to the customer electric service (or service drop up to 300 feet). If a service length greater than (300 feet) are necessary, it shall be installed and owned by MMED with the customer or contractor bearing all costs of the extension beyond 300 feet. Such electrical service entrance and meter location will be on the side of the house or building nearest adequate electrical facilities, as determined by MMED. It cannot be in a carport, porch area, wood deck or other such limited access location. If the Customer request the service location to be other than the nearest point as determined by MMED, the customer will be responsible for the additional cost, should MMED allow such extension.

MMED, in extending its service wires, will not attach or permit them to be attached to trees, special supports or to buildings other than the building to be entered. A substantial support shall be installed on low buildings to bring the service attachment up to the required height above ground.

The customer shall provide support in the construction of the building of sufficient strength for the attachment of service to the building. The support must meet the approval of MMED. If a support, riser or other form of construction is required on a customer's premises in order to properly support MMED's service wires and/or maintain standard clearance, it must be provided and maintained by the customer.

6. EXTENSION OF OVERHEAD PRIMARY FACILITIES

MMED may provide single-phase or three phase primary electric line extensions along public Right-of-Way at its expense to render service to any customer for any permanent and continuing use within its service area.

Should such extension exceed one thousand (1,000) feet and/or a construction cost exceeding $8,000, less transformers, metering and service cables, the customer will bear all such cost for the extension in excess of the one thousand (1,000) feet and/or $8,000.

When requests for service other than described above are made which require extension of MMED's facilities, MMED may make such extension pursuant to terms and conditions set forth in Section II, Item 3c.

7. RELOCATION OF EXISTING OVERHEAD OR UNDERGROUND FACILITIES

In cases of relocation of existing facilities, the requesting party will be responsible for all cost including recorded easement and right-of-way acquisition. Prior to commencement of said project a cost estimate equal to 100% of the project cost shall be paid. Upon completion, MMED will prepare a final cost and either refund any unused monies or re-invoice the customer for the balance due.

8. UNDERGROUND DISTRIBUTION (GENERAL PROVISIONS)

An underground electric service may be provided by MMED at the customer's request, providing the following requirements are met. However, MMED is not obligated to supply underground electric service when in the judgment of MMED; such service will be impractical or contrary to good operating practices. The service shall be supplied to the nearest point of the facility with the use of underground from an overhead source. The customer will provide a conduit system, as specified by MMED.

Should the customer desire the service to be in a location other than stated, such extension if agreeable by MMED will be borne at the customer's expense. In any event, the cost for the extension shall be a minimum of $15.00 per running foot for three phase and $10.00 for single phase.

For new electric service with loads of 300 KW or greater requiring a 500 KVA transformer or larger, MMED shall be provided the total electric load and design information as soon as practical to the utility. Electric service and equipment installation will be installed as soon as material procurement and delivery has been established. The user requesting the electric service shall deposit with MMED an amount equal to fifty (50%) percent of the delivered cost of the pad mounted transformer and construction materials before MMED places a purchase order for same.

At such time as the new service requiring the 500 KVA or larger pad mounted transformer is fully connected, operating with a minimum monthly demand of no less than 25% of the installed capacity, and all other deposits, fees and etc. are paid, MMED will refund to the user all remaining monies, if any, deposited with MMED toward the purchase of the pad mounted transformer and material.

However, should a prospective user requesting such electric service change or decide not to use such service after MMED issues a purchase order for the transformer and materials, then the prospective electric user shall forfeit all monies deposited for procurement orders pertaining to project.

MMED may provide primary electric line extensions within an existing underground area along public Right-of-Way at its expense (customer provides conduit system and related

hardware) to render service to any customer for any permanent and continuing use within its service area. Should such extension exceed five hundred (500) feet, the customer will bear all such cost for the extension in excess of the five hundred (500) feet. The customer will provide the conduit system as determined by MMED.

When requests for service for other than described above are made which require extension of MMED's facilities, MMED may make such extension pursuant to terms and conditions set forth in Section II, Item 3c.

a. New Residential Underground Services

MMED may install underground electric to any residential customer within any subdivision designated as an underground development. The designated electric underground area to consist of:

1. In new underground subdivisions, primary underground cable may be installed in a looped system providing the possibility of dual feeds to any given transformer location.

2. Individual service laterals from the pad-mounted transformer to a meter base located on the customer's building will also be installed by MMED. Said meter base location to be designated by the Electric Superintendent or his representative.

3. If the underground service can be provided entirely through the use of underground secondary cables from an overhead power source, MMED may install the underground service conductors necessary to extend from the overhead facilities on or near customer's property line to a metering location on the customer's building.

4. The meter base and conduit system is to be provided by the Customer. The meter base installation and maintenance of load side connections and all wiring internal to the residence are the sole responsibility of the customer. The type and specifications of the base will be provided by MMED.

5. *Fees.* In addition to the customer required facilities installation, and contribution in aid of construction cost, a fee of $300.00 per lot, per meter, shall be paid prior to commencement of construction.

b. New General and Industrial Underground Service

MMED may install for any general or industrial customer, an underground electric service upon request. This type service to consist of the following:

1. If the underground service can be provided entirely through the use of underground secondary cables from an overhead power source, MMED may install the underground service conductors necessary to extend from the

overhead facilities on or near customer's property line to a metering location on the customer's building.

2. The meter location shall be determined by the Superintendent of Electric Utilities, or his designee. The customer will install at the metering location a meter base after a building permit has been obtained. The customer shall be responsible for the attachment of said meter base installation and maintenance thereof, the load side connections and all wiring internal to the establishment.

3. Prior to commencement of installation, MMED shall approve the exact needs for all metering and the location for the electrical service.

4. If the electrical load dictates that the underground electrical service should be provided through the use of underground primary cables and equipment, MMED will furnish an underground primary feed from an overhead primary source on or near the customer's property line. The location will be determined jointly by the Superintendent of Electric Utilities or his representative and the customer.

5. The pad-mounted transformer will be furnished by MMED. A concrete pad suitable for the transformer, complete with adequate stub-outs or openings for primary and secondary conductors shall be furnished by the customer to the point of metering. Secondary conductors shall be provided and installed by the customer. MMED will provide pad specifications.

6. All necessary metering will be installed by MMED, excluding self- contained meter sockets and current transformer cabinets, which the customer will provide and install. The type of materials and installation shall be in accordance with MMED's specifications.

7. Customer shall provide conduits to the concrete transformer pad locations and adequate secondary cables to connect to said transformer, should the metering be at the transformer location. MMED will be responsible for connecting the service cables to the transformer. The customer will be responsible for the installation and maintenance of the service cables from the concrete pad location and all wiring internal to establish service.

8. *Fees.* In addition to the customer required facilities installation, and contribution in aid of construction cost, a fee of $300.00 per lot, per meter, shall be paid prior to commencement of construction.

c. Existing Residential, General Service or Industrial Customer

MMED may install to any existing overhead residential, general service or industrial customer an underground service upon request. However, the customer will be responsible for all costs incurred to install the underground facilities, including but not limited to labor, equipment, and material less salvage value of the overhead facilities. Should the customer change the use of the existing and/or require additional facilities

installed to serve the changed use, including detached facilities; the customer shall pay for such changes and or upgrades. All such cost shall be paid prior to installation. For installation specifications see section “b” above.

d. Underground Facilities to New Developments

1. Upon adoption of a proposed development plan, the developer may request underground facilities to be installed. The customer's contribution will be MMED's standard installation and lot fee requirements.

2. The developer may obtain installation in the additional area by paying a deposit, equal to the total installed cost of the facilities to serve the additional area. Deposits will be reviewed annually upon written request and be subject to refund based on the prorate portion of MMED's idle facilities needed to serve customers during the preceding 12 months. Any deposit held by MMED for three years will no longer be subject to refund.

3. In the event the developer decides to alter his/her development after the plan has been accepted and the underground facilities have been procured and/or installed, the developer will be responsible for costs for labor, equipment, and materials less salvage value for usable facilities as required for the new development plans.

4. *Fees.* In addition to the customer required facilities installation, and contribution in aid of construction cost, a fee of $300.00 per lot, per meter, shall be paid prior to commencement of construction.

e. New Mobile Home Park Underground Service

MMED may furnish underground service to Mobile Home Parks where:

1. Primary underground cable can be installed in a loop system.

2. The system, with the exception of metering centers, shall be installed on front lot lines as determined by MMED. The metering center shall be a 2- gang meter and be located near the rear of the mobile home but no greater than one hundred (100) feet from the edge of the street pavement, unless MMED and the Owner agree to a different multiple gang meter center or a lesser distance from the street pavement. All gang meter centers shall be of factory design, UL listed, and pre-approved by MMED.

3. For all underground facilities, customer must provide a recorded right-of-way suitable for MMED to install and maintain its facilities. The right-of-way may be in the form of utility easements shown, a recorded final plat, a blanket easement deed, or a dedicated easement deed.

4. Ownership and maintenance of meter sockets shall be the responsibility of the customer.

5. The Customer shall furnish all multiple ganged meter sockets. MMED will provide specifications for installation of each multiple ganged metering center.

6. The Owner or Tenant shall provide, install, and maintain meter center pedestals in accordance with City's standard design, constructed of a non- corrosive metal (i.e., aluminum, stainless steel, galvanized steel).

7. Prior to energizing any transformer designed to service multiple meter centers, all such centers shall be permanently in place if practical.

8. Fees. In addition to the customer required facilities installation, and contribution in aid of construction, a fee of $300.00 per lot, per meter, shall be paid prior to commencement of construction.

9. No meter sockets shall be less than 36" or more than 60" above finish grade. Measurement shall be to the center of the meter sockets.

10. All meter sockets shall be plumb.

11. All meter pedestals shall be imbedded in concrete of sufficient quantity to ensure that the meter sockets will remain plumb.

9. ADDITIONAL SPECIFICATIONS FOR ALL OVERHEAD AND UNDERGROUND

a. Location

All residential underground pad mounted transformers and switching equipment shall be installed as front lot design, thereby, allowing the installation and removal from the street.

b. Delivery

MMED will provide underground electric service at a single point of delivery at one of MMED's standard voltages. The type and location of these facilities will be in accordance with sound engineering practices as determined by MMED's Electrical Superintendent.

c. Security Lights

MMED may provide underground facilities to off-street lighting upon customer's request. The customer shall bear all cost associated with such installation. Prior to installation, all cost for the project shall be paid to MMED.

d. Street Lighting

The City requires street lighting installations provided by the developer in all new subdivisions. MMED will design and specify the street lighting needs in new subdivision meeting the standards for such. MMED may offer two different type poles and lights, all of which are standard for roadway lighting. The developer is responsible for conduit installation if applicable and all material cost to install said street lighting. MMED will provide labor and equipment for street light installation. Upon approval by MMED, the lights shall be installed as determined by MMED. In some areas of the city, street lighting is already provided. Whenever a streetlight fails to operate, the city will make every attempt to repair the light within five (5) working days, providing adequate notification has been received by MMED. However, the city makes no guarantee to the use of the light and assumes no liability thereof.

e. Other Utilities

MMED will install underground facilities to customers only after coordinating with other utility suppliers such as water, sanitary sewer, telephone, cable television, natural gas, etc.

In the event MMED is to excavate or dig holes on the customers' private property it shall be the customers' responsibility to have all underground utilities and buried facilities properly located. The customer assumes all responsibilities should damage occur as a result of such excavation.

f. Meter Location

Prior to the installation of a customer's meter base and upon approval of the MMED representative, should the customer request the meter base to be located at a point other than where designated by the Electric Utility representative, and MMED approves the requested change, the customer shall pay for such service extension as per charges set by MMED. Due to engineering constraints, MMED reserves the right to design and determine the location of the electrical facilities. Except in cases where the metering is to be installed in the pad mounted transformer, all such metering will be installed on the customer's permanent structure. The customer owns, installs, and maintains all conduits, wire and cables on the load side of the meter. MMED will connect cables at the transformer terminals.

Normally, the metering point will serve as the demarcation point to separate MMED and the customer. Such metering facilities will be located away from other equipment, doors and windows as not to interfere with the maintenance or safety thereof. As a guide the facilities are to be at least 3 feet from such obstacles.

g. Plans

MMED shall design and approve all underground electric supply plans for any development, whether residential, general or industrial. If after approval, the owner changes or requests a change from that of the Department's approved plans, and if said

plans result in the addition, removal or relocation of any MMED's facilities, the owner shall bear all costs incurred.

h. Easements

The customer shall provide MMED, satisfactory recorded right-of-way/easement for the installation and maintenance of its facilities.

i. Site Preparation

Prior to installation of any underground facilities, the site shall be within six (6) inches of final grade. The site shall be free and clear of all obstacles both above and below grade. Should the utility encounter difficulty due to such obstacles, the owner shall be responsible for the cost difference incurred for the excavation.

j. Electrical Load

The customer shall present to MMED a written plan for the facility to be served. Such plan shall show the complete electric load schedules and riser diagram, the department may also request a site plan and any other pertinent information as necessary.

k. Conduit System

The customer shall install a conduit system as directed by MMED. The conduit shall be no less than 48" deep for primary circuits, 36" deep for secondary and 24" for street lighting. Customer shall install a warning tape (MMED supplied) twelve
(12) inches above the conduit run. Measurement shall be taken from the top of the uppermost conduit. For minimum road crossing requirements on state right-of-way, see page 115.

No joint trenching is allowed. Each utility shall have its facilities in a separate trench, no less than 24" inches of horizontal separation from the nearest electrical line is required.
Other minimum separation as determined by MMED shall be followed. When crossing over other facilities, a minimum of 18 inches of vertical separation is required. If 18 inches cannot be obtained, 4 inches of concrete shall be encased around the conduit(s), to a length of four feet to each side of the buried line. When crossing under facilities, 18 inches of earth separation is required. All conduits shall be properly capped to prevent foreign objects from entering.

No reducer fitting or bushing is permitted within the conduit system. If the plan calls for a specific conduit size it is from point-to point.

Polyvinyl Chloride (PVC), conduit and fittings shall be Schedule-40, 80, heavy wall, or thin wall, as indicated in these Specifications manufactured to conform to UL standards. It shall be listed and labeled by UL. It shall have at least the same temperature rating as

the conductors' insulation. Expansion joints shall be used as recommended by the manufacturer in published literature. PVC systems shall be 90 degree "C" minimum UL rated, have a tensile strength of 7,000 psi @ 73.4 degree "F", flexural strength of 11,000 psi and compressive strength of 8,000 psi.

l. Backfill

All underground construction by a customer/developer is subject to inspection by MMED and must be approved by MMED prior to the installation of conductor and transformers. Conduit must be inspected before backfilling. Notify MMED at least one day prior to inspection requirement.

m. Compaction

All trenching and backfill shall meet the necessary compaction standards, no less than ninety-five percent compaction. Once compacted the contractor/homeowner shall present certification that the disturbed soil meets these requirements. Thereafter, the contractor/homeowner is responsible for any ground settling or changes.

n. Pull line

A pull line is to be installed in each conduit with a 150 pound rating.

o. Pole Riser, and Meter Facilities

Minimum schedule 40 PVC conduits and connectors are required, except riser, where aluminum or galvanized steel is required. On single phase and secondary the pole riser shall consist of rigid metallic galvanized conduit (UL listed), for the first 10' and elbow at the base of the pole. All risers to be installed on 6" standoff brackets (provided by MMED) spaced no closer than 6' apart. For all applications, contact MMED for additional specifications.

p. Meter Facilities

The elbow and riser at the metering facilities shall be galvanized steel and properly bonded to the equipment. A steel rigid compression connector may be used in place of a threaded end. Where required, a metal expansion joint shall be used on all meter risers.

q. Elbow Radius

For secondary service a minimum 18" to 48" radius elbow required, depending on service and conduit size.
The type (aluminum or galvanized steel) and actual radius to be determined by MMED at the time of construction. For primary service, 24" radius elbows minimum, one phase per conduit - (for 1/0 cable only). Conduit type, size and radius to be determined by MMED. In any conduit run, the total radius in bends shall not exceed a total of 270 degrees. This includes elbows, sweeps or any turns that is anything other than a straight run.

r. Obstructions

After installation of the underground facilities, the customer shall not plant or permit the installation of any obstructions near the facilities that will interfere with the maintenance and operation of such. Should MMED discover or need to remove such obstruction, the owner will be totally responsible. Failure to comply may result in discontinuance of service.

s. Standards

Work performed shall be in accordance with all applicable codes and regulations including but not limited to, Kentucky Uniform Building Code, National Electric Code, National Electric Safety Code, State of Kentucky, Hopkins County and MMED. All electrical materials and supplies used shall be UL approved and acceptable to MMED. All work performance and products not meeting these standards shall be promptly corrected.

t. Inspections and Fees

MMED will not connect power until all inspections, fees, construction, and general requirements are satisfactory to MMED.

u. Transformer Pad

CONTACT MMED FOR COMPLETE DETAILED DRAWING

v. Switchgear, capacitors, vaults and other related UD equipment.

The developer/customer shall reimburse MMED for such expense where the proposed UD development warrants the use of such appurtenances, as determined by MMED.

w. Vault installation

Where required, the customer shall excavate the site in preparation for the installation of such equipment. Preparation includes below grade gravel and compaction, installation completion and final site conditioning.

x. Violations

The customer is responsible for correcting any violation at the time the violation becomes apparent. For example, if the customer should perform grading work and causes MMED facilities to no longer meet proper minimum depth, then the customer must correct the problem to MMED's specifications.

y. Ownership

Transfer of ownership occurs after facilities installed by the customer/developer are inspected and approved by MMED. The customer/developer will be responsible for any violation of Electrical Codes or MMED policy at time violation is found.

10. UNDERGROUND UTILITY LOCATION

Kentucky statutes (KRS 367.4901 through 367.4917) require that all excavators planning excavation or demolition work shall notify all utility companies in the area and/or an underground protection service such as BUD at least two (2) working days before commencing work to alert utility companies in the area with underground facilities of the planned excavation or demolition activities.

Kentucky BUD Phone: 811

City of Madisonville Phone – 270-824-2130
Electric Utilities Department
609 McCoy Avenue
Madisonville, KY 42431

Please call at least two days before you plan to start digging. There is no charge for this service to eligible customers. MMED uses red marking paint to indicate electric facilities. Such indications are an approximate area expected to house underground lines. Please refer to the Kentucky "BUD" rules and regulations for further information. In case of **Emergency for Electric call MMED at (270) 824-2130 or (270) 821-1720.**

In the event MMED is to excavate or dig holes on the customer's private property it shall be the customers' responsibility to have all underground utilities and buried facilities properly located. The customer assumes all responsibilities should damage occur as a result of such excavation.

If the electrical facilities are customer owned, the customer/contractor may request MMED to mark the lines in the area of concern. If agreeable by all parties, the customer shall pay in advance an estimated cost to perform this service. Where such non-owned facilities are located by MMED, MMED assumes no liability as to the accurateness of such locations.

11. EXISTING UNDERGROUND FACILITIES PRIOR TO JULY 1, 1998

Underground facilities in place prior to July 1, 1998 are customer owned. In some cases, the customer has secondary and primary responsibilities between MMED facilities and the metering point. The customer will no longer be able to continue this practice whenever conditions exist that necessitates the customers facilities are to be moved or repaired. The point of metering will normally be the determinant factor in ownership and responsibility.

a. The property owner shall be responsible for the maintenance and repair of such facilities.

b. After examination of the electrical problem, MMED will report to the property owner its findings.

c. The property owner is under no obligation to have MMED repair/replace their facilities. However, if the customer elects MMED will give a rough estimate for the repairs, providing MMED is able to make the repair.

d. Upon receipt of payment and written authorization to proceed, MMED will begin repairs as soon as practical.

e. All additional monies (if any) are due and payable upon completion of the project.

f. Regardless of who makes the repairs, the repairs must be in accordance with MMED's policies and procedures for said facilities. If the repair consists of more than installing a splice to restore service, the entire cable run shall be replaced in accordance with MMED's standards.
If the replacement is performed jointly by the owners' contractor (if applicable) and MMED, as a complete conduit system, once installed and all cost paid, MMED will assume the maintenance and ownership of such facilities, No one other than MMED is allowed to remove, install, alter, maintain or change any facilities on MMED's poles, property and equipment.

g. In case of MMED's need to replace, remove, relocate or upgrade its poles and facilities or the facilities are no longer serviceable due to constraints imposed by the customer, or the service and facilities are no longer in compliance with the applicable code, the customers underground shall be removed from MMED's pole and property. MMED will propose alternate fees to supply service to the customer. The customer will be responsible for the cost of supplying a new underground feed and removal of their facilities from MMED poles.

12. TRENCH EXCAVATION

a. General

1) Trenching shall include all clearing and grubbing, including all weeds, briars, trees and stumps encountered in the trenching, regardless of size. The contractor shall dispose of any such material by approved methods by the appropriate legal authority.

2) Trenching also includes such items as railroad, street, road, sidewalk, pipe, small creek crossings, including cutting, moving or repairing damage to fences, poles or gates, and other surface structures, regardless of whether shown on the drawings. The contractor shall protect existing facilities against danger or damage while the conduit is being constructed and backfilled or from damage due to settlement of the backfill.

3) Materials encountered in excavation will be divided into only two classes: solid rock excavation and other materials. Conduit must not be laid upon rock or other unyielding surface.

4) All excavations shall be open trenches, except where the Construction Plans call for tunneling, boring, or jacking under structures, railroads, sidewalks, roads, or highways.

b. Trees and Shrubs

Where conduits run through wooded terrain, cutting of trees within limits of the right- of-way or easement, as set forth in this article, will be permitted. However, cutting of additional trees on sides of the right-of-way or easement to accommodate operation of trenching machines will not be permitted. The contractor shall obtain specific written permission of the property owner before cutting any tree on property other than the Developer's.

c. Highways, Streets and Railroads

1) Construction equipment damaging to pavement shall not be used. Curbs, sidewalks, and other structures shall be protected by the contractor from damage caused by his/her construction equipment and/or operation.

2) Where trenching is cut through pavement, which does not crumble on edges, trench edges shall be cut to at least 2-inches deep to straight and neat edges, before excavation is started, and care taken to preserve the edge to facilitate neat repaving.

3) The contractor shall so coordinate his/her work as to produce a minimum of interference with normal traffic on highways and streets. He may, with the approval of the governing agency, close a street to traffic for such length of time considered necessary, provided persons occupying property abutting the street have an alternate route of access to the property that is suitable for their needs during the time of closure.
It shall be the responsibility of the contractor to give 24-hours advance notice to fire and police departments and to occupants of a street that will be closed, in a manner approved by the governing body.

4) The contractor shall properly maintain all road crossings.

5) Railroad and Highway Department requirements in regard to trenching, tunneling, boring, and jacking shall take precedence over the foregoing specifications and the following tunneling and boring or jacking specifications, where they are involved. Where work is within railroad right-of-way, Railroad Protective Insurance shall be carried by the contractor in the amounts required by the Railroad Company. For minimum road crossing requirements on state right-of- way, see page 115.

6) The insurance policy shall name the railroad as the insured and the original policy shall be delivered to the railroad after submitting same to the City of Madisonville for review.

7) Uneven surfaces or bumps in the ground encountered and high driveways and road crossings shall be dug through to such depths that conduit may be laid to a reasonably even grade and have approved minimum cover at the lowest point to meet MMED standards.

d. Existing Utilities

1) The contractor shall determine, as far as possible in advance, the location of all existing sanitary sewer, storm drainage facilities, water mains, underground electric conduit, telephone cables, fiber cables, gas pipelines, and other subsurface structures and avoid disturbing same in opening trenches. In case of electric lines, sanitary sewer, water, and gas services and other facilities easily damaged by machine trenching, same shall be uncovered without damage ahead of trenching machine and left intact or removed without permanent damage ahead of trenching and restored immediately after trenching machine has passed. The contractor shall protect such existing facilities, including power and telephone poles and guy wires, against danger or damage while the conduit run is being constructed and backfilled, or from damage due to settlement of his/her backfill. It shall be the responsibility of the contractor to inform the customers of utilities of disruption of any utility service when it is known that it has been or will be cut off. In addition, the Contractor shall immediately notify the appropriate utility whose utilities are affected.

2) The contractor shall, at all times during trenching operations, comply with the City of Madisonville rules and regulations of the Engineering Department concerning such excavations.

e. Location of Proposed Conduits

The locations of conduits and their appurtenances as shown on the drawings are those intended for the final construction. However, conditions may present themselves before construction on any line is started that would indicate desirable changes in location. In addition, development of property traversed may require location changes. In such cases, the City of Madisonville reserves the right to make reasonable changes in line and structure locations. The Electrical Superintendent and the City of Madisonville are under no obligation to locate utility lines so that they may be excavated by machine.

f. Trench Requirements

1) All trenches must be dug neatly to lines and grades.

2) The opening of more than 500-feet of trench ahead of conduit laying and more than 500-feet of open ditch left behind conduit laying, before backfilling, will not

be permitted. No trench shall be left open or work stopped on same for a considerable length of time. The contractor shall at all times comply with the City of Madisonville and State of Kentucky erosion Control requirements.

3) Where sub-grade of the trench has insufficient stability to support the conduit and hold it to its original grade, the Electrical Superintendent or the City of Madisonville may order stabilization by various means (i.e., extra excavation, crushed rock for conduit bedding, concrete cradle or piling, etc.).

4) Excavation for conduit laying must be made of sufficient width to allow for proper jointing and alignment of the conduit, but not greater than the maximums permitted in the following table.

* TRENCH WIDTH AT TOP OF CONDUIT

Nominal Conduit Size (In.)	Trench Width (In.)
2	24
4	28
6	32

* Wider trench may be required where multiple conduits are installed.

5) Trenches in earth or rock shall be dug as shown on the Construction Plans and be sufficiently deep to insure the minimum cover over conduit lines in developed rights-of-ways and the minimum cover in utility easements.

6) Trenches must be dug true to alignment of applicable stakes. Alignment of trenches or conduits in the trench must not be changed to pass around obstacles such as poles, fences, and other evident obstructions without the permission of the Electrical Superintendent. Lines will be laid out to avoid obstacles as far as possible, contingent with maintenance of alignment necessary to finding the conduit line in the future and avoiding obstruction to future utilities.

g. Damage to Existing Structures

1) Hand trenching is required where undue damage would be caused to existing structures and facilities by machine trenching.

2) In case of damage to any existing structures, repair and restoration shall be made at once and backfill shall not be replaced until this is done. In all cases, restoration, and repair shall be such that the damaged structure will be in as good condition and serve its purpose as completely as before. Where there is the possibility of damage to existing utility lines by trenching machine, the contractor shall make hand search excavation ahead of machine trenching, to uncover same. Contractor shall immediately notify the owner of such damaged structure, prior to any repairs.

h. Extent Seeding

1) Where lawns, pastures, thin grass, or cover crops are destroyed by trenching, backfilling, or tunneling operations, the surface shall be prepared by disking, fertilizing, and seeds. Seeding, fertilizing, and mulching shall be included in the price for trenching and backfilling. The Electrical Superintendent shall control the timing of this operation. Requirements of the Department of Highways for reseeding shall take precedence over these Specifications where they are involved.

2) When the construction project is located on privately owned property on easements acquired by the City of Madisonville or the developer and the individual landowner requires the cover grass to be the same as present at the beginning of construction, the contractor shall supply the seed required by the landowner. Seedling and fertilizing in such instances shall be at the rate as recommended by the seed producer with soil preparation and mulching as stated herein.

3) When the construction project encroaches within the rights-of-way of the Department of Highways, the seed mixture, application rate, and method of mulching shall be as required by the Department ofHighways.

Contractors' Options

1) Where surface grasses and cover is similar in nature throughout the length of the project, the contractor may provide seed of one type or mixture for the entire project provided there are not objections by individual landowners involved and with permission of the City of Madisonville and the Electrical Superintendent. In such cases, the seed type and/or mixture shall be that specified for lawn areas. Pasture and/or cover crop mixtures shall not be used for lawn application for any reason.

2) When construction facilities or construction operations are located on or encroach on privately owned properties, the contractor may, at his/her election, negotiate with the individual landowners for restoration of the surface. This negotiation and settlement may be for materials, labor, or both as agreeable to the individual property owner.

In such cases, the contractor shall obtain from the individual landowner a "Release of Claims" releasing the City of Madisonville from any further liability for surface restoration, a copy of which shall be provided for the City of Madisonville and the Electrical Superintendent. This option shall apply to surface restoration only. The contractor shall be responsible for cleanup and regarding work and for any settlement of the trench or graded area within the one-year guarantee period.

i. Soil Preparation

All areas to be seeded shall be thoroughly cleaned, removing all debris of whatever

nature. After the area has been cleaned, the soil for seeding shall be prepared as follows:

1) Loosen the soil to a depth of not less than 4-inches.

2) Work the soil until it is in good condition, raking with hand rakes to complete the soil preparation and make final finished grade.

3) Broadcast 15-pounds of 8-8-8 or better fertilizer on each 1,000 square-foot of area.

4) Rake area to receive sod, to spread fertilizer and work into soil.

5) On areas to be seeded, the raking in of fertilizer may be done concurrently with raking in of seed as hereinafter specified.

j. Seeding

1) Temporary Cover (All Areas)

a) This item shall consist of seeding a temporary cover of grass, or grass and small grain, on areas disturbed on the construction site that will not be re-disturbed within a 60-day period. The determination of the area to be temporarily seeded and the time of seeding shall be controlled by the Electrical Superintendent.

b) The seed mixtures to be used for temporary cover will be governed by the time of year the seeding is accomplished. The mixtures and time of seeding shall be as follows:

c) Time of Seeding

i) 2/15 to 6/1: Rye 1-1/2 bushels and Ryegrass 25 pounds per acre; or tall fescue 30-pounds and Ryegrass 20-pounds per acre.

ii) 6/2 to 8/15: Tall fescue 30-pounds and Ryegrass 20-pounds per acre; or spring oats two bushels and Ryegrass 30-pounds per acre.

iii) 8/16 to 2/14: Rye two bushels and Ryegrass 20-pounds per acre; or tall fescue 30-pounds and Ryegrass 20-pounds per acre.

d) Lime will not be required for temporary seeding.

e) Fertilize at the rate of 400 pounds per acre of 10-10-10 fertilizers, or equivalent, broadcast uniformly on the area to be seeded.

f) All seed shall be broadcast evenly over the area to be seeded and cult packed or otherwise pressed into the soil. Seed and fertilizer may be mixed together and applied after the seedbed has been prepared.

g) Mulch for temporary seeding will not be required except on those areas, in the Electrical Superintendent's opinion, top steep to hold the seed without protective cover.

2) Seeding (Permanent Cover)

This item consists of seeding all areas disturbed during construction. All grading and/or filling of rills and gullies to a cross section acceptable to the Electrical Superintendent shall be included in the seedbed preparation.

a) Pastures and Cover Crops

i) All areas to be seeded shall be seeded with 50-pounds of tall fescue (KY-31) per acre, subject to the provisions hereinbefore stated in this specification group.

ii) Prepare seed bed as specified in this specification section unless instructed otherwise by the Electrical Superintendent, apply 2 tons of lime per acre.

iii) No mulch will be required except when seeding is done during the period October 16 through January 31, or May 2 through July 31, tall fescue straw shall be used at the rate of 2 tons per acre.

3) Lawns and Yards

a) This item consists of seeding all areas equivalent to residential lawns or yards disturbed during construction.

All grading and filling shall be accomplished in a manner acceptable to the Electrical Superintendent before the placement of seed and materials. Seed shall consist of a mixture of one part Red Top and three parts high grade Kentucky Bluegrass seed mixed together and broadcast at the rate of 2- lbs. to each 1,000-square-foot of surface, to be seeded. Apply 2-tons of lime per acre. Apply 1,500 pounds of 10- 20-20 fertilizers per acre. Apply mulch at the rate of 2-tons per acre. Mulch shall be applied to all lawn areas regardless of the time seeded.

k. Mulching

1) Mulch materials, meeting the requirements of Part 2 of this Specification Section, shall be applied at the rate of 2 tons per acre.

2) The mulch shall be stabilized by running a "weighted" disk harrow with disks set straight, over the area on the contour, after the mulch has been applied, to imbed or press a part of the straw into the soil sufficiently to hold it in place. On earth embankments or areas too steep for use of mechanized equipment, the mulch shall be held in place by using small stakes and twine or other method acceptable to the Electrical Superintendent. The blown-on bituminous-treated straw mulch method of placing the mulch, as specified in Section 212.06.03, Method 2 of the Standard Specifications for Road and Bridge Construction of the Kentucky Transportation Cabinet Department of Highways, will be an acceptable placing method.

a. Mesh, netting, or other special protective cover shall be at locations as shown on the Construction Plans and shall be installed according to the manufacturer's recommendations.

13. CLEARANCES: 0-600 volts

At Service Drip loop (a)	Above Residential Property and Driveways (b)	Above Residential Property and Driveways (c)	Above Roads, Streets, Alleys, and Other Public Ways (d)
11.5 ft.	12 ft.	15 ft.	18 ft.

a. 11.5 feet - at the electric service entrance to buildings; also at the lowest point of the drip loop of the building electric entrance; and above areas or sidewalks accessible only to pedestrians, measure from final grade or other accessible surface only for service-drop cables supported on and cabled together with a grounded bare messenger and limited to 150 volts to ground.

Note: MMED requires a clearance of 11.5 feet for conductors over spaces and ways restricted to pedestrian traffic (including point of attachment to the building.)

b. 12 feet - over residential property and driveways, and those general areas not subject to truck traffic, where the voltage is limited to 277 volts to ground.

c. 15 feet - for those areas listed in the 12-foot classification where the voltage exceeds 300 volts phase to phase.

d. 18 feet - over public streets, alleys, roads, parking areas subject to truck traffic, driveways on other than residential property, and other land traversed by vehicles such as cultivated, grazing, forest, and orchard.

e. In all cases the point of attachment of the service drop shall be not less than 11.5 feet or more than 25 feet above the ground, on permanent structures.

f. Clearances listed in this document should meet or exceed the minimum requirements. MMED reserves the right to adjust these values where in its opinion the clearances may pose a hazard to persons or property.

13. a Clearance from Building Openings:

Service conductors installed as open conductors or multi-conductor cable without an overall outer jacket shall have a horizontal clearance of not less than three feet from windows that are designed to be opened, doors, porches, balconies, ladders, stairs, fire escapes, or similar locations.

Exception: Conductors that run above the top level of a window may be permitted to be less than the three feet requirement above.
Overhead service conductors shall not be installed beneath openings through which materials may be moved, such as openings in farm and general service buildings, and shall not be installed where they will obstruct entrance to these building openings.

13.b Clearances For 12 kV Overhead Lines

MINIMUM VERTICAL CLEARANCES ABOVE GROUND

12.4 kV

Type Crossing	Basic Clearance (ft)	Voltage Adder (ft)	Total Clearance (ft)
Railroads	26.5	0.0	26.5
Streets and Roads	18.5	0.0	18.5
Driveways	18.5	0.0	18.5
Cultivated Lands	18.5	0.0	18.5
Pedestrian Areas	14.5	0.0	14.5
Water Areas (Sailing Not Allowed)	17.0	0.0	17.0
Water Areas (Sailing Allowed)			
Less than 20 acres	20.5	0.0	20.5
20,200 acres	28.5	0.0	28.5
200-2,000 acres	34.5	0.0	34.5
7 2,000 acres	40.5	0.0	40.5

12.4 kV

Type Crossing	Basic Clearance (ft)	Voltage Adder (ft)	Total Clearance (ft)
Sailboat Rigging/Launching			
Areas Adjacent to Water			
Less than 20 acres	25.5	0.0	25.5
20-200 acres	33.5	0.0	33.5

12.4 kV Cont.

Type Crossing	Basic Clearance (ft)	Voltage Adder (ft)	Total Clearance (ft)
200-2,000 acres	39.5	0.0	39.5
200 - 2,000 acres	45.5	0.0	45.5
Along Urban Streets	18.5	0.0	18.5
Along Rural Streets	16.5	0.0	16.5

13.c CLEARANCES FOR SWIMMING POOLS, FOUNTAINS AND SIMILAR INSTALLATIONS. (SEE FOLLOWING DIAGRAM FOR MINIMUM CLEARANCES and Section II, figure 1C.dwg).

SWIMMING POOL CLEARANCE

Clearance of Wires, Conductors, Cables, or Unguarded Rigid Live Parts Over or Near Swimming Pools.
Voltages are phase to ground for effectively grounded circuits and those other circuits where all ground faults are cleared by promptly de-energizing the faulted section, both initially and following subsequent breaker operations.

Clearances are with no wind displacement

	Insulated communication conductors and cables; messengers; surge-protection wires; grounded guys; ungrounded guys exposed to 0 to 300 V neutral conductors (ft)	Unguarded rigid live parts 0 to 600 V Communication conductors; supply cables of 0 to 600 V Ungrounded guys exposed to open supply conductors of over 300 V to 600 V (ft)	Supply cables over 600 V Open supply conductors 0 to 600 V (ft)	Unguarded rigid live parts over 600 V to 22 kV; Ungrounded guys exposed to over 600 V to 22 kV (ft)	Open supply conductors over 600 V to 22 kV (ft)
A. Clearance in any direction from the water level, edge of pool, base of diving platform, or anchored raft	22.0	22.5	23.0	24.5	25.0
B. Clearance in any direction to the diving platform or tower	14.0	14.5	15.0	16.5	17.0
V. Vertical clearance over adjacent land	**Clearances shall be as required.**				

13 d Sign and lighting clearance

a. No customer owned pole or sign shall have less than 12’ of vertical clearance from MMED’s primary conductor.
b. No customer owned pole or sign shall have less than 8’ of horizontal clearance from MMED’s outer most conductor.
c. Where MMED has written easement or right-of-way no sign or customer owned facilities shall encroach on specified easements or right-of-ways or violate the above clearance requirements.

13.e Notice to Contractors:

MMED is very concerned about hazards involving contacts to electric lines by contractor’s personnel and the general public.
MMED strives to make every effort to educate those involved and/or eliminate these hazards.

This notice is to make everyone aware of such conditions and the minimum clearances required by MMED to work in the vicinity of its wires. Your cooperation is necessary in order to eliminate these life-threatening contacts.

MINIMUM CLEARANCES (including any tools or conductive object)

MMED requires a minimum clearance of 10 feet in any direction from its energized high voltage lines. High voltage refers to any wires operating at 601 volts to 12,470 volts.

LOW VOLTAGE

MMED requires a minimum clearance of 4 feet in any direction from its energized low voltage wires. Low voltage refers to any wires operating at 600 volts or less; including system neutral.

If there are any questions as to whether or not wires are high or low voltage, the Contractor shall contact MMED for clarification. No person, crane, scaffold, or other object shall be placed in a position by the Contractor's personnel that will not allow 10 feet clearance from the high voltage wires or 4 feet from the low voltage wires.

These clearances do not relieve Contractors from codes or regulations that result in clearances that exceed those stated above which directly pertain to the Contractor's occupation.

If the above clearance cannot be met in performing the work, then MMED shall be notified and a solution worked out prior to commencing work.

Requests for information regarding clearances from MMED lines can be obtained by calling MADISONVILLE MUNICIPAL ELECTRIC DEPARTMENT, (270) 824-2130.

13.f Distance From Buildings

A minimum distance from buildings and structures for oil-insulated transformers are as follows:

a. 75 KVA or less – not less than 10 feet from any building or any opening vertically or horizontally.

b. 76 KVA to 500 KVA – not less than 15 feet from building and required exits.

c. 501 and above – not less than 25 feet from building and required exits.

CONTACT MMED FOR DETAILED INFORMATION.

13.g Indoor Vaults and Fenced Transformer Stations

When the need arises to replace transformers and/or cable facilities, or condition of facilities are found to be in non-compliance of applicable codes, or unsafe, MMED will upgrade the station to the extent to comply with applicable standards. The Customer will be required to remove, relocate, or replace the facilities belonging to them. The use of pole mounted equipment in enclosed rooms and outside fenced areas are prohibited.

Where the use of large station type transformers are permitted, the primary clearance from ground shall be not less than eight (8) feet vertically and fifteen (15) feet horizontal in any direction. The equipment shall be elevated on concrete pads and other substation type construction. The area shall be protected by a galvanized chain link fenced area suitable for electrical installations. All cost for the site preparation and security will be borne by the customer. In any event, the fence shall be no less than eight (8) feet tall with barbed wire on top and properly grounded. Where permitted, MMED will provide specifications for such installation.

13.h Clearances from Underground Electrical Equipment and Utility Poles

MMED has had many problems where shrubs, trees, fencing, plants and other obstructions have been placed around electrical equipment. No such obstruction is to be within five (5) feet of the sides, and ten (10) feet of the door to any of our electrical facilities. MMED will require the removal of these obstructions within thirty (30) days upon discovery or will remove it for the customer after this time period, at the customer's expense. Additionally, the customer shall not plant or allow to be planted any type shrub, tree, vine or plant that may interfere with the utility poles, guy wires and utility facilities. MMED shall have clear access to its facilities at all times. Should MMED encounter such obstruction on or near its facilities, MMED will notify the customer for the removal of such, where possible. MMED retains the right to remove such obstructions during emergencies, power restoration or other maintenance, without such notification or obligation thereof.

14. METER LOCATION FOR ALL TYPES

MMED will install and maintain, at its own expense, the meter necessary to measure the electricity used by the customer. All multiple-gang meter centers shall be of factory design, UL listed, and pre-approved by MMED. The uses of troughs are no longer permissible, if other UL approved equipment is available. In most cases, the local electrical supply facility will order any such equipment as required.

Customer shall contact MMED for electrical service needs and meter location on customer's facilities. Such electrical service entrance and meter location will be on the side of the house or building closest to existing available electrical facilities, as determined by MMED. It cannot be in a carport, porch area or wood deck. When the building and lot are such that the total length of underground conduit shall exceed 200 feet or, if service size exceeds 200 amps, these specifications and requirements may be altered and a custom arrangement may be specified by MMED. The meter normally shall be attached to an

exterior surface of the customer's premises at a point satisfactory to MMED. Where engineering conditions strictly preclude this type of installation, the meter shall be located at a point readily accessible as designated by MMED. Meters shall not be installed where they are subject to corrosive fumes, excessive heat and moisture, sudden temperature changes, dust, vibrations or possible damage or where hazardous conditions exist, nor shall they be installed on or in trailers, portable houses or any buildings not on a permanent foundation. Should such metering found to be subjected to any of these conditions, MMED would require the customer to relocate the facilities to a suitable area, at the customer's expense. Failure to comply may result in termination of service.
Meters are not to be installed on MMED poles, including telecommunications or other utility providers. Exact location of meter, conduits and riser elbows must be approved by MMED prior to installation.

MMED may refuse to install a meter, if in its judgment, the customer's installation is hazardous or of such character, that satisfactory service cannot be given. In case of refusal, MMED shall inform the customer of the reason for refusal to render service and what changes are necessary for an acceptable installation. Such metering facilities will be located away from other equipment, doors and windows as not to interfere with the maintenance or safety thereof. As a guide the facilities are to be no less than 3 feet from such obstacles.

Any necessary change in wiring must be made by the customer before MMED will move a meter to a new location. No person other than MMED's authorized representative will be allowed to move a meter from one location to another.

15. METER INSTALLATION

a. Number of Meters

MMED will supply, install and maintain one watt-hour meter and or demand meter when required, for each class of service supplied. Meter mounting equipment such as meter sockets, meter enclosures, meter panels, meter connection cabinets, metering transformer cabinets, of any approved type, shall be provided, installed and maintained by the customer.

All multiple-gang meter centers shall be of factory design, UL listed, and pre-approved by MMED. Troughs splice boxes; meter sockets and other like devices are not to be used to add additional metering installations.

All multi-gang meter bases are to be labeled with their corresponding apartment or unit number. Each base is to be labeled inside with a permanent marker in the bottom right-hand corner and on the outside with a permanent stick-on label. Any discrepancies or service delivery errors due to the failure to maintain such labeling will be the property owner's sole responsibility.

b. Meter Sockets and Meter Panels

Normally, socket-type metering will be used where the load side capacity of the wiring is 320 amperes or less. Only meter sockets, which are labeled by Underwriters Laboratories, Inc., will be approved.

Bypass: A lever operated jaw release type; heavy duty, full ampere rating, moving lever up to bypass and releases pressure on meter jaws. Cover cannot be installed with lever in bypass position.

Such socket is required on all single sockets over 100 amperes. A sealing ring, when required, shall be furnished with the socket. Where gang bases have been approved, they shall have disconnecting means under the meter socket.

GROUNDING: The neutral wire and ground wire must be connected under separate lugs, for such applications. All equipment and enclosures shall be properly bonded in accordance with equal potential grounding provisions, in an effort to protect persons who may come in contact with such equipment.

Installations exceeding the 320-ampere maximum capacity of heavy-duty sockets require current and/or potential transformers or both to properly meter these services and, therefore, information should be obtained from MMED before starting any wiring. Meter sockets may be mounted either directly on the building or on panel board whichever best fits the requirement of the installation. They shall be mounted in a plumb and level position and the top of the socket shall not be more than 5 ½ feet or less than five feet above permanent ground or floor level, with a minimum overhead clearance of twenty-four (24) inches.

A minimum clearance of 3 1/4 inches on all sides is required. A horizontal clearance of forty-eight (48) inches in front of meters extending from the floor to at least seven feet above the floor shall be provided and maintained to permit access to the meter.

All multiple-gang meter centers shall be of factory design, UL listed, and pre-approved by MMED.

c. Socket Connected Type Meters (over 320 amps)

When the load side capacity of the wiring exceeds 320 maximum capacity amperes, a socket-connected meter with current transformers will be used.

Metering transformers can be generally mounted in enclosures approved for the purpose, but generally are mounted on the side of buildings at the point of service connection. On large installations, the customer may be required to provide and install metering termination equipment, as determined by MMED.

On all installations involving metering transformers, it is essential that the customer receive MMED approval for specifications relative to space requirements, installation details and other information pertinent to the installation.

d. Grouped Meters

When two or more meters are installed in the same building and fed from the same service entrance, they must be grouped in a manner approved by MMED to facilitate reading and servicing. Normally, only two risers will be permitted on a structure. Should additional meters be allowed they shall be served from an MMED approved grouped meter center. Each individual meter setting shall be plainly and permanently marked on the meter panel or individual switch. Such marking shall be in full view when the meter is in place and shall designate the installation, room or apartment for which the meter is installed. Each meter must be provided with its own disconnect switch or breaker. The details of large general and industrial installations requiring extensive metering equipment shall be agreed to between the customer and MMED.

Adding additional metering point(s) to avoid paying some or any demand charges is disallowed. The customer will pay all cost to MMED for loss of revenue and or stranded investment cost for the facilities in place, if MMED allows such change.

e. Continuous Conduit

There must be continuous conduit from the pole or underground power source into the source side of the meter base or metering equipment. No cover plates or other equipment that allows access to the wiring will be permitted. No reducer fitting or bushing is permitted within the conduit system. If the plan calls for a specific conduit size it is from point-to point. This applies to temporary and permanent installations.

f. Electrical Facilities under structures

No MMED's electrical conduit, wiring or equipment is allowed under any permanent structures. When a permanent structure of any type is built over any electrical facilities or any type structure encloses such facilities, MMED requires the customer to relocate these facilities at the customers' expense. Included but not limited to Residential Homes, General/Industrial Buildings, Barns, Outbuildings, both portable and stationary Pools, Garages, Porches, Carports, Concrete Slabs, Mobile homes and any other such permanent type facility that may interfere with the Utility's operation and access to its facilities. Upon proper notification, failure to promptly correct such deficiently will result in discontinuation of electrical service.

16. ELECTRICAL REQUIREMENTS CONCERNING MOTORS AND INDUSTRIAL APPLICATIONS

a. General

Limitations on Customer's Installation:
Customer utilization equipment should be selected and used with the view of obtaining the highest practicable power factor; and no appliance or device which, in the opinion of MMED, is not properly constructed, controlled or protected, or may adversely affect MMED's service to other customers, shall be connected to the Customer's installation.

(1) Voltage Fluctuation: All utilization equipment attached to the Customer's installation shall be such that starting and operating characteristics will not cause an instantaneous voltage drop of more than four percent of the standard voltage or cause objectionable flicker in other customers' lighting. Electric service must not be used in such a manner as to cause any unusual fluctuations, disturbances, noise, harmonics, or surge transience to MMED's system or Customers.
MMED will require the Customer, at their expense, to install suitable apparatus, which will reasonably limit such fluctuations and disturbances as described above. SCR drives, power supplies, ballasts, etc can also cause such fluctuations.

(2) Power Factor Correction: Customer shall provide power factor correction apparatus satisfactory to MMED on any and all equipment affecting power factor quality below the minimum requirements.

(3) Motor Regulation: All motors connected to the Customer's installation shall be equipped with satisfactory starting devices to prevent abnormal voltage fluctuations, and shall be provided with devices which will protect the motor installation against under-voltage, over-load, phase failure and short-circuit.

The proper operation of motors and other electrical equipment is necessary to minimize objectionable motor starting effects and to otherwise protect the service to other customers. All motors require starting currents substantially greater than their normal running currents. Excessive starting currents will result in objectionable drops in the supply voltage to the customers in the vicinity. Therefore, customer's equipment shall generally conform to the following requirements and any exceptions thereto will be subject to agreement between MMED and the customer.

b. Motor Protection

Protection, in accordance with the National Electric Code, shall be provided for all motors, to adequately protect such motors and connected equipment under all conditions including the following:

1) Overload
2) Loss of Voltage
5) Low Voltage because of emergency conditions

4) Loss of phase (single-phase or polyphase motors)
5) Re-establishment of normal service after any of the above.
6) Phase reversal
7) Motors that cannot be subjected to full voltage on starting

The lack of protection may result in needless damage to equipment and the expense of delay and repair.

c. Motor Values

For installation of all motors, it is necessary to check with the MMED to assess what primary and secondary voltages are available in the immediate area in which the motor is to be installed, as well as proper motor installations.

SINGLE PHASE MOTORS

1. Motors of 5 H. P. and smaller may be started across the line, provided such starting does not cause undue interference to other consumers served from the same transformer.
On equipment containing two or more motors exceeding 5 H.P. in total, the controls should be so connected or operated that motors will not be started simultaneously.

2. Motors in excess of 5 H.P. normally should have current limiting devices, such as; resistance starters, capacitor start--capacitor run characteristics or equivalent.

3. Any motor whose starting characteristics are such as to limit the starting current to 300 % of full load current will be acceptable, regardless of type of starting device used, for single-phase motors of 10 H.P. rating and smaller.

4. Motors in excess of 10 H.P. will be considered as a special application and will be served only when the user meets the requirements set forth by MMED for this specific application.

THREE PHASE MOTORS

1. 15 H.P. and smaller motors operated singly can be started across the line. On equipment containing two or more exceeding 15 H.P. in total, the controls should be so connected or operated that motors will not be started simultaneously.

2. Motors larger than 15 H.P. up to and including 75 H.P. must be equipped with starting devices so as to limit the starting current to 300 % of full load current.

3. Motors in excess of 75 H.P. must be equipped with starting devices so as to limit the starting current to 250 % of full load current.

4. Motors in excess of 150 H.P. shall be considered a special application and will be served only when the user meets the requirements set forth by MMED for this application.

*Normally three-phase supply is not available for residential service

d. DEFINITION AND NOTES

1. Total locked rotor current is defined as the steady state current taken from the supply line with the motor rotors locked, with all other power-consuming components, including a current-reducing starter if used, connected in the starting position, and with rated voltage and frequency applied.

2. Where the equipment contains more than one motor and some motors are arranged for sequence starting, that combination of power-consuming components simultaneously started that produces a higher draft of starting current than any other combination. The interval between successive steps shall not be less than one-half second.

e. Special Equipment Applications

The installation of welders, X-ray equipment, diathermy equipment, radio transmitters, etc., shall be referred to MMED for approval.

17. ELECTRIC CURRENT DIVERSION AND TAMPERING POLICY

a. Policy Objective:

To establish rules, procedures, and guidelines to be followed in the event a MMED customer or customers are suspected of electric current diversion or meter tampering.

Any tampering, interference or work performed upon metering installations, un-metered enclosures or electric gutters, or other property of MMED is prohibited and MMED may, at any time, without notice, discontinue supply of service to the customer and remove its meter or meters and equipment. Service will not be restored to such customer until payment has been made to MMED for all costs involved, including payment for damage, installation of tamper security device, and cost associated with investigation to MMED facilities and service consumed but not metered.

b. Policy Statement:

1) "Diversion and tampering" shall be defined as any means of unauthorized action taken by any person or persons that has the effect of circumvention,

or alteration of the accuracy, of any billing meter and/or associated devices, whether accidental, purposeful, fraudulent or otherwise.

2) MMED shall endeavor to recover by administrative means any lost revenue and associated cost of property damage, manpower, and equipment charges related to diversion and/or theft of electricity, and when un-collectible in this manner, to prosecute by civil or criminal action, the person or persons responsible for, or receiving benefits from, diversion of service and/or theft of electricity.

3) The customer requesting electric service from MMED shall be required to provide valid identification. The customer shall be required to sign the appropriate request forms, agreeing to be responsible for MMED's equipment installed on their premises.

4) The customer shall exercise proper care to protect the property of MMED installed on the premises from being damaged, destroyed, tampered with, or diverted; and shall not permit persons other than employees or agents of MMED to break any metering seals.

The customer, customer's employees, customer's agents, or members of their families shall not disconnect or connect any MMED electrical meter, or inspect, work on, disturb, tamper with, or divert electric power, electrical wiring or associated equipment which is the property of MMED.

5) The customer, customer's employees, customer's agents or associates, or members of their families shall not attach or permit to be attached at the metering point, any contrivance or any device which may or could cause there to be no registration and/or incorrect registration of energy usage and/or demand of any MMED’s electric metering device.

6) If property of MMED has been damaged or destroyed due to carelessness or neglect, or tampered with or diverted from registering proper electric usage by the customer, a member of their family, or their agent, employee or tenant, or other person or persons, the customer shall pay MMED the cost of necessary repair, security device and/or replacement of facilities and/or the cost of any revenue lost from diversion of such facilities, as applicable. In instances where the person other than the property owner is suspected of causing the damage or current diversion and has “skipped out”, the property owner shall be liable for damages, including cost for installation of the meter security device. In any event, the meter security device shall be in place prior to restoration of service.

c. Policy Responsibility:

The Electric Superintendent shall have the responsibility to administer this policy.

d. Policy Procedure:

Seal and Meter Integrity:

1) MMED's meter department shall test, repair, adjust and replace all electric meters on a rotating schedule.

2) All electric meters and related equipment shall be properly sealed with color-coded locking type seals.

3) Meter readers shall check meter seals as directed. They shall physically pull on the seal to insure the seal is properly locked and has not been tampered with.

4) When a meter seal has been found broken or cut, the meter reader shall report this to MMED.

5) The first time a customer's meter seal has been broken or cut, MMED investigator shall promptly remove the meter and inspect for evidence of meter tampering and or electrical work.

   Should no such indication be discovered the meter shall be resealed and notification to the customer by letter of the findings and enclose a copy of this policy. However, if it is determined that the metering facilities has been removed or tampered with it shall be treated as meter tampering and proceed accordingly. In the event the customer or his/her agent, renter, occupant or unknown source removes, damages, deface, alter or install a meter or any component thereof it shall be treated as meter tampering.

6) The customer shall be assessed a normal reconnect fee and a one-hundred dollar ($100.00) minimum investigation fee or the actual cost of time and material for investigation, and securing the meter to prevent further tampering. It shall also be reported to the Electrical Inspector for re-inspection. All fees and charges are to be paid in full, prior to restoration of service.

7) In an effort to maintain electrical meter integrity and administer MMED's meter seal program, only MMED employees shall have the authority to cut, break, or otherwise remove a meter seal or other equipment seal belonging to MMED.

8) No manager, supervisor, foreman, or employee shall have the authority to grant any customer, electrician, or contractor permission to cut, break, or otherwise remove any electrical meter seal or other equipment seals belonging to MMED.

e. Investigation/Evidence of Diversion and Tampering:

1. All reports of theft of electricity, meter tampering or broken meter seals shall be investigated as soon as possible.

   Investigation procedures shall include, but are not limited to, determination of person or persons responsible for the theft, review of customer records, on-site field investigations, and collection of evidence, photographic and/or other material as necessary.

2. Evidence of diversion/theft or broken meter seals shall be logged and the custody of evidence shall be protected in a locked device in MMED's office building. Upon resolution, the seal and related matter may be discarded.

18. GROUNDING INFORMATION FOR ALL MMED CUSTOMERS AND ELECTRICAL INSTALLATION

Proper grounding of electrical systems is necessary for the protection of people and property. The National Electrical Code (N.E.C.) Article 250-Grounding contains the provisions considered necessary for safety. Please refer to the latest edition for further clarification.

The ILLUSTRATIVE drawings contained in this service guide generally show supplemental grounding provisions at the metering point and are not intended to represent the total premises grounding system.

The importance of understanding the provisions of N.E.C. Article 250 - Grounding cannot be overemphasized for those persons designing, constructing, or operating electrical systems. The following condensed information is intended as a reference guide to grounding services for alternating current systems. Refer to the N.E.C. articles as designated for information that is more detailed.

The grounded service conductor (service neutral), meter base and service equipment must be electrically bonded together and permanently grounded [N.E.C. 250-23 (a), 250-32, 250-53, 250-70, 71, 72, 250-81].

The grounding electrode system should consist of all the following elements bonded together if available on the premises (N.E.C. 250-81):

a. Metal underground electric conduit in direct contact with the earth for 10 feet or more and supplemented by an additional electrode of a type specified in N.E.C. 250-81 or in 250-83.
   NOTE: Any interior metal electric piping must be bonded to the grounding system even though there may be no metal underground water pipe. Other interior metal piping which may become energized must also be bonded to the grounding system (N.E.C. 250-80).

b. The metal frame of the building, where effectively grounded.

c. A concrete encased electrode.

d. A bare copper ground ring.

e. The electrode shall be installed such that at least 8 feet of length is in contact with the soil. It shall be driven to a depth of not less than 8 feet except that where rock bottom is encountered; the electrode shall be driven at an oblique angle not to exceed 45 degrees from the vertical or shall be buried in a trench that is at least 2 1/2 feet deep.

The upper end of the electrode shall be flush with or below ground level unless the above ground end and the grounding electrode conductor attachment are protected against physical damage (N.E.C. 250-117).

Electrodes which do not have a resistance to ground of 25 ohms or less, shall be augmented by an additional electrode(s) and shall be not less than 6 feet apart. MMED will periodically test the electrode and or grounding to ensure this provision. If at any time the grounding is found inadequate, the customer/contractor will be required to comply. If the electrical service is off at the time of inspection, the problems shall be corrected prior to service delivery. Should the service be energized at the time of discovery, the defect shall promptly be corrected. Should the repairs require MMED to perform additional work, the customer or contractor will be required to reimburse MMED for such service

Grounding electrode conductors shall be installed in one continuous length without a splice or joint. Where multiple grounding conductors are required, each shall be connected individually to the grounding electrode by separate connection. The minimum size for an unprotected grounding electrode conductor is #6AWG provided it is free from exposure to physical damage. Grounding conductors shall not be smaller than #6AWG. Larger grounding electrode conductors may be required depending on the size of the largest service-entrance conductor(s) or where required by MMED standards (N.E.C. 250-94, Table 250-94).

Grounding conductor connections shall be accessible and made in a manner that will assure a permanent and effective ground (N.E.C. 250-112, 250-115).

Note: MMED requires no less than 2 - 8' x 5/8", 13 mill copper clad ground rod, driven in undisturbed soil at all metering locations and all grounds shall meet 25 ohms or less. Should the ground fail the test upon inspection, the customer will be required to correct the deficient ground and may be required to pay a minimum $15.00 retest fee.

19. UTILITY EASEMENTS AND RIGHTS OF ACCESS

The purpose for the electrical easements of the Utility and its tree trimming policy are to maintain its commitment to provide quality service and to the safety of the public. MMED strives to continue to be cost efficient in its construction, maintenance and tree-trimming program. When trimming is necessary, MMED will prune trees in accordance with

approved principles of modern arboriculture and vegetation management control guidelines with due regard for the appearance of the pruned tree.

MMED employees, properly identified by a MMED identification card, shall have access to the Customer's premises at all reasonable times for the purpose of reading meters, testing, repairing, removing or exchanging any or all equipment belonging to the Utility. Access privileges are assured by easements, both written and prescriptive and right-of-way conditions which forbid obstacles such as buildings and other permanent structures, locked gates, shrubs and limbs, dogs and other animals, from prohibiting entrance/exit and proper working area. Any animal or other that poses a threat or hazard to MMED personnel will not be allowed.

The Utility may allow fences on the right-of-way easement but requires the customer to install a ten-foot gate, which allows access to the facilities by MMED vehicles. MMED requires access to Right of Way or Easement even if gate is installed.

If construction is planned that will prohibit or restrict access to Utility meters or other facilities, the Customer shall contact MMED for assistance in relocation of the facilities.

20. TREE TRIMMING POLICY

Trees growing in lines or overhanging into the Utility's easement are a constant problem. Therefore, the Utility enforces a tree trimming policy.

a. **Utility Easements** - should be clear and accessible to Utility personnel and vehicles. No permanent structure such as home additions, garages, storage buildings, etc., shall be placed on easements. Fencing would be allowed as long as a minimum 10' gate is installed for access to property. It is required that all form of vegetation such as: trees, shrubs, flowers are not to be planted in any easement. If planting is done, it is requested that they be placed in areas so that they do not block or interfere with required Utility operations.

b. **Tree Trimming** - All tree pruning, both initial and re-trimming, will be performed with due regard for the safety of the public and providing reliable and efficient service to the customers in accordance with approved principles of modern arboriculture and vegetation management control guidelines.

1) General Guidelines:

The “Target Tree Pruning Method” will be utilized in MMED’s Tree pruning program and will be done to maintain the proper required minimum clearance of:

a) 10 foot in all directions from primary wires

b) 4 foot in all directions from secondary wires

c) Greater distance will be obtained whenever possible.

d) Trees interfering with the Customer's service drop are the sole responsibility of the property owner. MMED will remove the service so the owner may have the tree trimmed or removed. The service drop is normally the line(s) from the transformer and/or service pole to the customer's point of attachment.

Efforts will be made to provide advanced notice (7 calendar days) to the property owners, of the Utility's intention to trim trees on their property except in emergency situations and, where reasonably possible, to discuss the tree trimming procedure. Should the customer elect to have the trees trimmed at his/her expense by their contractor, such arrangements may be made with a MMED representative. In the event the customer elects to have the trees trimmed at their expense, such trimming must be completed within 30 days. Thereafter, if the customer fails to comply, MMED will proceed to trim the trees. Regardless of who cuts the trees, the minimum clearance shall be as described above.

1) Trees in Utility Easement - Trimming will be done in accordance with the best-prescribed practice as adopted by the Utility.

1) Trees Adjacent to Utility Easement – The amount of trimming will be determined by the proximity of the wires in reference to the location of tree.

2) Trimming will be done to limbs that invade the easement, written or prescriptive, to clear overhead lines and equipment.

3) Tree Removal - some trees may be removed and disposed of appropriately.

4) Contractor assistance: Where conditions exist that require MMED to trim or cut tree limbs away from power lines to facilitate the removal of, or trimming by, a private contractor, and /or the removal and re-installation of MMED facilities, the contractor shall reimburse MMED for such extraordinary expenses.

5) Damages: In the event a contractor or homeowner damages any MMED lines or equipment and/or interrupts service to any of MMED customers, the contractor / homeowner shall be liable to MMED for such damages. If MMED is requested to perform tree cutting in order to facilitate work to be performed by contractors or others, the requesting person is responsible to MMED for any and all cost associated with such request.

21. ENERGY CURTAILMENT AND SERVICE RESTORATION PROCEDURES

Rules and Regulations or Terms and Conditions:

a. Purpose

To provide procedures for reducing the consumption of electric energy on the City of Madisonville, Electric Utilities Distribution system in the event of a capacity shortage and to restore service following an outage. Notwithstanding any provisions of these Energy Curtailment and Service Restoration Procedures, the City shall have the right to take whatever steps, with or without notice and without liability on City's part, that the City believes necessary, in whatever order consistent with good utility practices and not on an unduly discriminatory basis, to preserve system integrity and to prevent the collapse of the City's electric system or interconnected electric network or to restore service following an outage.

b. Energy Curtailment Procedure Priority levels:

For the purpose of these procedures, the following Priority Levels have been established:

1) Essential Health and Safety Uses - to be given special consideration in these procedures shall, insofar as the situation permits, include the following types of use

   a) Hospitals", which shall be limited to institutions providing medical care to patients.

   b) "Life Support Equipment", which shall be limited to kidney machines, respirators, and similar equipment used to sustain the life of a person. (Note: CPAP or Continuous Positive Airway Pressure units are often used for sleep apnea which does NOT qualify as a form of life-sustaining equipment.)

   c) "Police Stations and Government Detention Institutions", which shall be limited to essential uses required for police activities and the operation of facilities used for the detention of persons.

   d) "Fire Stations", which shall be limited to facilities housing mobile fire-fighting apparatus.

   e) "Communication Services", which shall be limited to essential uses required for telephone, telegraph, television, radio and newspaper operations, and operation of state and local emergency services.

   f) "Water and Sewage Services", which shall be limited to essential uses required for the supply of water to a community, flood pumping and sewage disposal.

g) "Transportation and Defense-related Services", which shall be limited to essential uses required for the operation, guidance control and navigation of sir, rail and mass transit systems, including those use essential to the national defense and operation of state and local emergency services. These uses shall include essential street, highway and signal-lighting services.

Although, when practical, these types of uses will be given special consideration when implementing the manual load-shedding provisions of this program, any customer may be affected by rotating or unplanned outages and should install emergency generation equipment if continuity of service is essential. In case of customers supplied from two utility sources, only one source will be given special consideration. Also, any other customers who, in their opinion, have critical equipment should install emergency generation equipment.

The City attempts to keep a list of customers with life support or critical needs. It is the customers responsibility, if the situation exists, to maintain backup power sources or in critical situations, to contact medical personnel or dial 911.

a) It shall, therefore, be the customer's responsibility to notify the City if he / she has critical needs.

b) Critical General Service and Industrial Uses - except as described in “c” below.

c) Residential Use - the priority of residential use during certain weather conditions (for example severe winter weather) will receive precedence over critical general service and industrial uses. The availability of City service personnel and the circumstances associated with the outage will also be considered in the restoration of service.

d) Non-critical general service and industrial uses.

e) Nonessential Uses - the following and similar types of uses of electric energy shall be considered nonessential for all customers:

i) Outdoor flood and advertising lighting, except for the minimum level to protect life and property, and a single illuminated sign identifying general service facilities when operating after dark.

ii) General interior lighting levels greater than minimum functional levels.

iii) Show-window and display lighting.

iv) Parking lot lighting above minimum functional levels.

v) Energy use greater than that necessary to maintain a temperature of not less than 78 degrees during operation of cooling equipment and not more than 65 degrees during operation of heating equipment.

vi) Elevator and escalator use in excess of the minimum necessary for non-peak hours of use.

vii) Energy use greater than that which is the minimum required for lighting, heating or cooling of general service or industrial facilities for maintenance cleaning or business related activities during non-business hours.

c. Curtailment Procedures

In the event the City's load exceeds generation, transmission, or distribution capacity, in conjunction with KYMEA's system capacity, and internal efforts have failed to alleviate the problem, including emergency energy purchases, the following steps will be taken:

1) The Kentucky Municipal Energy Association (KYMEA) and The Federal Energy Regulatory Commission will be advised of the situation.

2) An appeal will be made to customers through the news media and/or personal contact to voluntarily curtail as much load as possible. The appeal will emphasize the defined priority levels as set forth above.

3) Customers will be advised through social media and news media when available that load interruption on a rotating basis is imminent, if possible.

4) Power output will be maximized at the City's distribution system

5) City use of energy at City street lighting facilities will be reduced to a minimum.

6) City's use of electric energy in the operation of its offices and other facilities will be reduced to a minimum.

7) Load shedding will begin on a rotating predetermined basis in all of the City's service territory, giving consideration to priority levels where practical.

d. Service Restoration Procedure

Where practical, priority uses will be considered in restoring service and service will be restored in the reverse order of curtailment. However, because of the varied and unpredictable circumstances, which may exist or precipitate outages, it may be necessary to balance specific individual needs with infrastructure-needs that affect a larger population. When practical, the City will attempt to provide estimates of repair times to aid customers in assessing the need for alternative power sources and temporary relocations.

Security Lighting Service

AVAILABILITY

This rate schedule is available, for the various types of security lighting services shown herein, in any area which MMED has an electric service. Service is subject to the provisions herein and the provisions of MMED's standard contract for security lighting service. Should the service not meet these standard provisions, MMED reserves the right to revise the charges listed hereinafter to include any additional or usual cost involved.

CONDITIONS OF SERVICE

1. DURATION: Service will be from dusk to dawn, automatically controlled.

2. STANDARD OVERHEAD SYSTEM: Security lighting equipment furnished under the Standard Overhead Rate shall consist of wood poles, brackets, appropriate fixtures for the lamps being used, the necessary overhead security lighting circuit, protective equipment, controls and transformers. MMED will install, own, operate and maintain the entire security lighting system, including circuits, lighting fixtures and lamp replacements. The Customer may be required to pay a non-refundable cost to install lighting facilities (Section 1 item 31). In addition to the installed facilities cost, the standard monthly rental rate(s) shall apply.

3. CLASSIC UNDERGROUND SYSTEM: MMED may upon request, furnish under the CLASSIC Underground Rate, Classic poles of MMED's selection, together with underground wiring and all other equipment and provisions as necessary. In addition, the customer will be required to pay for all material, equipment and labor for the installation of the facilities. MMED will visit the customers' premises and determine the scope of the project and provide a cost estimate to the customer. Only property owners may request additional poles to be placed on their property. All monies due are to be paid prior to installation or procurement of materials.

4. The customer shall be responsible for fixture replacement or repairs where such replacement or repairs are caused from willful damage, vandalism or causes other than normal burnout.

5. MMED shall, at the request of Customer, relocate or change existing MMED owned equipment. Customer shall reimburse MMED for such changes at applicable rate, including appropriate overheads.

Security Light Rate Schedule

TYPE AND RATE

	OVERHEAD INSTALLATION MONTHLY RATE	CLASSIC UNDERGROUND
HIGH PRESSURE SODIUM (no longer available)		
150 watt	$6.52	$9.78
250 watt	$9.23	$13.92
400 watt	$14.49	$21.74
Flood Light (no longer available)		
400 watt -HPS	$16.13	$24.20
400 watt metal halide	$16.13	$24.20
LED SECURITY LIGHTING		
150 watt equivalent	$6.52	$9.78
250 watt equivalent	$9.23	$13.92
400 watt equivalent	$14.49	$21.74
LED FLOOD LIGHTING		
400 watt equivalent	$16.13	$24.20
**********		
Classic Pole	$4.25	$6.35

ACTUAL COST FOR UNDERGROUND INSTALLATION WILL BE CALCULATED ON A CASE-BY-CASE BASIS.

A customer desiring to rent a security light must enter into a five (5) year contract. A sample of the contract is as follows.

Security Light Contract (SAMPLE)

This contract made and entered into and between the City of Madisonville, hereinafter known as the City, and **Customer's Name** of Madisonville, Kentucky, hereinafter known as the Customer. The parties hereto agree as follows:

APPLICABLE: Available for Customer outdoor lighting to customers receiving service from Madisonville Municipal Electric Department facilities at same location.

CHARACTER OF SERVICE: Electric service under this rate schedule will be provided only where suitable existing secondary voltage is available. Service will be from dusk to dawn by photo control, for night use only.

RATE: The City is to furnish the complete fixture) with dusk to dawn control and a mast arm. Service and installation of the fixture to be installed on an existing pole. If there is no existing pole, a charge will be made for setting a new pole. The City reserves the right to increase the charge per fixture per month over the period of this contract, but will do so only after proper procedures. Should the City increase the rate per fixture per month during this contract, the Customer has the right to terminate this contract by giving written notice to the City after thirty (30) days.

DUE DATE OF BILL: Payment will be due within fifteen (15) days from the date of bill. Billing for this service to be made part of the bill rendered for other electric service. Sharing cost with other adjacent property owners is disallowed.

TERM OF CONTRACT: For a fixed term of not less than five (5) years and for such time thereafter until terminated by either party giving thirty (30) days written notice to the other. A written application signed by the Customer will be considered sufficient contract. Should the Customer cancel the contract prior to the initial five years, a prorated charge will be imposed on the bill. The remaining unused time period will be prorated at 25% of the actual rate: (monthly rental times 25%, times the unused months = balance due). *Example: $6.25 monthly rental x 25 % = $1.5625 x remainder of contract *24 months = $37.50, this would be the balance due on a five year contract with two years remaining.*

RULES AND REGULATIONS: The City shall own and maintain all the facilities required to provide service under this contract. All service and necessary maintenance will be performed only during regular scheduled working hours of the City. The City shall be allowed access to restore service and or remove facilities as necessary.

The customer is solely responsible for notifying MMED in the event the light fails to properly operate. Should MMED fail to repair the light within fifteen (15) calendar days of such notification, the rental for the given month, for the light in question, will be prorated. However, the City makes no guarantee to the use of the light and assumes no liability thereof. All calls and reporting shall be directed to Madisonville Municipal Electric Operations Center located at 609 McCoy Avenue, telephone (270) 824-2130. Calls to other City offices will not be acceptable.
(Location and other pertinent information will also be included in actual document.)

Rate Schedules

For

Electric Service

MADISONVILLE MUNICIPAL UTILITIES

Electric Rate Schedules
MADISONVILLE Municipal Utilities

Designation: Residential Service – Rate Schedule RS-1

Availability:

In any area served by the MADISONVILLE Municipal Electric Department (MMED) electric system in accordance with MMED's terms and conditions for providing electric service.

Application:

To residential customers in single family dwelling units for domestic purposes when all electric service is supplied through one meter. If a portion of the electric service supplied to a dwelling is used for nonresidential (non-domestic) purposes, the customer can arrange his wiring so that the electric service for residential and nonresidential purposes can be separately metered and this rate shall apply to the residential portion. A residence in which four or more sleeping rooms are rented or are available for rent is considered non-domestic and this rate shall not apply.

Type of Service:

Single phase, 60 hertz, at one of MMED's standard service voltages (120/240), or other voltages as might be mutually agreeable; three-phase service may be provided at the discretion of MMED.

Monthly Rate:

Customer Charge:	$ 6.00 per month
Energy Charge:	$0.09968 per kWh

Minimum Bill:

The minimum billing charge under the above rate shall be the Customer Charge.

Power/ Fuel Cost Adjustment:

The above rates are subject to a Power Cost Adjustment (PCA) as specified in MMED's Rules and Regulations.

Payment:

Bills are due and payable when rendered and become delinquent on the 15th day after the date of issue. A penalty of ten (10%) percent may be added to all such bills

Electric Rate Schedules
MADISONVILLE Municipal Utilities

Designation: Small General Service – Rate Schedule GS-1A

Availability:

In any area served by the MADISONVILLE Municipal Electric Department (MMED) electric system in accordance with MMED's terms and conditions for providing electric service.

Application:

To any non-domestic customer for all electric power and energy requirements whose maximum monthly billing demand during the last 12-month period does not exceed 50 kW for more than one month or billing period. Each premises will be supplied only at one point of delivery and all electric service supplied will be measured through one meter. This schedule is not applicable for temporary, breakdown, standby, supplementary, resale or shared electric service.

Type of Service:

Single phase or three phase, 60 hertz, at one of MMED's standard service voltages (120/208, 120/240) or other voltages as might be mutually agreeable.

Monthly Rate:

Customer Charge:		$12.03 per month
Energy Charge:	First 5,000 kWh	$0.1169 per kWh
	Additional kWh	$0.0846 per kWh

Any GS1A customer which has a tax-exempt status under IRC Section 501 may elect to be charged an alternate GS1A rate which shall be a customer charge 0f $18.03 per month and an energy charge of $0.1087 per kWh. Any such customer shall be limited to one rate election per year. Prior to allowing such rate the City may require evidence of exempt status.

Minimum Bill:

The minimum billing charge under the above rate shall be the Customer Charge plus a facilities investment charge of $1.00 per kVA of installed transformer capacity as requested by the customer.

Power/Fuel Cost Adjustment:

The above rates are subject to a Power Cost Adjustment (PCA) as specified in MMED's Rules and Regulations.

Payment:

Bills are due and payable when rendered and become delinquent on the 15th day after the date of issue. A penalty of ten (10%) percent may be added to all such bills.

Electric Rate Schedules
MADISONVILLE Municipal Utilities

Designation: Large General Service – Rate Schedule GS-2A

Availability:

In any area served by the MADISONVILLE Municipal Electric Department (MMED) electric system in accordance with MMED's terms and conditions for providing electric service.

Application:

To any non-domestic customer for all electric power and energy requirements that exceeds 50 kW for two or more months within a 12-month period... Each premises will be supplied only at one point of delivery and all electric service supplied will be measured through one meter. This schedule is not applicable for temporary, breakdown, standby, supplementary, resale or shared electric service.

Type of Service:

Single phase or three phase, 60 hertz, at one of MMED's standard service voltages (120/208, 120/240, 277/480) or other voltages as might be mutually agreeable.

Monthly Rate:

Customer Charge: $18.01 per month

Demand Charge: $11.74 per KW for each KW Billing Demand

Energy Charge: $0.0669 cents per KWH

Billing Demand:

Billing Demand shall be greater of:

(a) the maximum fifteen (15) minute peak demand (kW) measured during the billing month,

(b) sixty percent (60%) of the highest demand established in the preceding eleven (11) months, or

(c) twenty percent (20%) of customer's Contract Demand (kW).

Minimum Bill:

The minimum billing charge under the above rate shall be the established demand charge per the above criteria, energy, and customer charge or a customer charge plus a facilities investment charge of $1.00 per kVA of installed transformer capacity as requested by the customer, whichever is greater.

Power Factor:

This rate schedule is subject to a Power Factor Charge as defined in the customer's Energy Services Contract and /or this rate schedule.

Power/Fuel Cost Adjustment:

The above rates are subject to a Cost Adjustment (PCA) as specified in MMED's Rules and Regulations.

Payment:

Bills are due and payable when rendered and become delinquent on the 15th day after the date of issue. A penalty of ten (10%) percent may be added to all such bills.

Electric Rate Schedules
MADISONVILLE Municipal Utilities

Designation: Customer Service Choice – Rate Schedule GS-2SS

Availability:

In any area served by the MADISONVILLE Municipal Electric Department (MMED) electric system in accordance with MMED's terms and conditions for providing electric service.

Application:

To any large power customer for all electric power and energy requirements that exceeds 3,000 kW, and who shall contract for year round permanent service, and who shall provide satisfactory guarantees or contributions to construction to satisfy the expenditure necessary to provide the desired service. Each premises will be supplied only at one point of delivery and all electric service supplied will be measured through one meter. This schedule is not applicable for temporary, breakdown, standby, supplementary, resale or shared electric service.

Type of Service:

Three phase with secondary voltages of 120/240, 120/208, 277/480; or primary voltages of 2,400/4,160, 7,200/12,470.

Monthly Rate:

Customer Charge:	$109.00 per month	
Demand Charge		
	On-Peak:	$11.74 per kW
	Off-Peak:	$0.94 per kW (for each kW in excess of the on-peak kW)
Energy Charge		
	All kWh	$0.0666 per kWh

Service Measurement Periods:

The rating periods applicable to the on-peak and off-peak demand charges above shall be as follows:

On-Peak Period:	8:00 a.m. to 10 p.m., Central Standard Time (CST), year round.
Off-Peak Period:	All hours Monday through Friday not included above plus all hours Saturday and Sunday.

Billing Demand:

Billing Demand shall be greater of:

(a) the maximum fifteen (15) minute peak demand (kW) measured during the billing month,

(b) sixty percent (60%) of the highest demand established in the preceding eleven (11) months, or

(c) twenty percent (20%) of customer's Contract Demand (kW).

Customer Dedicated Facility Charge:

Charges under this rate schedule shall include a facility charge equal to 1.5% of the total installed cost of dedicated electric distribution facilities required to provide service to the Customer. MMU will prepare specific cost estimates on a case-by-case basis to determine the Facilities Charge.

Minimum Bill:

The minimum billing charge under the above rate shall be the established on-peak demand charge per the above criteria, energy, and customer charge or a customer charge plus a facilities investment charge of $1.00 per kVA of installed transformer capacity as requested by the customer, whichever is greater.

Power Factor:

This rate schedule is subject to a Power Factor Charge as defined in the customer's Energy Services Contract and /or this rate schedule.

Power/Fuel Cost Adjustment:

The above rates are subject to a Power Cost Adjustment (PCA) as specified in MMED's Rules and Regulations.

Payment:

Bills are due and payable when rendered and become delinquent on the 15th day after the date of issue. A penalty of ten (10%) percent may be added to all such bills.

Electric Rate Schedules
MADISONVILLE Municipal Utilities

Designation: Large Industrial High Load Factor – Rate Schedule HLF

Availability:

In any area served by the MADISONVILLE Municipal Utilities (MMU) electric system in accordance with MMU's terms and conditions for providing electric service.

Application:

To any large power customer for all electric power and energy requirements that do not fall below 1,500 kW, and 60% load factor for more than one month within a 12-month period. In addition, the customer shall contract for year-round permanent service, and shall provide satisfactory guarantees or contribution to satisfy the expenditure necessary to provide the desired service. Each premises will be supplied only at one point of delivery and all electric service supplied will be measured through one meter. This schedule is not applicable for temporary, breakdown, standby, supplementary, resale or shared electric service.

Type of Service:

Three phase, 60 hertz, with secondary voltages of 120/208,120/240,277/480, primary voltages of 7200/12470, or other voltages as might be mutually agreeable.

Monthly Rate:

Customer Charge:	$549.24 per month
Demand Charge	$11.94 per kW for each kW Billing Demand Energy
Charge	$0.06132 cents per KWH

Billing Demand:

Billing Demand shall be greater of:

(a) the maximum fifteen (15) minute peak demand (kW) measured during the billing month,

(b) sixty percent (60%) of the highest demand established in the preceding eleven (11) months, or

(c) twenty percent (20%) of customer's Contract Demand (kW).

Minimum Bill:

The minimum billing charge under the above rate shall be the established demand charge per the above criteria, energy, and customer charge or a customer charge plus a facilities investment charge of $1.00 per kVA of installed transformer capacity as requested by the customer, whichever is greater.

Power Factor:

This rate schedule is subject to a Power Factor Charge as defined in the customer's Energy Services Contract and /or this rate schedule.

Fuel Cost Adjustment and Power Cost Adjustments:

The above rates are subject to a Fuel Adjustment Cost (FAC) and/or Power Cost Adjustment (PCA) as specified in MMU's Rules and Regulations.

Payment:

Bills are due and payable when rendered and become delinquent on the 15th day after the date of issue. A penalty of ten (10%) percent may be added to all such bills.

Electric Rate Schedules
MADISONVILLE Municipal Utilities

Designation: Large Industrial High Consumption – Rate Schedule GS2GE

Availability:

In any area served by the MADISONVILLE Municipal Utilities (MMU) electric system in accordance with MMU's terms and conditions for providing electric service.

Application:

To any large power customer for all electric power and energy requirements that do not fall below 4,000 kW average within a 12-month period and a 60% load factor. In addition, the customer shall contract for year-round permanent service, and shall provide satisfactory guarantees or contribution to satisfy the expenditure necessary to provide the desired service. Each premises will be supplied only at one point of delivery and all electric service supplied will be measured through one meter. This schedule is not applicable for temporary, breakdown, standby, supplementary, resale or shared electric service.

Type of Service:

Three phase, 60 hertz, with secondary voltages of 120/208,120/240,277/480, primary voltages of 7200/12470, or other voltages as might be mutually agreeable.

Monthly Rate:

Customer Charge:	$2,587.50 per month
Demand Charge	$16.909 per kW for each kW Billing Demand Energy
Charge	$0.025975 cents per KWH

Billing Demand:

Billing Demand shall be greater of:

(a) the maximum fifteen (15) minute peak demand (kW) measured during the billing month,

(b) sixty percent (60%) of the highest demand established in the preceding eleven (11) months, or

(c) twenty percent (20%) of customer's Contract Demand (kW).

Minimum Bill:

The minimum billing charge under the above rate shall be the established demand charge per the above criteria, energy, and customer charge or a customer charge plus a facilities investment charge of $1.00 per kVA of installed transformer capacity as requested by the customer, whichever is greater.

Power Factor:

This rate schedule is subject to a Power Factor Charge as defined in the customer's Energy Services Contract and /or this rate schedule.

Fuel Cost Adjustment and Power Cost Adjustments:

The above rates are subject to a Fuel Adjustment Cost (FAC) and/or Power Cost Adjustment (PCA) as specified in MMU's Rules and Regulations.

Payment:

Bills are due and payable when rendered and become delinquent on the 15th day after the date of issue. A penalty of ten (10%) percent may be added to all such bills.

Electric Rate Schedules
MADISONVILLE Municipal Utilities

Power/Fuel Cost Adjustment

All MMED rates are subject to a Power Cost Adjustment (PCA) that reflects MMED's actual cost of power. The PCA is expressed as dollars per kWh and is multiplied by the energy (kWh) sold during each billing period to each customer. The PCA is designed to be calculated quarterly based on actual power costs and energy sales for the applicable 3-month period. The following formula illustrates the calculation of the PCA:
PCA = A/B – Base Review, where:
PCA = The cost adjustment expressed as dollars per kWh to be multiplied by the energy (kWh) sold during each billing period to customers on rates subject to the PCA.
A = Actual power cost for the applicable 3-month period.
B = Actual energy sales from rates subject to the PCA for the applicable 3-month period.
Base Rate = The Base Rate is the base power cost, inclusive of SEPA power cost, expressed as dollars per kWh, included in the base rates for all retail customers.

POWER FACTOR

MMED will apply the following conditions to rate schedules that are subject to power factor requirements.

(a) The reference in this section to "power factor" or "pf" is in accordance with the accepted technical meaning of this term.

(b) The City expects the customer's electrical system to be at or near unity power factor. However, the City will permit the customer's system during normal operation, to have a power factor not measured at Customer's maximum demand during the billing period, the City reserves the right to require the customer to furnish, at his/her own expense, suitable corrective equipment to maintain a power factor of 90% or higher. At the City's option, in lieu of the customer providing the above corrective equipment, the City may add an adjustment to the maximum measured kW load for billing purposes each month when the power factor is less than 90%, in accordance with the following formula:

$$\text{Billing Demand (adjusted)} = \frac{\text{Maximum Measured Demand (kW)} \times 90\%}{\text{Measured Power Factor (\%)}}$$

(c) The City reserves the right to install a kVA meter or metering equipment of a type whereby power factor can be determined for use in the above formula.

(d) In the event, the power factor requirements of the City's supplier of power and energy is revised, this paragraph will be modified to conform to the requirements of the City's supplier.

Electric Rate Schedules
MADISONVILLE Municipal Utilities

Designation: Temporary Service Rider

Availability:

In any area served by the MADISONVILLE Municipal Electric Department (MMED) electric system in accordance with MMED's terms and conditions for electric service.

Application:

To General Service, Residential and General Service, Secondary schedules for service to carnivals, fairs, circuses, construction projects and other temporary or transient business.

All provisions of the applicable schedule remain effective subject only to the modifications and additional provisions prescribed by this rider.

Monthly Rate:

The applicable General Service, Secondary schedule, except minimum shall be not less than:

Single Phase Service - $21.74 per month
Three Phase Service - $32.61 per month

Power/Fuel Cost Adjustment:

The above rates are subject to a Power Cost Adjustment (PCA) as specified in MMED's Rules and Regulations.

Electric Rate Schedules
MADISONVILLE Municipal Utilities

Designation: Net Energy Metering Rate (NEM)

Availability:

This rate is available to any permanent residential, general service, or industrial NEM customers in any area served by the MADISONVILLE Municipal Electric Department (MMED) electric system in accordance with MMED's terms and conditions for providing electric service. NEM is available only by request, and on a first-come, first- served basis up to a cumulative capacity of one percent (1%) of the MMED's single hour peak load during the previous year. An eligible NEM customer shall mean a retail electric NEM customer of the MMED with a generating facility that:

1. Generates electricity using solar energy or wind energy only;
2. Has a rated capacity of not greater than thirty (30) kilowatts;
3. Is located on the NEM customer's premises;
4. Is owned and operated by the NEM customer;
5. Is connected in parallel with the MMED's electric distribution system; and
6. Has the primary purpose of supplying all or part of the NEM customer's own electricity requirements.

The term "NEM customer" hereinafter shall refer to any NEM customer requesting or receiving NEM services in accordance with MMED's terms and condition for providing electric service.
At its sole discretion MMED may discontinue this NEM schedule and application with ninety (90) days written notification. MMED shall not be liable for any expense incurred as a result of the determination to discontinue this schedule.

Metering:

MMED requires any NEM customer, who wishes to install a generator that meets the criteria above or has been approved by MMED for the NEM ordinance, to allow the installation of meter(s) for the sole purpose of separately monitoring (i) the flow of power and energy, as applicable, from MMED to the NEM customer and (ii) the flow of power and energy, as applicable, from the NEM customer to MMED. The meter(s) will be owned and installed by MMED in accordance with MMED's Policies and Procedures for Electric MMED Service.

Measurement of Energy

Energy supplied by MMED to the NEM customer shall be determined by appropriate meter(s) located at one delivery point. Such meter(s) shall be capable of determining energy associated with MMED providing energy to the NEM customer under the rate

schedule appropriate for such deliveries. The energy delivered by the NEM customer to MMED shall be metered separately for billing purposes.

Monthly Charges for Delivery from MMED to the NEM customer:

Charges for energy delivered by MMED to the NEM customer shall be determined according to the rate schedule appropriate or applicable for the NEM customer per MMED's standard rate classifications.

In addition to MMED's standard rates, a second meter charge will be assessed in the amount stated below. This meter charge will be associated with the meter measuring NEM customer deliveries to MMED.

Customer Meter Charge: $50.00 per month

Monthly Credits for Electrical Energy Generated and Delivered by NEM Customer to MMED:

An energy credit rate from MMED to the NEM customer shall be applied to any electrical energy generated and delivered by the NEM customer. The NEM customer credit rate shall be equal to MMED's average per kWh wholesale power costs as determined by summing (i) MMED's per kWh Power Cost Adjustment (PCA) shown in MMED's Policies and Procedures plus (ii) the wholesale power cost in MMED's base rates of $ 0.07610 per kWh, as updated from time to time. The monthly credit will be determined by multiplying the per kWh energy credit rate by the total monthly energy in kWhs (adjusted for losses) generated and delivered by the NEM customer.

Monthly Bills and Credits:

For purposes of determining monthly bills for NEM customers, the monthly credit for energy generated and delivered by the NEM customer will be subtracted from charges for all energy delivered (NEM and MMED) to the NEM customer. If the net kWh amount is greater than zero, then the NEM customer will be billed for the net amount. If the net kWh amount is less than zero, then MMED will credit the charges to the NEM customer's bill on a monthly basis in the amount of the total credit. MMED will read both NEM customer meters and calculate the appropriate billing for each meter on a monthly basis. Any credits will be carried forward to future billing cycles, for the life of account. Under net metering MMED will not return money to the customer for such generation.

Application and Approval Process

The NEM customer shall submit an Application and fee for Interconnection and Net Metering (Application) and receive approval from MMED prior to connecting the generator facility to MMED's system. Applications will be submitted by the NEM

customer and reviewed and processed by MMED. Application must contain approved drawings and plans and be approved by a Kentucky licensed electrical engineer prior to MMED approval. In the event customer needs MMED to provide those services MMED will be reimbursed all costs associated with approval and design of site plans and engineering services associated with the NEM application process. MMED may reject an Application for violations of any code, standard, or regulation related to reliability or safety; however, the MMED will work with the NEM customer to resolve those issues to the extent practicable. NEM customers may contact the MMED to check on status of an application or with questions prior to submitting an Application.

A Level 1 (solar) Application shall be used if the generating facility is inverter-based and is certified by a nationally recognized testing laboratory to meet the requirements of Underwriters Laboratories Standard 1741 "Inverters, Converters, Controllers and Interconnection System Equipment for Use With Distributed Energy Resources" (UL 1741).

A Level 2 (wind) Application is required under any of the following conditions:

1. The generating facility is not inverter based;
2. The generating facility uses equipment that is not certified by a nationally recognized testing laboratory to meet the requirements of UL 1741 : or
3. The generating facility does not meet one or more of the additional conditions under Level 1.

Application forms and information regarding the NEM program can be obtained by contacting MMED

Application Fee:

Upon submission of the required application to MMED customer shall pay a non-refundable application fee of $150.00.

Terms and Conditions:

To interconnect to the MMED's distribution system, the NEM customer's generating facility shall comply with the following terms and conditions:

1. The MMED shall provide the NEM customer metering services through a standard kilowatt-hour metering system capable of separately measuring (i) the power and energy, as applicable for billing purposes, from MMED to the NEM customer and (ii) the energy delivered by the NEM customer to MMED. If the NEM customer requests any additional meter or meters or distribution upgrades, such installations shall be at the NEM customer's expense.

2. The NEM customer shall install, operate, and maintain, at NEM customer's sole cost and expense, any control, protective, or other equipment on the NEM customer's system required by the MMED's technical interconnection requirements based on IEEE 1547, the NEC, accredited testing laboratories such

as Underwriters Laboratories, and the manufacturer's suggested practices for safe, efficient and reliable operation of the generating facility in parallel with MMED's electric system. NEM customer shall bear full responsibility for the installation, maintenance and safe operation of the generating facility. Upon reasonable request from the MMED, the NEM customer shall fully demonstrate generating facility compliance. Should NEM customer request assistance related to the generation system performance or safety those cost will be at the customer's expense at the current MMED hourly rate as stated in MMED's rate ordinance.

3. The generating facility shall comply with, and the NEM customer shall represent and warrant its compliance with: (a) any applicable safety and power quality standards established by IEEE and accredited testing laboratories such as Underwriters Laboratories; (b) the NEC as may be revised from time to time; (c) MMED's rules, regulations, and MMED's Service Regulations as contained in MMED's Retail Electric Ordinance as may be revised from time to time (d) all other applicable local, state, and federal codes and laws, as the same may be in effect from time to time. Where required by law or regulation, NEM customer shall pass an electrical inspection of the generating facility by a local authority having jurisdiction over the installation.

4. Any changes or additions to the MMED's system required to accommodate the generating facility shall be considered excess facilities. NEM customer shall agree to pay MMED for actual costs incurred for all such excess facilities prior to construction.

5. NEM customer shall operate the generating facility in such a manner as not to cause undue fluctuations in voltage, intermittent load characteristics or otherwise interfere with the operation of MMED's electric system. At all times when the generating facility is being operated in parallel with MMED's electric system, NEM customer shall so operate the generating facility in such a manner that no adverse impacts will be produced thereby to the service quality rendered by MMED to any of its other NEM customers or to any electric system interconnected with MMED's electric system. NEM customer shall agree that the interconnection and operation of the generating facility is secondary to, and shall not interfere with, MMED's ability to meet its primary responsibility of furnishing reasonably adequate service to its NEM customers.

6. NEM customer shall be responsible for protecting, at NEM customer's sole cost and expense, the generating facility from any condition or disturbance on MMED's electric system, including, but not limited to, voltage sags or swells, system faults, outages, loss of a single phase of supply, equipment failures, and lightning or switching surges. Should such condition or disturbance be determined to be NEM equipment, NEM customer shall reimburse MMED for any and all expenses incurred to determine such disturbance.

7. After initial installation, MMED shall have the right to inspect and/or witness commissioning tests, as specified in the Level 1 or Level 2 Application and approval process. Following the initial testing and inspection of the generating

facility and upon reasonable advance notice to NEM customer, MMED shall have access at reasonable times to the generating facility to perform reasonable on-site inspections to verify that the installation, maintenance, and operation of the generating facility comply with the requirements of this ordinance.

8. For Level 1 and 2 generating facilities, where required by the MMED, an eligible NEM customer shall furnish and install on the NEM customer's side of the point of common coupling a safety disconnect switch which shall be capable of fully disconnecting the NEM customer's energy generating equipment from MMED's electric service under the full rated conditions of the NEM customer's generating facility. The external disconnect switch (EDS) location will be determined by MMED and shall be located adjacent to MMED's meters. If the location of the EDS is not at the customer's master meter, it shall be noted by placing a permanent sticker on the master meter indicating the EDS location. The EDS shall be of the visible break type in a metal enclosure which can be secured by a padlock. If the EDS is not located directly adjacent to the master meter but at the NEM generator meter, the NEM customer shall be responsible for ensuring that the location of the EDS is properly and legibly identified for so long as the generating facility is operational. The disconnect switch shall be promptly accessible to MMED personnel at all times. In the event MMED disconnects customer generation MMED will not be held liable for any damages or revenue loss as a result from such disconnect.

9. MMED shall have the right and authority at MMED's sole discretion to isolate the generating facility or require the NEM customer to discontinue operation of the generating facility if MMED believes that: (a) continued interconnection and parallel operation of the generating facility with MMED's electric system creates or contributes (or may create or contribute) to a system emergency on either MMED's or NEM customer's electric system; (b) the generating facility is not in compliance with the requirements of this ordinance, and the noncompliance adversely affects the safety, reliability, or power quality of MMED's electric system; or (c) the generating facility interferes with the operation of MMED's electric system. In non-emergency situations, MMED shall give NEM customer notice of noncompliance including a description of the specific noncompliance condition and allow NEM customer a reasonable time to cure the noncompliance prior to isolating the generating facilities. In emergency situations, when the MMED is unable to immediately isolate or cause the NEM customer to isolate only the generating facility, the MMED may isolate the NEM customer's entire facility. Any cost incurred by MMED as a result of the improper performance of NEM equipment or operation shall be promptly reimbursed by NEM customer. Any such unpaid expense shall be grounds for service termination at any of NEM customer's facilities.

10. NEM customer shall agree that, without the prior written permission from MMED, no changes shall be made to the generating facility as initially approved. Increases in generating facility capacity will require a new "Application for Interconnection and Net Metering" which will be evaluated on the same basis as any other new application. Repair and replacement of existing generating facility

components with like components that meet UL 1741 certification requirements for Level 1 or 2 facilities and not resulting in increases in generating facility capacity is allowed without written approval. However, MMED must be notified to inspect the repaired component/operation prior to continued operation. Failure to do so will result in termination of service.

11. To the extent permitted by law, the NEM customer shall protect, indemnify, and hold harmless the MMED and its directors, officers, employees, agents, representatives and contractors against and from all loss, claims, actions or suits, including costs and attorneys fees, for or on account of any injury or death of persons or damage to property caused by the NEM customer or the NEM customer's employees, agents, representatives and contractors in tampering with, repairing, maintaining, or operating the NEM customer's generating facility or any related equipment or any facilities owned by the MMED.

12. The NEM customer shall maintain general liability insurance coverage at all times through a standard homeowner's, commercial, or other policy) for both Level 1 and Level 2 generating facilities. NEM customer shall, upon request, provide MMED with proof of such insurance at the time that application is made for net metering and provide a certificate of liability insurance on an annual basis in accordance with City requirements. Such certificate shall name the City of Madisonville as "Certificate Holder". All of the policies of insurance so required to be purchased and maintained for the certificates or other evidence thereof shall contain a provision or endorsement that the coverage afforded will not be cancelled, materially changed or renewal refused until at least thirty (30) days' prior written notice has been given to the MMED by certified mail. All such insurance shall remain in effect until written notice and verification that NEM facilities are rendered inoperative and completely disconnected from MMED's utility system. The limits of liability for the insurance required above shall provide coverage for not less than the following amounts or greater amounts where required by Laws and/or Regulations:

<u>General Liability</u>

Commercial General Liability (each occurrence)	$1,000,000
General Aggregate	$1,000,000
Products – Comp/Op AGG	$1,000,000
Personal and Adv Injury	$1,000,000
Fire Damage (each occurrence)	$ 500,000
Medical Expense (any one person)	$ 100,000

<u>Excess Liability</u>

Umbrella Form (each occurrence)	$1,000,000
Aggregate	$1,000,000

If at any time it is determined that such insurance is invalid, MMED shall immediately disconnect NEM from the electric distribution system.

13. By entering into an Interconnection Agreement, or by inspection, if any, or by non-rejection, or by approval, or in any other way, MMED does not give any warranty, express or implied, as to the adequacy, safety, compliance with applicable codes or requirements, or as to any other characteristics, of the generating facility equipment, controls, and protective relays and equipment.

14. A NEM customer's generating facility is transferable to other persons or service locations only after written notification to the MMED has been made and verification that the installation is in strict compliance with this ordinance. Upon written notification that an approved generating facility is being transferred to another person, NEM customer, or location, the MMED will verify that the installation is in compliance with this ordinance and provide written notification to the NEM customer(s) within 20 business days. If the installation is no longer in compliance with this ordinance, the MMED will render it inoperative and notify the NEM customer in writing and identify what must be done to place the facility in compliance.

Payment:

Bills are due and payable when rendered and become delinquent on the 15th day after the date of issue. A penalty of ten (10%) percent may be added to all such bills. Applicable credit payments by MMED to the NEM customer will be included in each cycle billing. Under net metering MMED will not return money to the customer for such generation.

Diagrams

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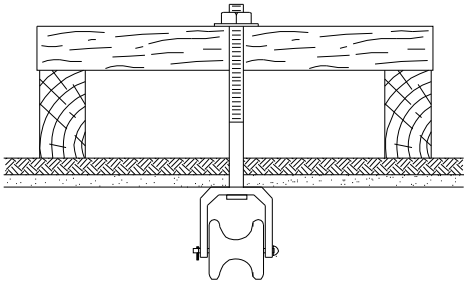
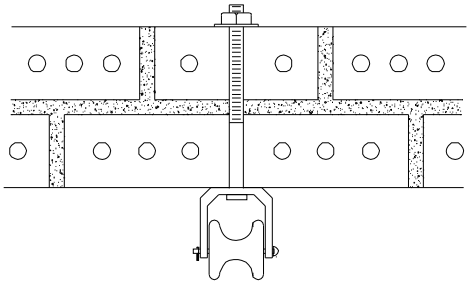
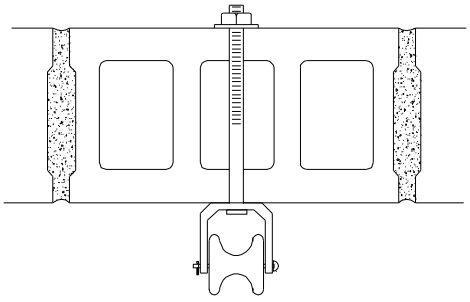
SERVICE ATTACHMENT TO CUSTOMER'S BUILDING



FOR SINGLE CONDUCTOR ATTACHMENT TO BRICK VENEER, STUCCO, PLASTER OR SHEET METAL WALLS OR 3 WIRE SERVICE CABLE ATTACHMENT TO ANY FRAME BUILDING, 5/8" MACHINE BOLT & CLEVIS INSTALLED BY CUSTOMER.



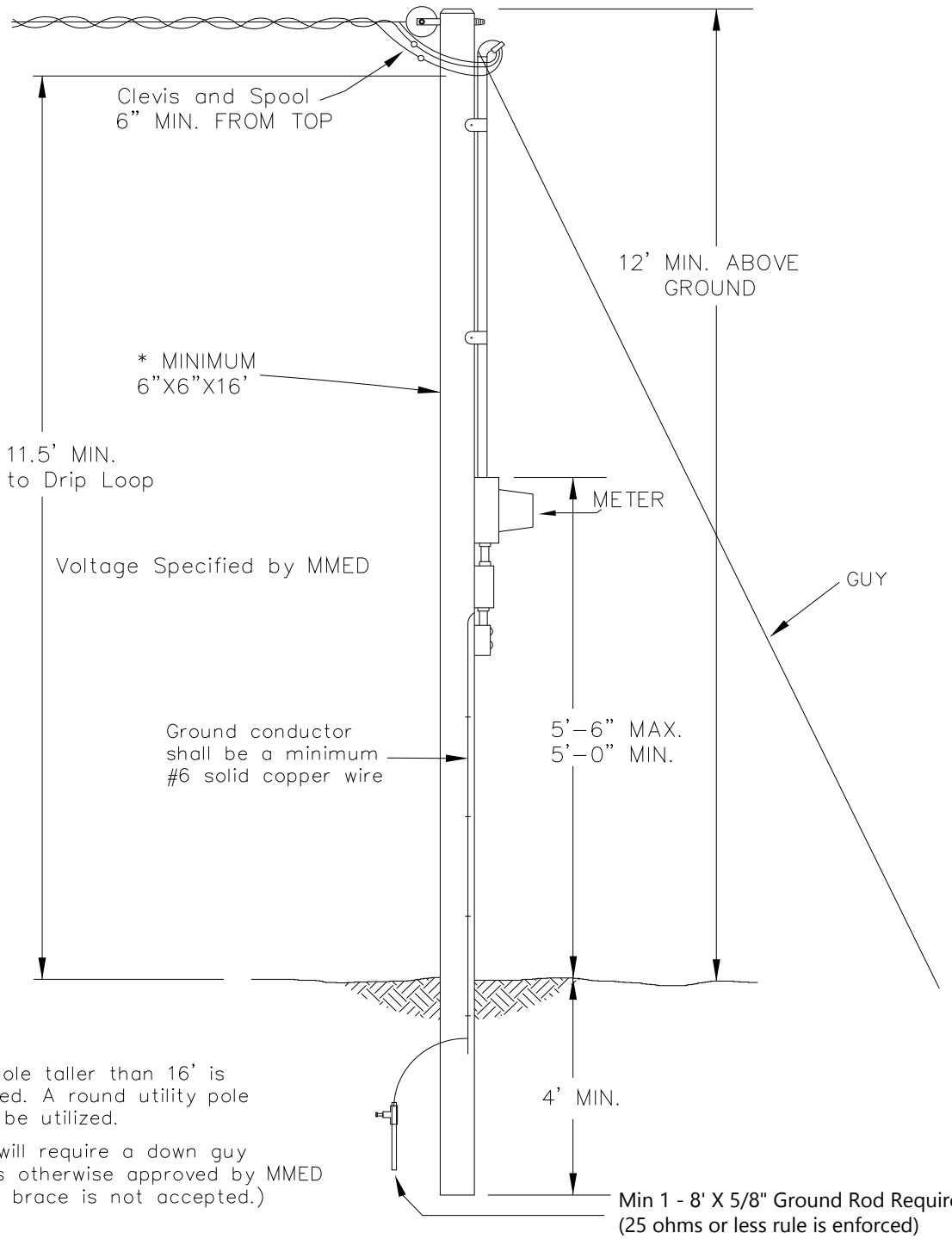
SOLID MASONRY, BRICK OR CEMENT. FOR 3 WIRE SERVICE CABLE DEADEND, 5/8" MACHINE BOLT & CLEVIS INSTALLED BY CUSTOMER.



CONCRETE BLOCK OR HOLLOW TILE, FOR SINGLE CONDUCTOR OR 3 WIRE SERVICE CABLE DEADEND, 5/8" MACHINE BOLT & CLEVIS INSTALLED BY CUSTOMER.

SERVICE WIRES SHALL NOT BE ATTACHED TO FIRE WALLS, PARAPET WALLS OR CHIMNEYS.

Madisonville Municipal Electric Department	SERVICE ATTACHMENT TO CUSTOMER'S BUILDING (REFER TO MMED RULES AND REGULATIONS FOR ADDITIONAL REQUIREMENTS)	DATE 2-6-02 FILE NAME FIG2.DWG



* 1. If a pole taller than 16' is required. A round utility pole must be utilized.

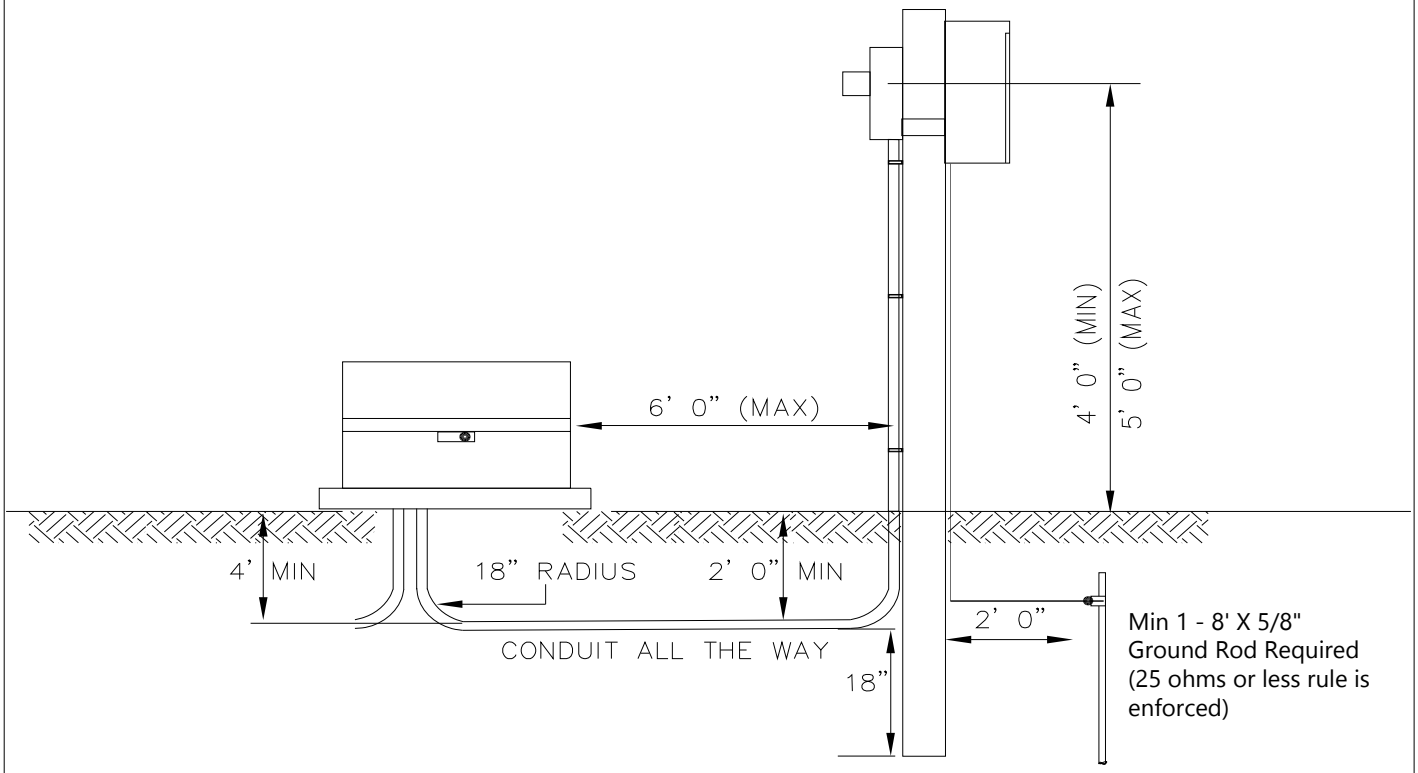
2. Pole will require a down guy unless otherwise approved by MMED (Push brace is not accepted.)

Madisonville Municipal Electric Department	METER SETTINGS FOR TEMPORARY SERVICE – O.H. (REFER TO MMED RULES AND REGULATIONS FOR ADDITIONAL REQUIREMENTS)	DATE 2-6-02 FILE NAME FIG7.DWG

NOTIFY MMED FOR METER INSTALLATION AND SERVICE CONNECTION

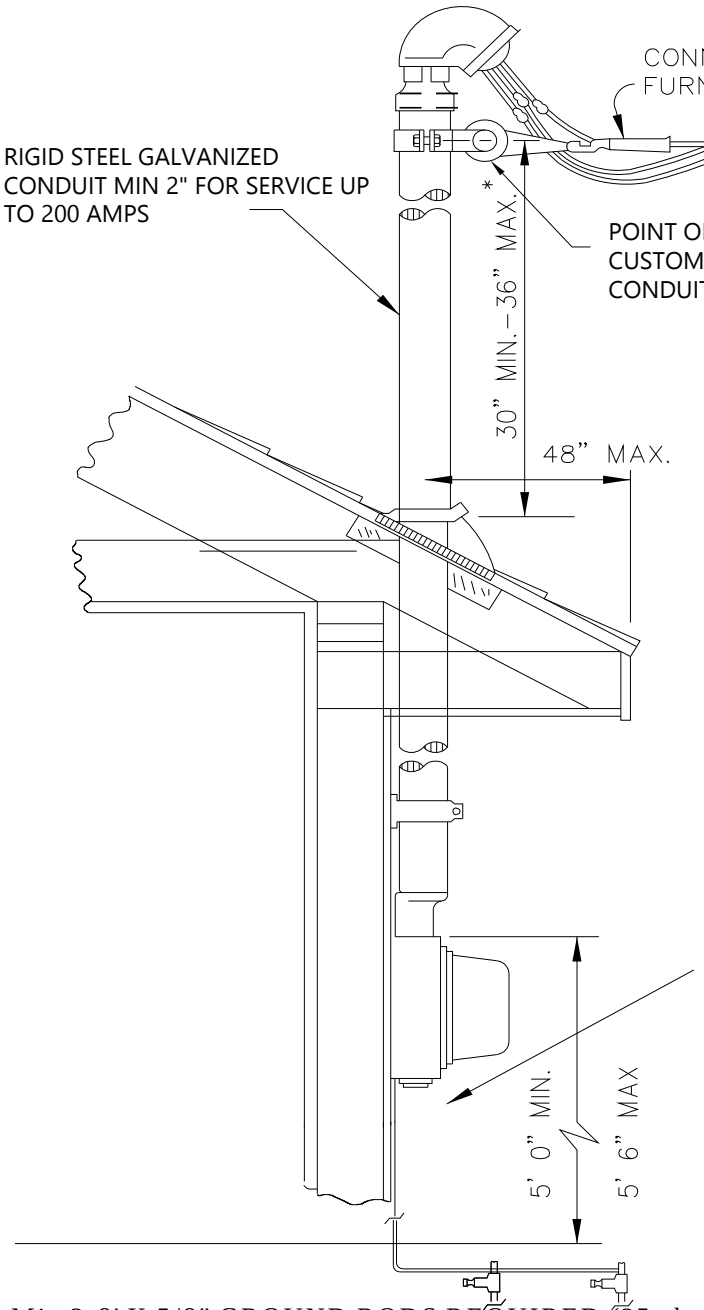
THE CUSTOMER WILL FURNISH AND INSTALL ALL MATERIAL INCLUDING SERVICE SUPPORT, THE SWITCH–FUSE ASSEMBLY AND GROUNDED CONNECTION DETAIL BELOW.

SPLICED TIMBERS ARE NOT ACCEPTABLE. ONE 4"X4"



Ground conductor shall be a minimum #6 solid copper wire for 200 amp or less and #4 solid copper wire for 400 amp. Conduit size shall be determined by MMED.

Madisonvile Municipal Electric Department	TEMPORARY UNDERGROUND SERVICE INSTALLATION (REFER TO MMED RULES AND REGULATIONS FOR ADDITIONAL REQUIREMENTS)	DATE 2–6–02 FILE NAME FIG7A.DWG



* FOR SERVICES WITH MAIN BREAKERS OF GREATER THAN 400 AMP OR IF RISER NEEDS TO BE EXTENDED FOR ADDITIONAL CLEARANCE CONTACT MMED FOR SERVICE MAST CONFIGURATION.

GROUNDING ELECTRODE CONDUCTOR SHALL BE UNSPLICED AND HAVE 6" EXPOSED FOR INTERCONNECTION OF OTHER SYSTEMS. ELECTRICAL NON–METALLIC, OR METALLIC SHALL BE USED FOR PROTECTION. (IF METALLIC CONDUIT, BOND BOTH ENDS)

Ground conductor shall be a minimum #6 solid copper wire for 200 amp or less and #4 solid copper wire for 400 amp. Conduit size shall be determined by MMED.

Min 2-8' X 5/8" GROUND RODS REQUIRED (25 ohms or Less)spaced min 6' apart

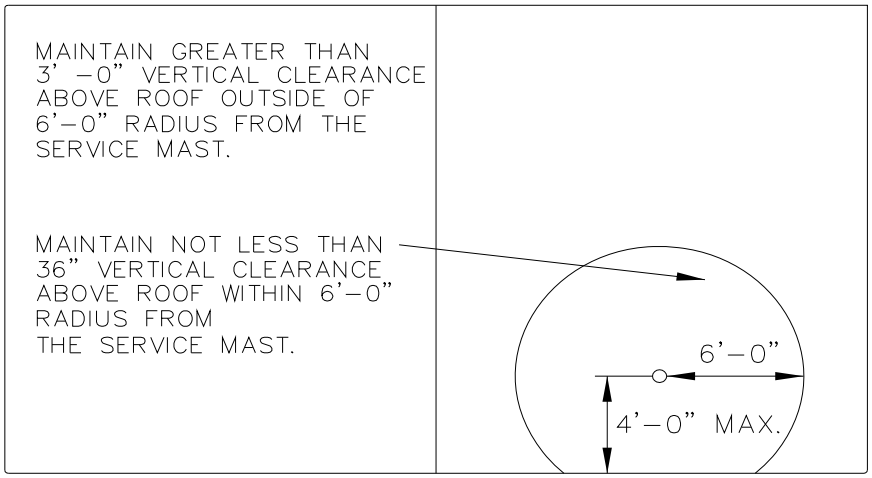
Madisonville Municipal Electric Department

TYPICAL THROUGH ROOF RISER DETAIL

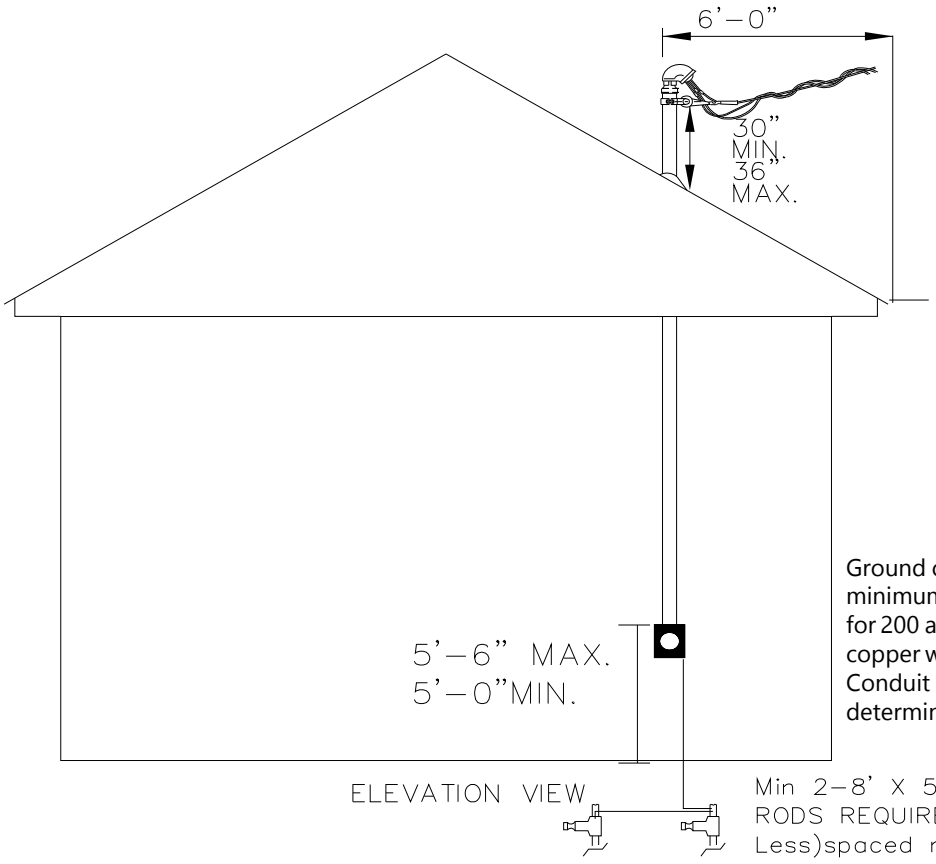
(REFER TO MMED RULES AND REGULATIONS FOR ADDITIONAL REQUIREMENTS)

DATE 2–6–02

FILE NAME FIG8.DWG



PLAN VIEW



ELEVATION VIEW

Ground conductor shall be a minimum #6 solid copper wire for 200 amp or less and #4 solid copper wire for 400 amp. Conduit size shall be determined by MMED.

Min 2–8' X 5/8" GROUND RODS REQUIRED (25 ohms or Less)spaced min 6' apart

Madisonville Municipal Electric Department

CLEARANCES OF SERVICE DROP TERMINATING ON SUPPORT MAST (REFER TO MMED RULES AND REGULATIONS FOR ADDITIONAL REQUIREMENTS)

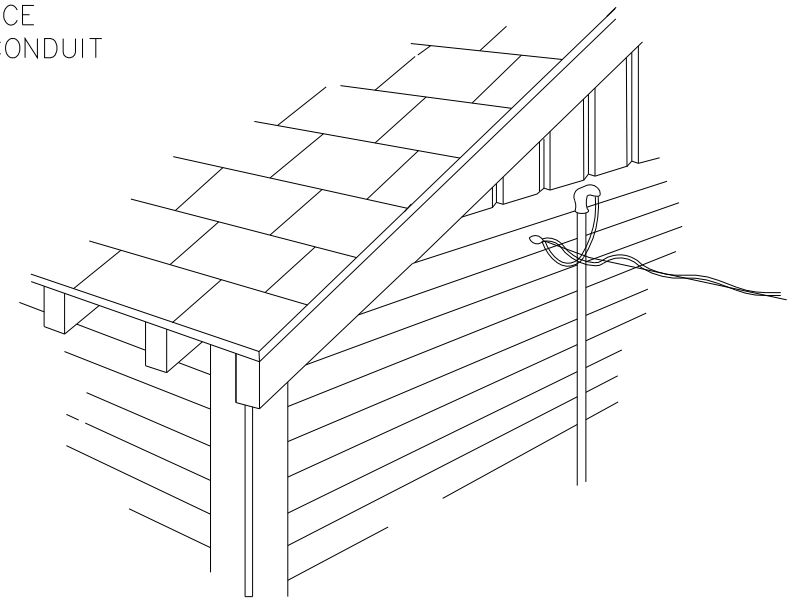
DATE 2–6–02

FILE NAME FIG234–2.DWG

SERVICE CONDUCTORS SHALL BE LOCATED ABOVE THE POINT OF ATTACHMENT OF THE SERVICE DROP CONDUCTORS. MINIMUM OF 6" & MAXIMUM OF 12" SPACING BELOW THE SERVICE HEAD AND 6" FROM THE CONDUIT

SERVICE HEAD SHALL CLEAR SOFFIT/OVERHANG BY AT LEAST 18".

REFER TO DRAWING FIG.2 FOR ATTACHMENT SPECIFICATIONS



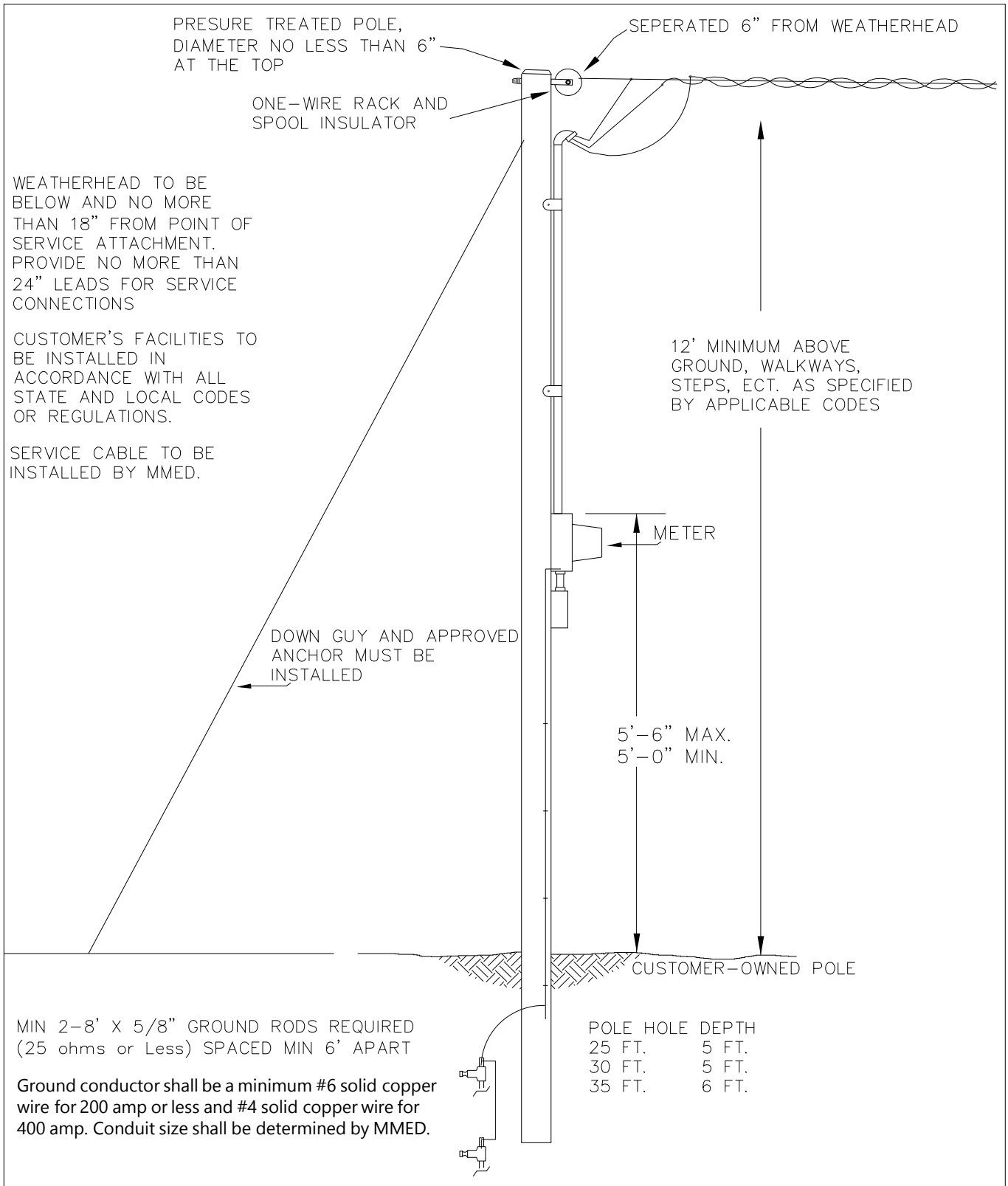
Madisonville Municipal Electric Department

SUGGESTED LOCATIONS FOR SERVICE ATTACHMENTS ON CUSTOMER'S BUILDING

(REFER TO MMED RULES AND REGULATIONS FOR ADDITIONAL REQUIREMENTS)

DATE 2-6-02

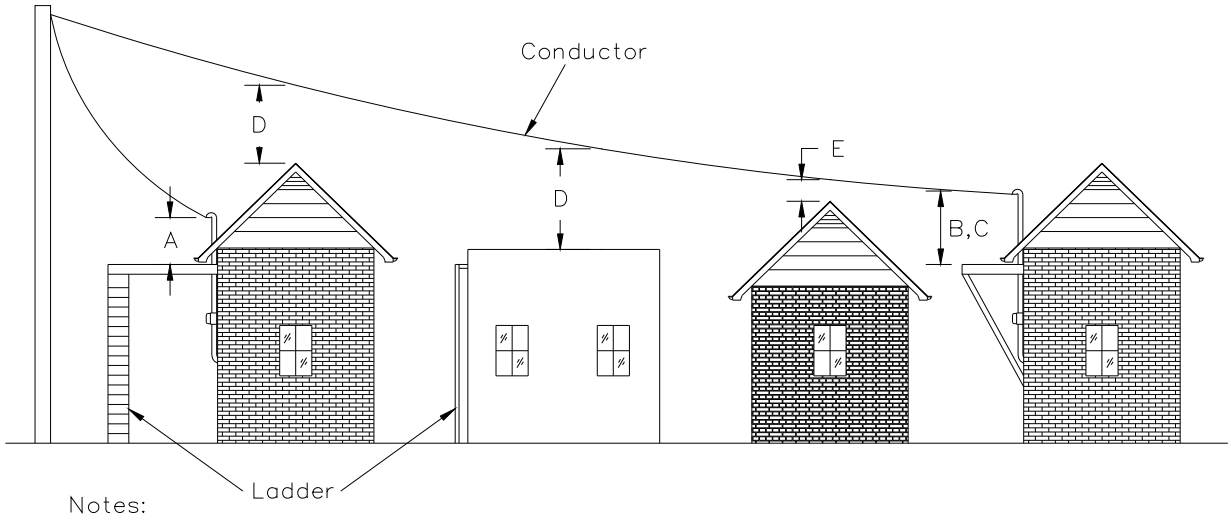
FILE NAME FIG9.DWG



Madisonville Municipal Electric Department	INDIVIDUAL MOBILE HOME (REFER TO MMED RULES AND REGULATIONS FOR ADDITIONAL REQUIREMENTS)	DATE 2-6-02 FILE NAME IND MOBILE HOME

- Attached to Building
  - Readily Accessible
    - Any Voltage (A)
      - Triplex — 8'
      - Quad — 8'
      - Open Wire – 8'
  - Not Accessible
    - 120/208 120/240 (B)
      - Triplex — 3'
      - Quad — 3'
      - Open Wire – 3'
    - 277/480 (C)
      - Quad — 8'
      - Open Wire – 8'

- Not Attached to Building
  - Readily Accessible
    - Any Voltage (D)
      - Triplex — 11.0'
      - Open Wire – 11.5'
  - Not Accessible
    - Any Voltage (E)
      - Triplex — 3.5'
      - Open Wire – 5.5'



Notes:

Windows that are not designed to open makes the roof not accessible.

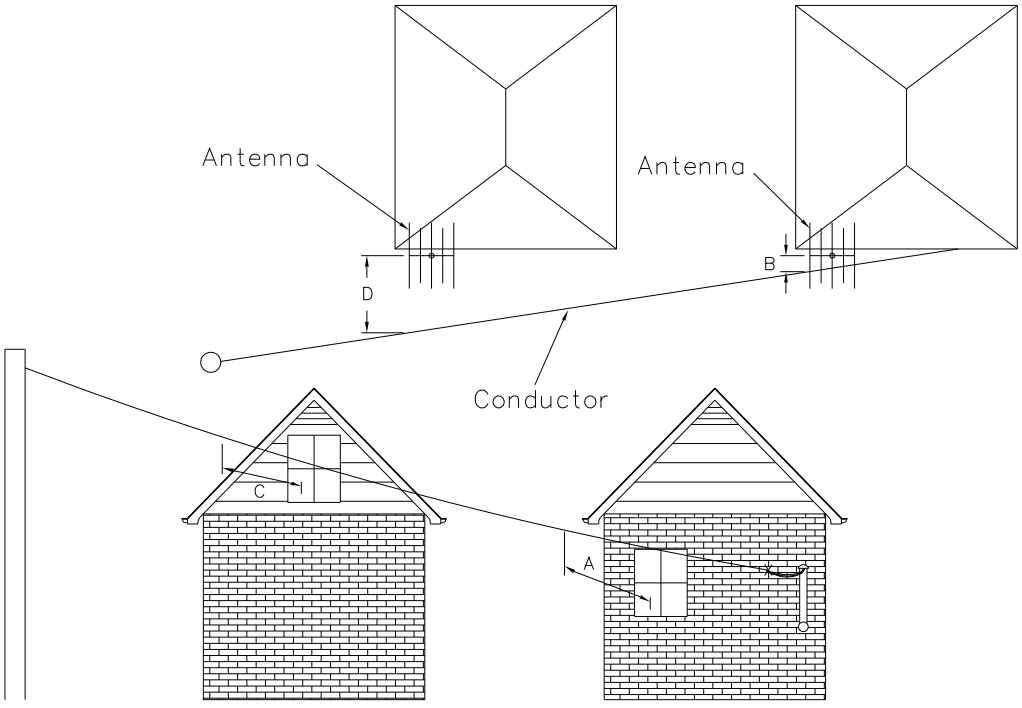
Clearances are the same for flat or sloped roofs.

(D) For added safety of the public, MMED does not allow conductors over metal roofs or mobile homes.

Madisonvile Municipal Electric Department	VERTICAL SERVICE CONDUCTOR CLEARANCE OVER ROOFS AND PROJECTIONS (REFER TO MMED RULES AND REGULATIONS FOR ADDITIONAL REQUIREMENTS)	DATE 2-6-02 FILE NAME FIG1.DWG

Attached to Building	Windows Doors	(A)	Triplex	3.0'
			Open Wire	3.0'
	Antenna	(B)	Triplex	3.5'
			Open Wire	5.5'
Not Attached to Building	Windows Doors	(C)	Triplex	5.0'
			Open Wire	5.5'
	Antenna	(D)	Triplex	3.5'
			Open Wire	5.5'

Window clearance does not apply if service is above the level of the window or if the window is not designed to open.

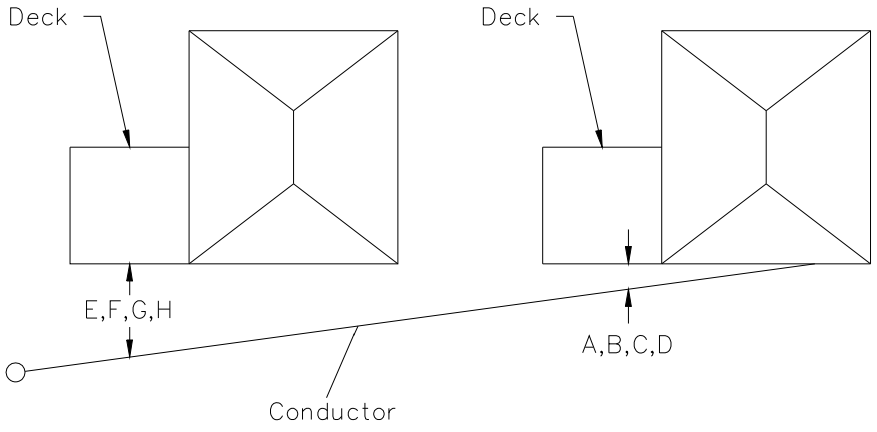


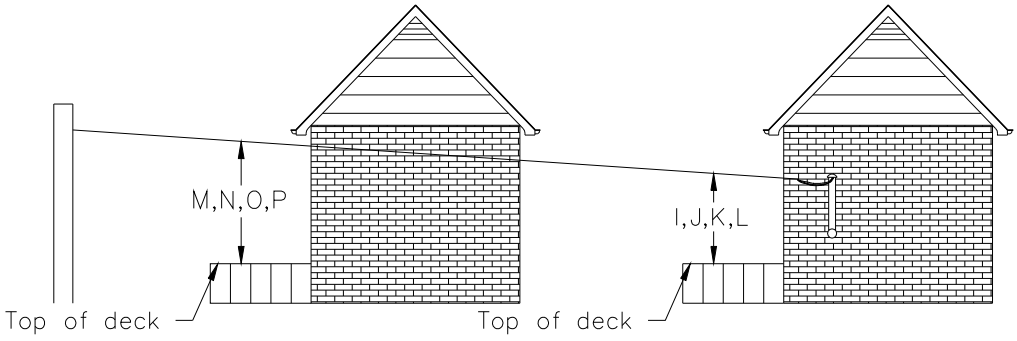
Madisonville Municipal Electric Department	HORIZONTAL SERVICE CONDUCTOR CLEARANCE FROM BUILDINGS AND ANTENNA (REFER TO MMED RULES AND REGULATIONS FOR ADDITIONAL REQUIREMENTS)	DATE 2-6-02 FILE NAME FIG1A.DWG

*Balconies, Decks or Railing

	Duplex Triplex Quad	Open Wire
Horizontal clearance – Attached to building – * not accessible	3' (A)	3.5' (B)
Horizontal clearance – Attached to building – * readily accessible	5' (C)	5.5' (D)
Horizontal clearance – Not attached to building – * not accessible	3' (E)	3.5' (F)
Horizontal clearance – Not attached to building – * readily accessible	5' (G)	5.5' (H)
Vertical clearance – Attached to building – * not accessible	3' (I)	11.5' (J)
Vertical clearance – Attached to building – * readily accessible	8' (K)	11.5' (L)
Vertical clearance – Not attached to building – * not accessible	3.5' (M)	10.5' (N)
Vertical clearance – Not attached to building – * readily accessible	11' (O)	11.5' (P)

Vertical clearance is from the highest point over balconies, deck or railing.
Horizontal clearance is from the nearest point of conductor to edge of structure or reaching distance. Horizontal clearance, that is not accessible to be the clearances permitted for walls and projections.





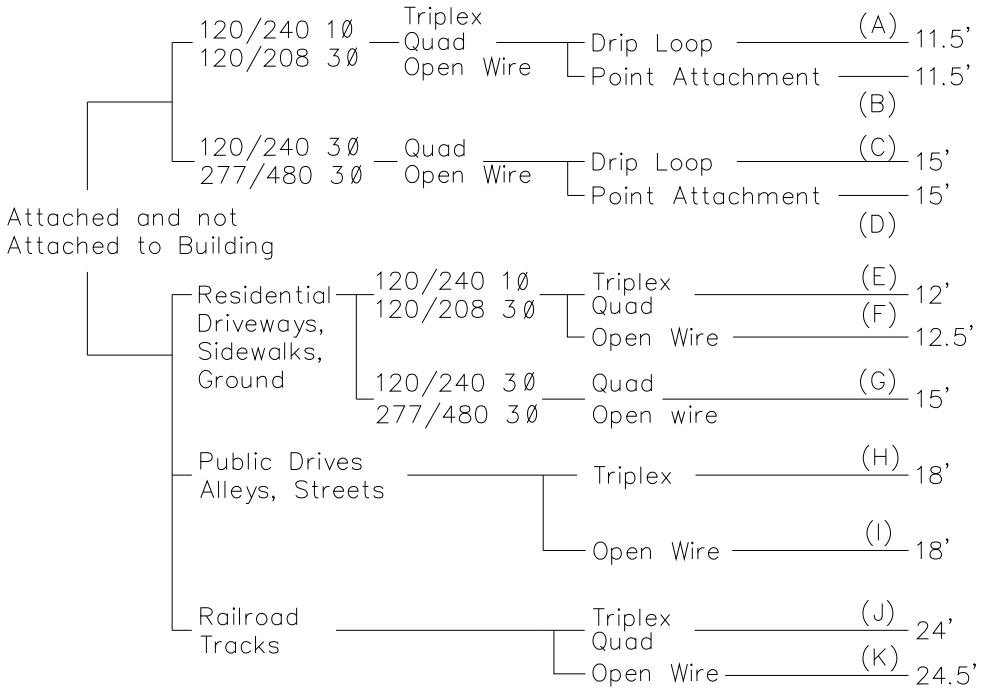
Madisonville Municipal Electric Department

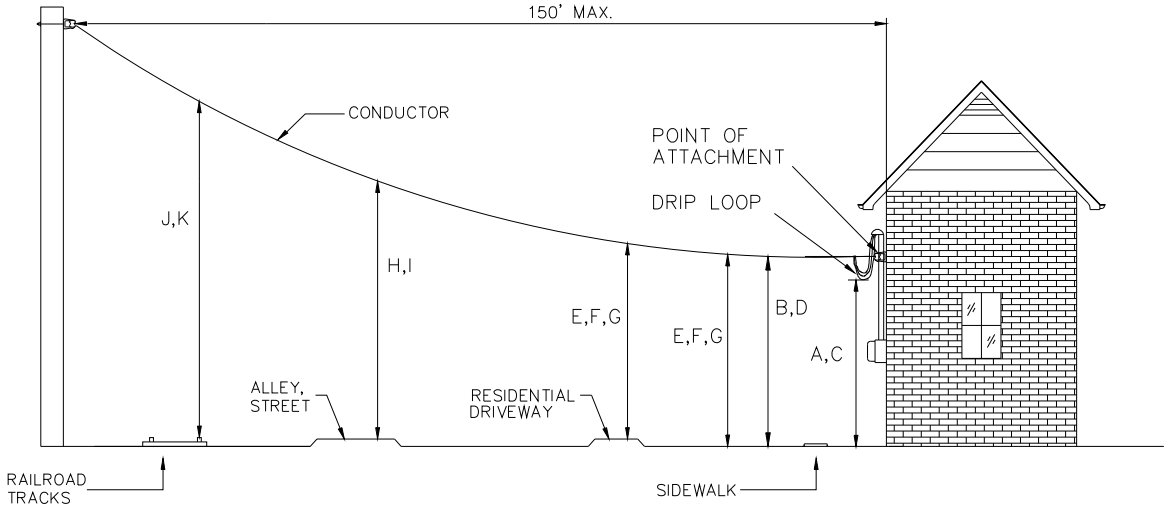
CLEARANCE OF SERVICE CONDUCTORS OVER DECKS & BALCONIES

(REFER TO MMED RULES AND REGULATIONS FOR ADDITIONAL REQUIREMENTS)

DATE 2-6-02

FILE NAME FIG24.DWG



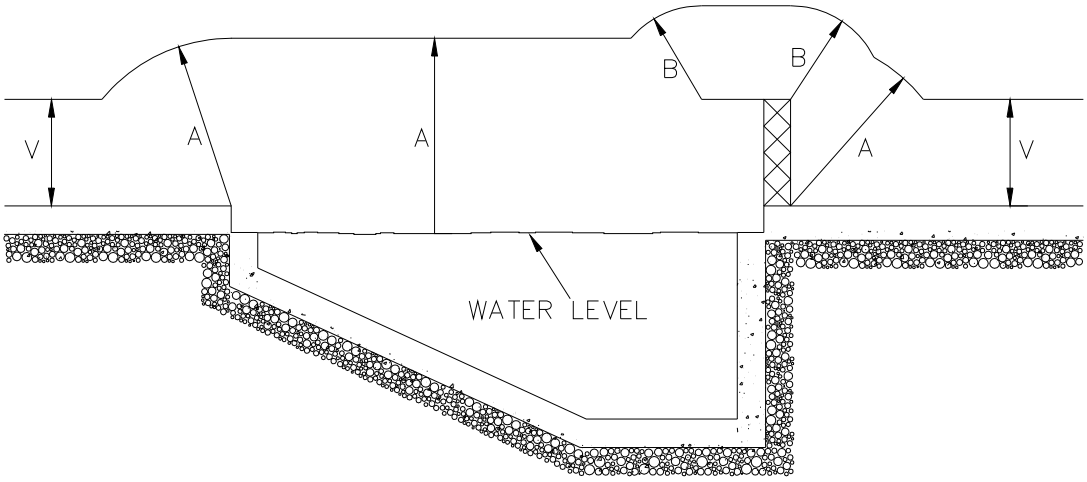


Madisonvile Municipal Electric Department	VERTICAL HEIGHT OF SERVICE CONDUCTORS AT DRIP LOOP AND POINT OF ATTACHMENT (REFER TO MMED RULES AND REGULATIONS FOR ADDITIONAL REQUIREMENTS)	DATE 2-6-02 FILE NAME FIG1B.DWG

	Pilot wire Messengers Guys Neutrals	Duplex Triplex Quad	Open wire (Secondary)	Open wire (Primary)
A. Clearance in any direction from the water level, edge of pool, base of diving platform, or anchored raft.	22.0'	22.5'	23.0'	25.0'
B. Clearance in any direction to the diving platform or tower.	14.0'	14.5'	15.0'	17.0'
V. Vertical clearance over adjacent land subject to pedestrians or restricted traffic only.	11.5'	12.0'	12.5'	16.0'

Service conductors must be in conduit and be a minimum of 5' from water.

Clearance reverts back to standard clearances over adjacent land when service drop is 10' or more horizontally from water edge.



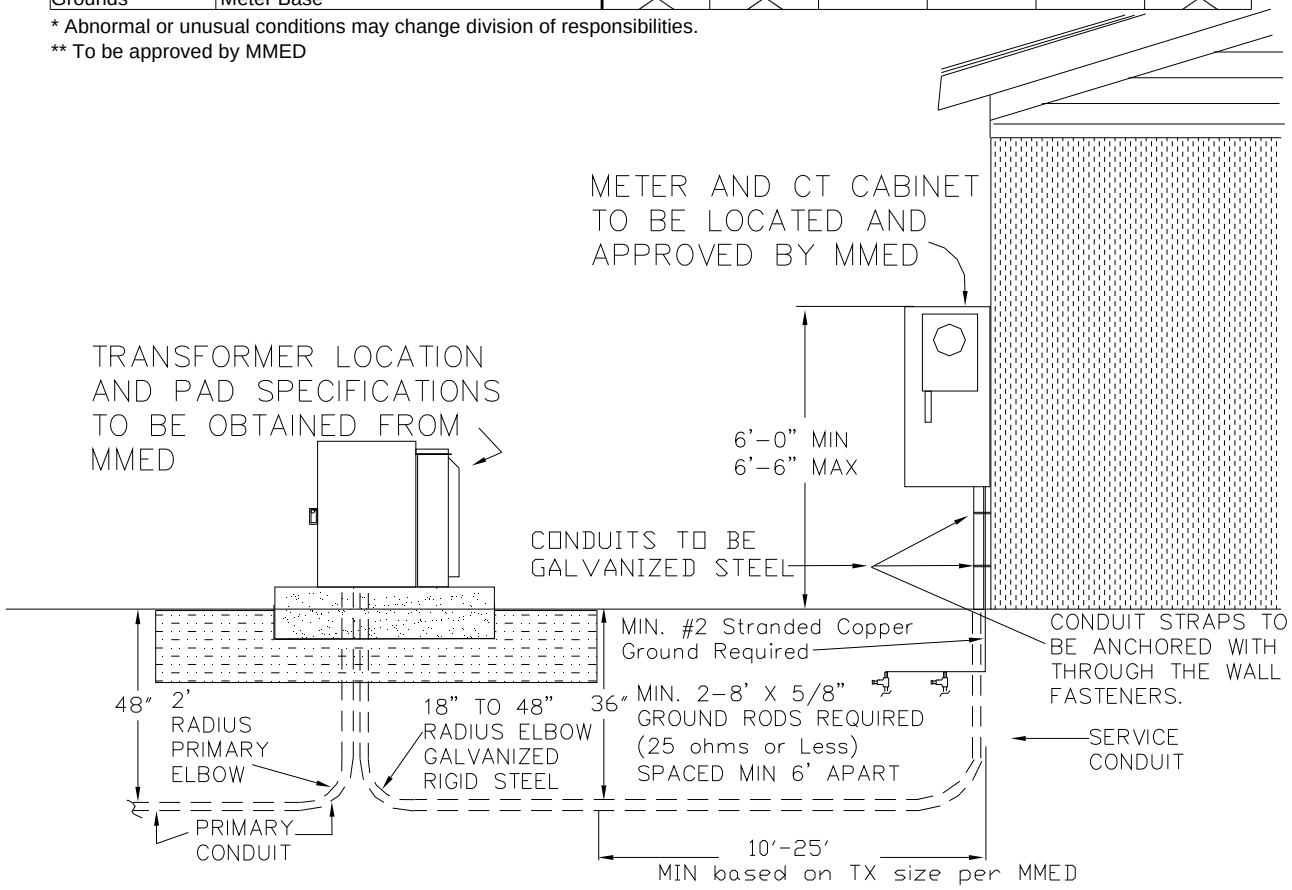
Madisonville Municipal Electric Department	VERTICAL SERVICE CONDUCTOR CLEARANCE OVER POOLS AND PROJECTIONS (REFER TO MMED RULES AND REGULATIONS FOR ADDITIONAL REQUIREMENTS)	DATE 2-6-02 FILE NAME FIG1C.DWG

Division of Responsibilities *

Item	Description	Customer			MMED		
		Provide	Install	Own/ Maintain	Provide	Install	Own/ Maintain
3 Ph. Trans. Pad	Per MMED Specifications	X	X	X			
1 Ph. Trans. Pad					X	X	X
Trenching	Primary - 48" Depth	X	X				X
	Service - 36" Depth	X	X				X
Backfilling	Per MMED Specifications	X	X				X
Conduit	Primary	X	X				X
	Service	X	X				X
Service	Cable				X	X	X
	Connectors **	X				X	X
Transformer	Connector Bolt Assemblies				X	X	X
Metering	Meter Base				X	X	X
	CT's				X	X	X
	CT Cabinet **	X	X	X			
Grounds	Meter Base	X	X				X

* Abnormal or unusual conditions may change division of responsibilities.

** To be approved by MMED



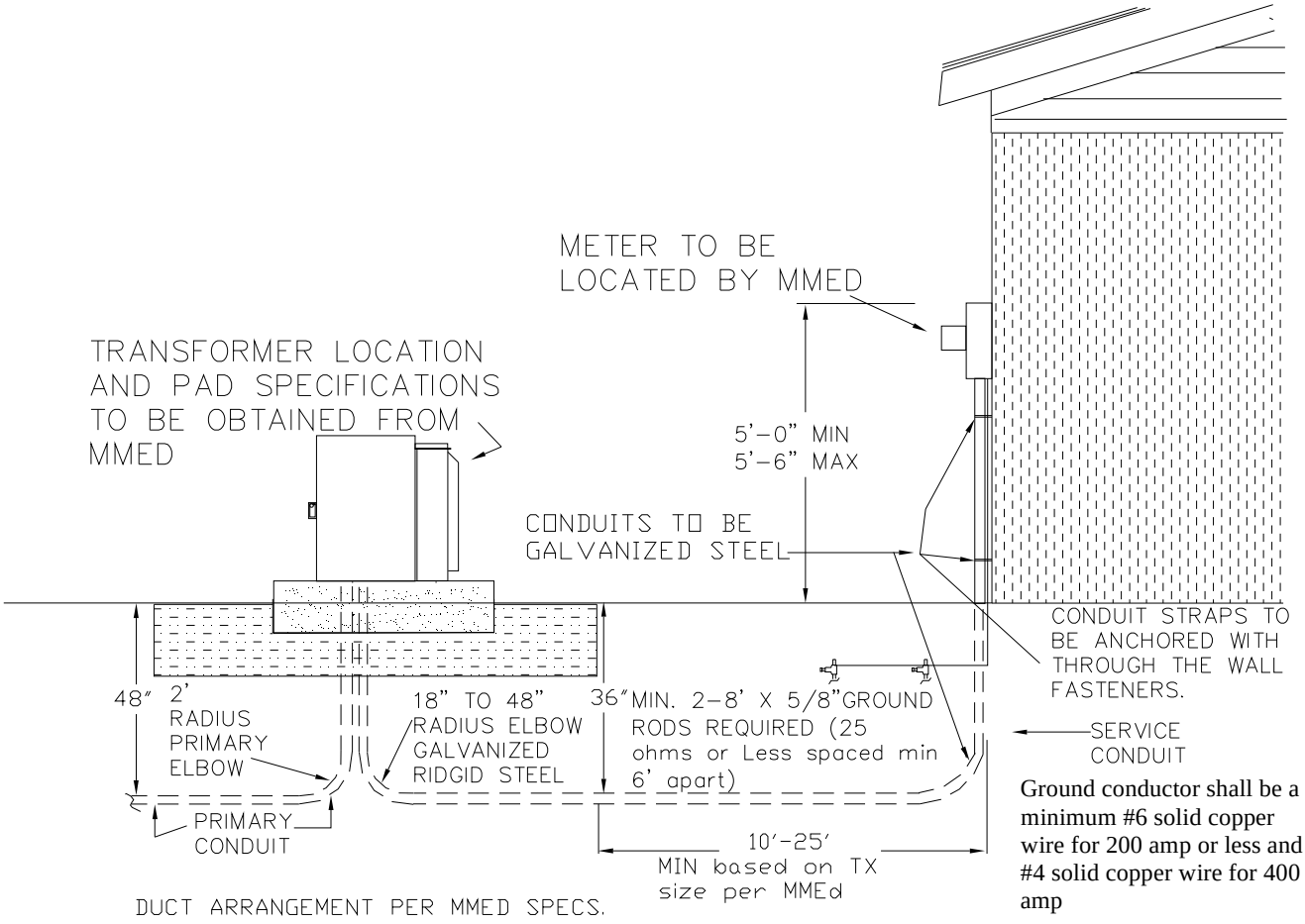
DUCT ARRANGEMENT PER MMED SPECS.

MADISONVILLE MUNICIPAL ELECTRIC DEPARTMENT	TRANSFORMER-RATED UNDERGROUND SERVICE METER ON CT CABINET (REFER TO MMED RULES AND REGULATIONS FOR ADDITIONAL REQUIREMENTS)	DATE 2-6-02 FILE NAME PAGE

Division of Responsibilities *

Item	Description	Customer			MMED		
		Provide	Install	Own/ Maintain	Provide	Install	Own/ Maintain
3 Ph. Trans. Pad	Per MMED Specifications	X	X	X			
1 Ph. Trans. Pad					X	X	X
Trenching	Primary - 48" Depth	X	X				X
	Service - 36" Depth	X	X				X
Backfilling	Per MMED Specifications	X	X				X
Conduit	Primary	X	X				X
	Service	X	X				X
Service	Cable				X	X	X
	Connectors	X	X	X			
Transformer	Connector Bolt Assemblies				X	X	X
Metering	Meter Base	X	X	X			
Grounds	Meter Base	X	X	X			

* Abnormal or unusual conditions may change division of responsibilities.



Ground conductor shall be a minimum #6 solid copper wire for 200 amp or less and #4 solid copper wire for 400 amp

MADISONVILLE MUNICIPAL ELECTRIC DEPARTMENT

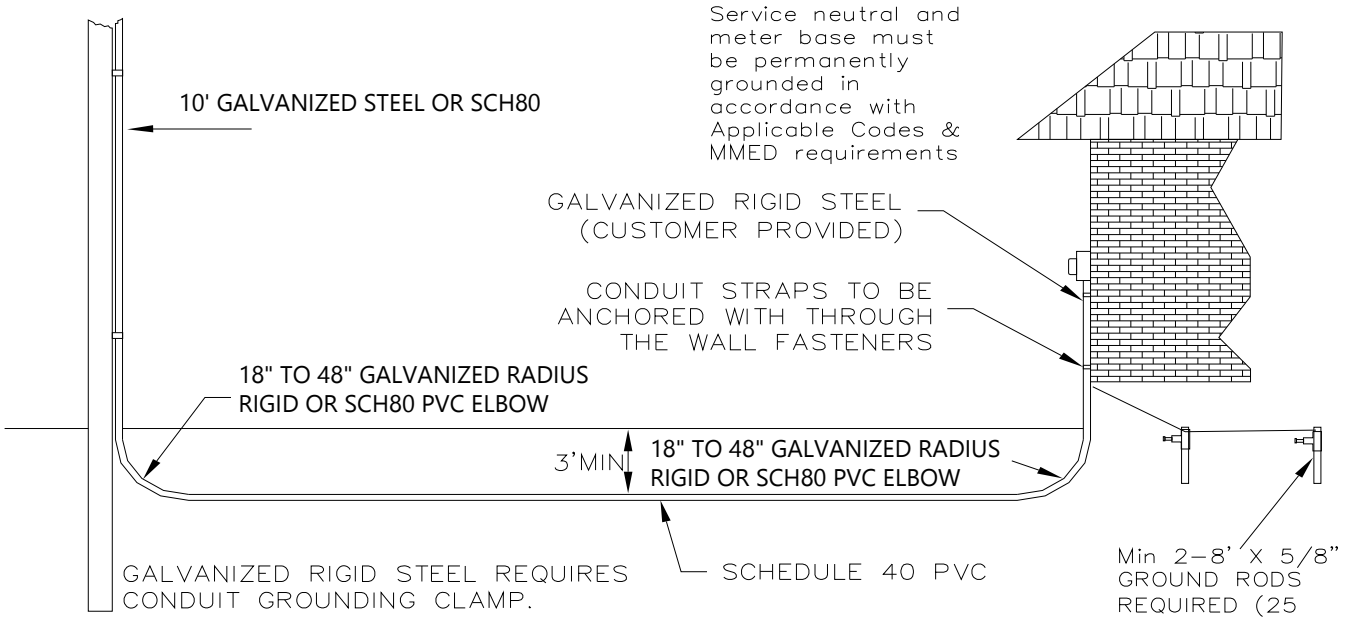
SELF-CONTAINED UNDERGROUND SERVICE 400 AMP AND BELOW METER ON BUILDING.

(REFER TO MMED RULES AND REGULATIONS FOR ADDITIONAL REQUIREMENTS)

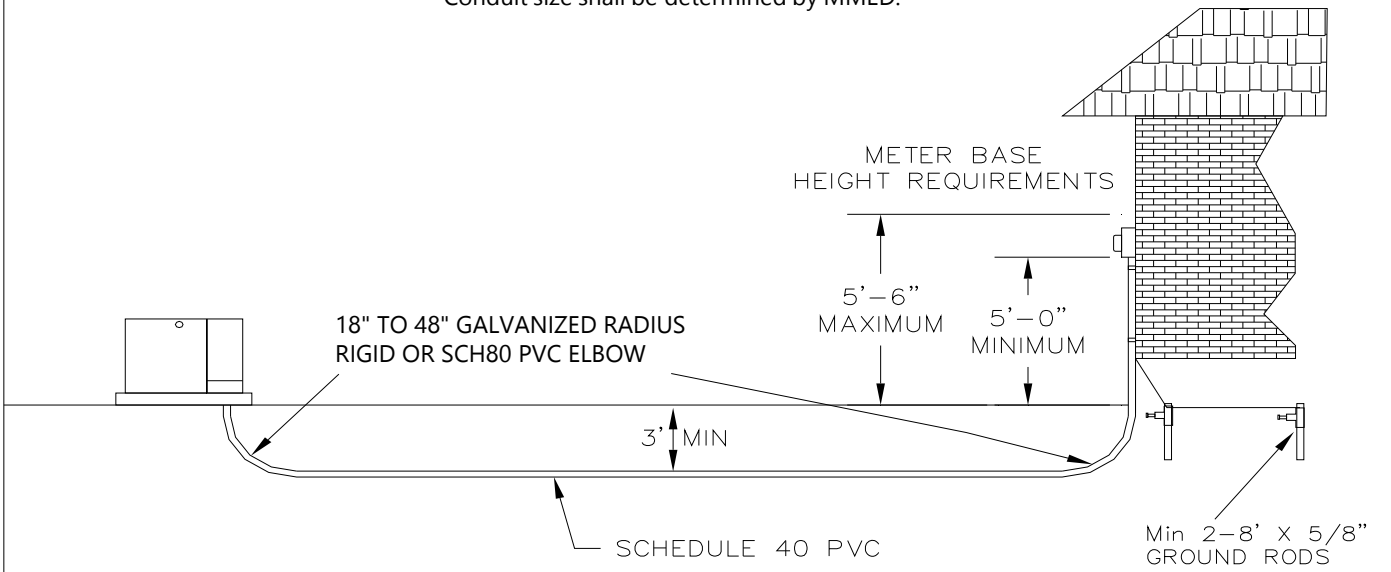
DATE 2-6-02

FILE NAME

PAGE



Ground conductor shall be a minimum #6 solid copper wire for 200 amp or less and #4 solid copper wire for 400 amp. Conduit size shall be determined by MMED.



Ground conductor shall be a minimum #6 solid copper wire for 200 amp or less and #4 solid copper wire for 400 amp. Conduit size shall be determined by MMED.

Madisonville Municipal Electric Department	RESIDENTIAL UNDERGROUND 120/240 SINGLE PHASE SERVICE (REFER TO MMED RULES AND REGULATIONS FOR ADDITIONAL REQUIREMENTS)	DATE 2–6–02 FILE NAME PAGE

LOCATION AND HEIGHT OF ATTACHMENT POINT TO BE LOCATED BY MMED

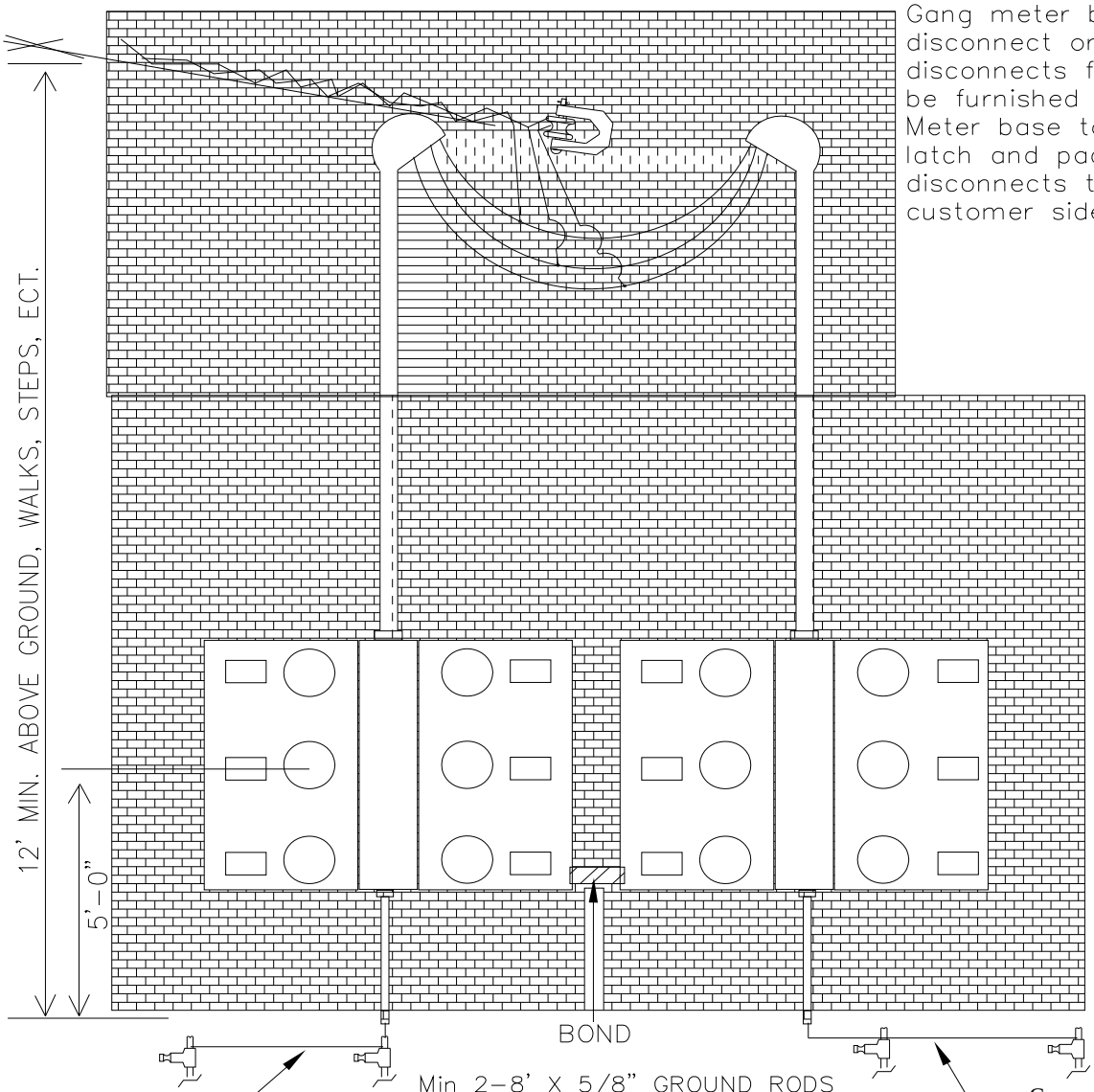
Attachment must be adequate to prevent damage to customer's property at maximum tension. Service entrance head should be above and not farther than 24" from point of service attachment.

All material and installation to be furnished by customer except as noted.

Notify MMED for meter installation.

Fittings between conduit and meter must be raintight

Customer to provide adquate leads to make service connections



Gang meter base with main disconnect or separate individual disconnects for each tenant to be furnished by CUSTOMER. Meter base to INCLUDE locking latch and padlock eye. All disconnects to be installed on customer side of meter

Ground conductor shall be a minimum #4 solid copper wire

Min 2-8' X 5/8" GROUND RODS REQUIRED (25 ohms or Less)spaced min 6' apart

Ground conductor shall be a minimum #4 solid copper wire

Madisonvile Municipal Electric Department

MULTI-FAMILY DWELLING
INDIVIDUAL METERING
OVERHEAD SERVICE

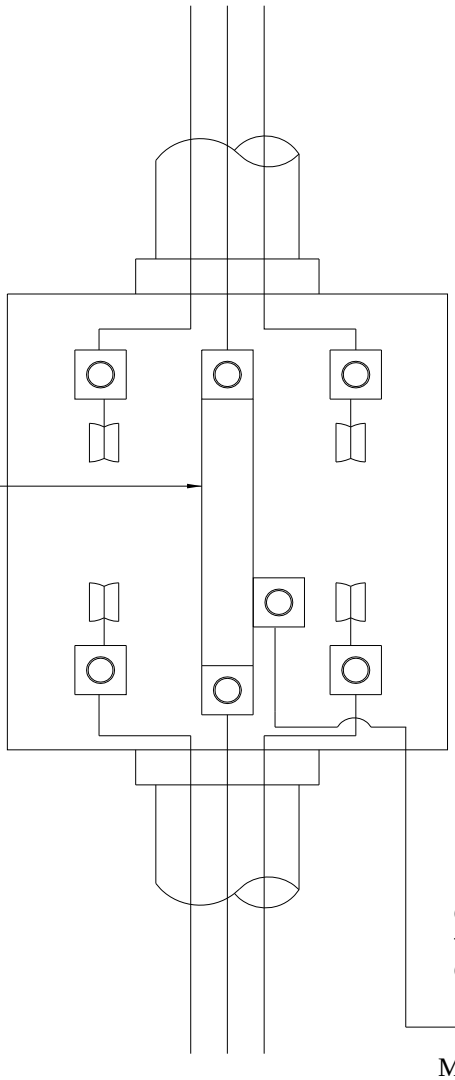
(REFER TO MMED RULES AND REGULATIONS FOR ADDITIONAL REQUIREMENTS)

DATE 2-6-02

FILE NAME
FIG11.DWG

WIRING DIAGRAM FOR METER SOCKET

4 TERMINAL SOCKET



SOCKET MUST BE MMED
& UL APPROVED

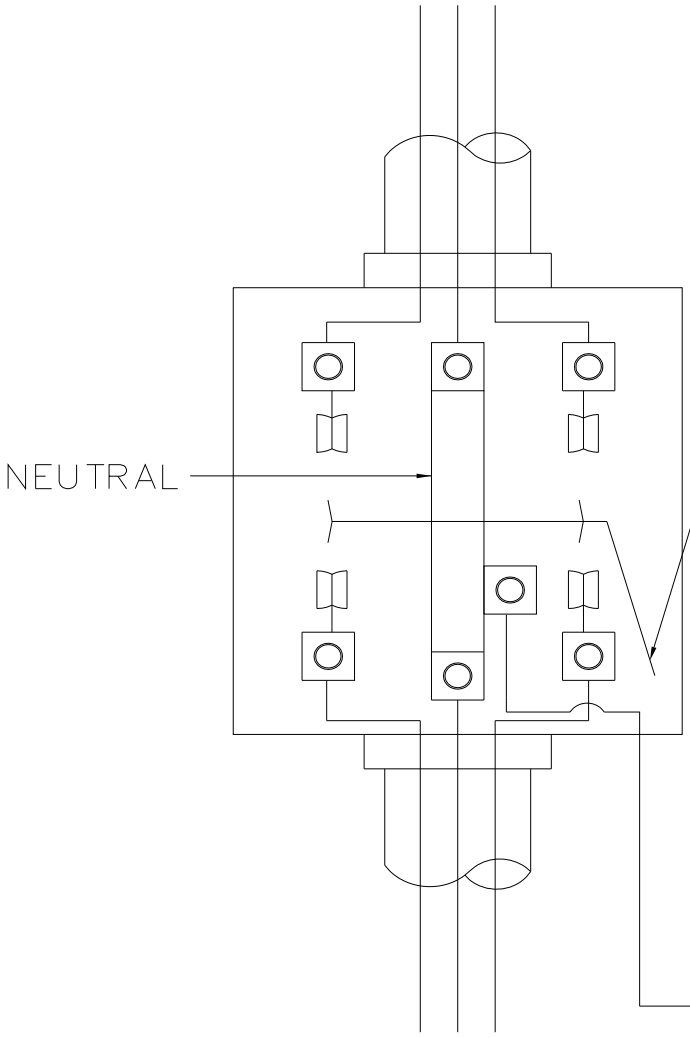
Ground conductor shall be a minimum #6 solid copper wire for 200 amp or less and #4 solid copper wire for 400 amp. Conduit size shall be determined by MMED.

Min 2-8' X 5/8" GROUND RODS REQUIRED (25 ohms or Less)spaced min 6' apart

Madisonville Municipal Electric Department	100 AMP MAIN 120/240V, 1ø, 3 WIRE (REFER TO MMED RULES AND REGULATIONS FOR ADDITIONAL REQUIREMENTS)	DATE 2-6-02 FILE NAME FIG15B1.DWG

WIRING DIAGRAM FOR METER SOCKET

4 TERMINAL SOCKET



SOCKET MUST HAVE A MANUAL LEVER OPERATED BYPASS SWITCH

SOCKET MUST BE MMED & UL APPROVED

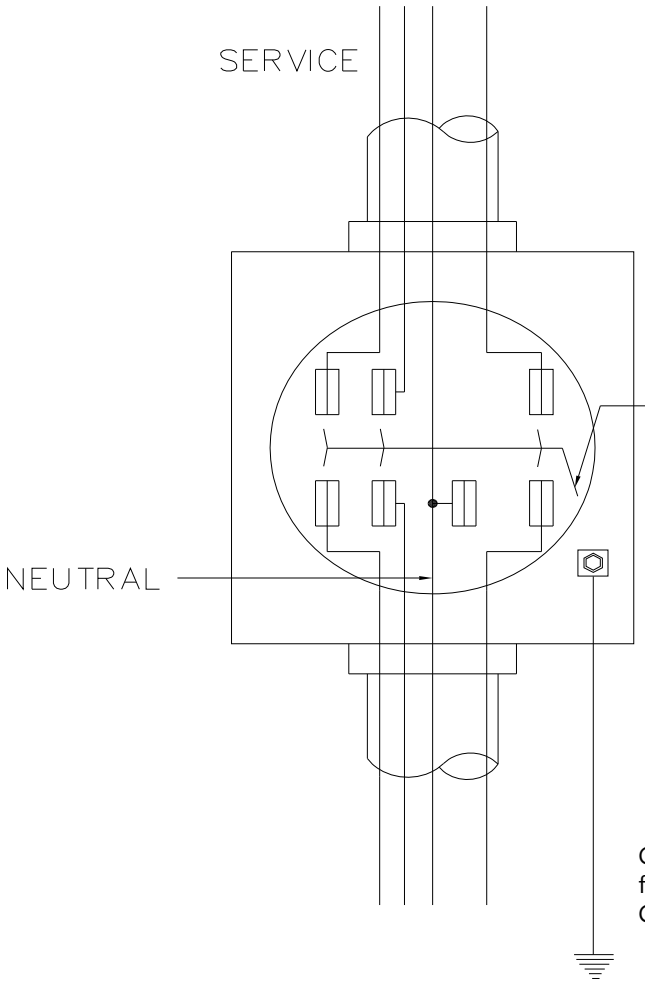
Ground conductor shall be a minimum #6 solid copper wire for 200 amp or less and #4 solid copper wire for 400 amp. Conduit size shall be determined by MMED.

Min 2-8' X 5/8" GROUND RODS REQUIRED (25 ohms or Less)spaced min 6' apart

Madisonville Municipal Electric Department	125 TO 400 AMP MAIN 120/240V, 1ø, 3 WIRE (REFER TO MMED RULES AND REGULATIONS FOR ADDITIONAL REQUIREMENTS)	DATE 2-6-02 FILE NAME FIG15B.DWG

WIRING DIAGRAM FOR METER SOCKET

7 TERMINAL SOCKET



FOR 120/240V SERVICES
HIGH LEG MUST BE ON THE TOP
RIGHT TERMINAL OF METER BASE

SOCKET MUST HAVE A MANUAL
LEVER OPERATED BYPASS SWITCH

SOCKET MUST BE MMED
& UL APPROVED

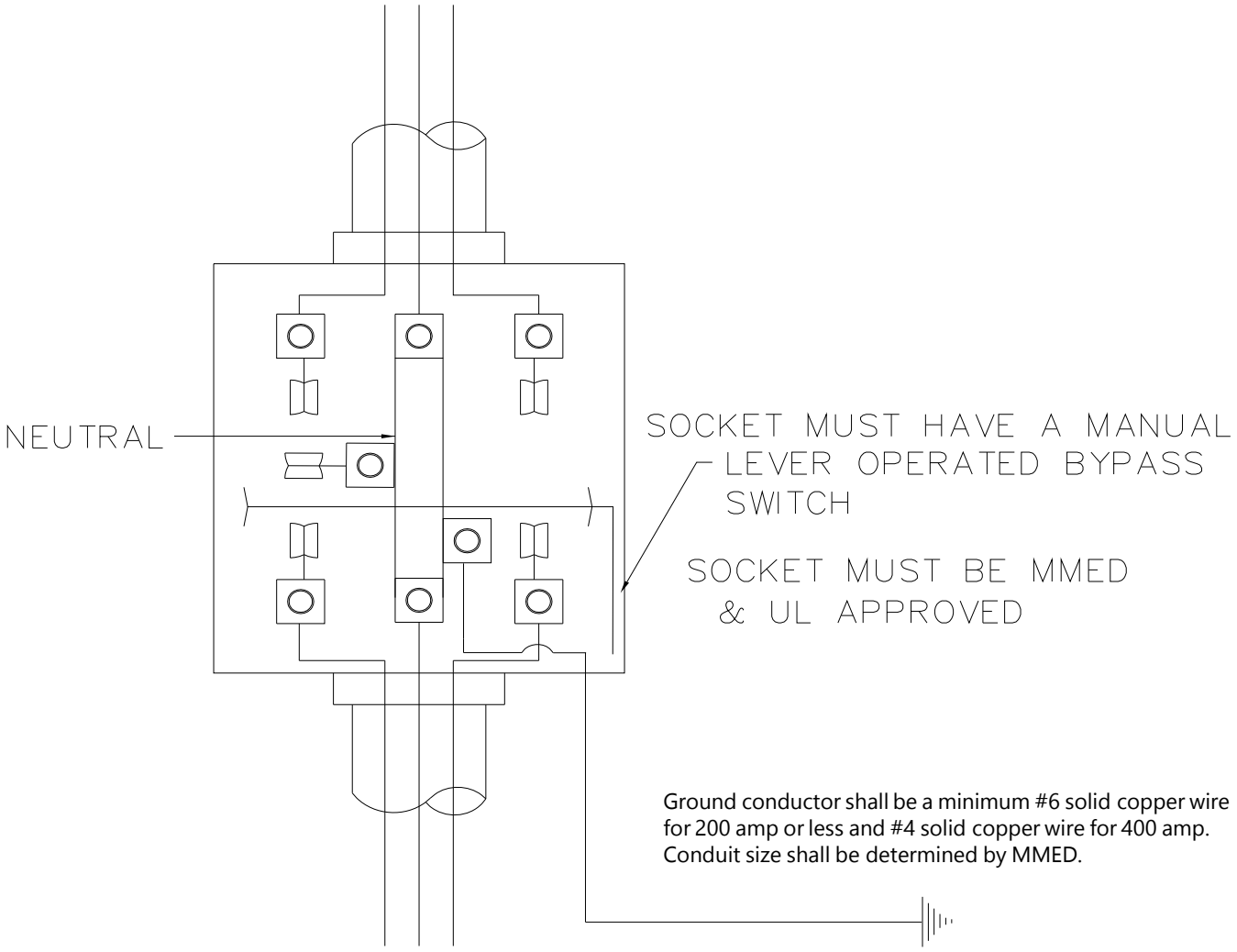
Ground conductor shall be a minimum #6 solid copper wire for 200 amp or less and #4 solid copper wire for 400 amp. Conduit size shall be determined by MMED.

Min 2-8' X 5/8" GROUND RODS
REQUIRED (25 ohms or
Less)spaced min 6' apart

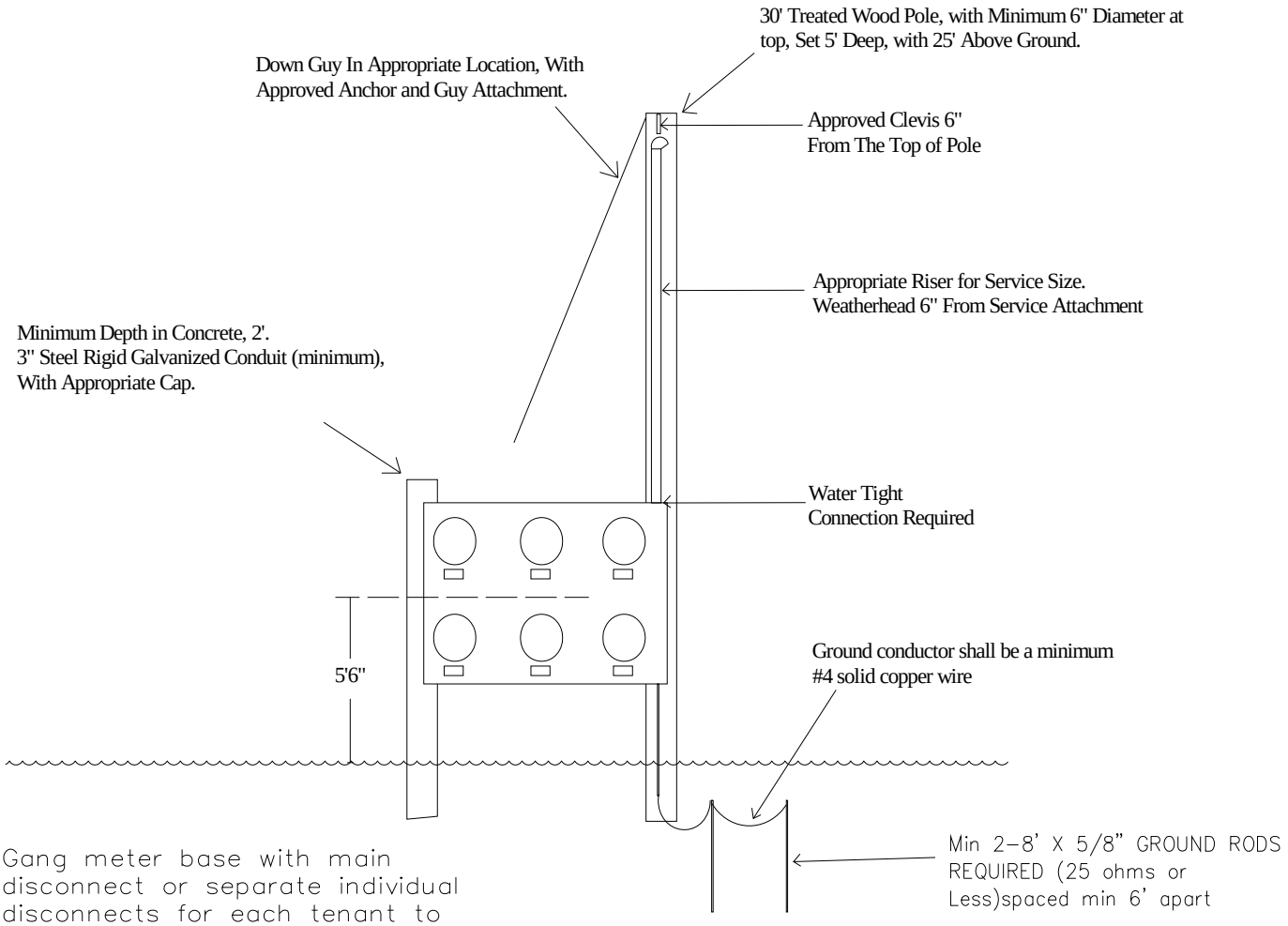
Madisonville Municipal Electric Department	100 TO 400 AMP MAIN 120/208V, 3ø, 4 WIRE 120/240V, 3ø, 4 WIRE (REFER TO MMED RULES AND REGULATIONS FOR ADDITIONAL REQUIREMENTS)	DATE 2-6-02 FILE NAME FIG18.DWG

WIRING DIAGRAM FOR METER SOCKET

5 TERMINAL SOCKET



Madisonville Municipal Electric Department	125 TO 400 AMP MAIN 120/208V, 1ø, 3 WIRE (REFER TO MMED RULES AND REGULATIONS FOR ADDITIONAL REQUIREMENTS)	DATE 2–6–02 FILE NAME FIG16.DWG



Gang meter base with main disconnect or separate individual disconnects for each tenant to be furnished by CUSTOMER. Meter base to INCLUDE locking latch and padlock eye. All disconnects to be installed on customer side of meter

Madisonville Municipal Electric Department	Multiple Gang Meter Center (Free Standing) (REFER TO MMED RULES AND REGULATIONS FOR ADDITIONAL REQUIREMENTS)	DATE 1-20-04 FILE NAME

Highway Crossings

All highway crossings and encroachments shall be approved by the appropriate governing authority. Applicant must contact the City of Madisonville for additional information prior to commencement of construction.

END OF PAGE

TYPICAL HIGHWAY BORE DETAIL
- FOR FULLY CONTROLLED HIGHWAYS -

KYTC KEPT #: _____

SECTION 1: HIGHWAY INFORMATION

COUNTY:	ROUTE:	MILE POINT:	PAVEMENT WIDTH:

SECTION 2: UTILITY INFORMATION

UTILITY TYPE:	PIPE TYPE:	DIAMETER:

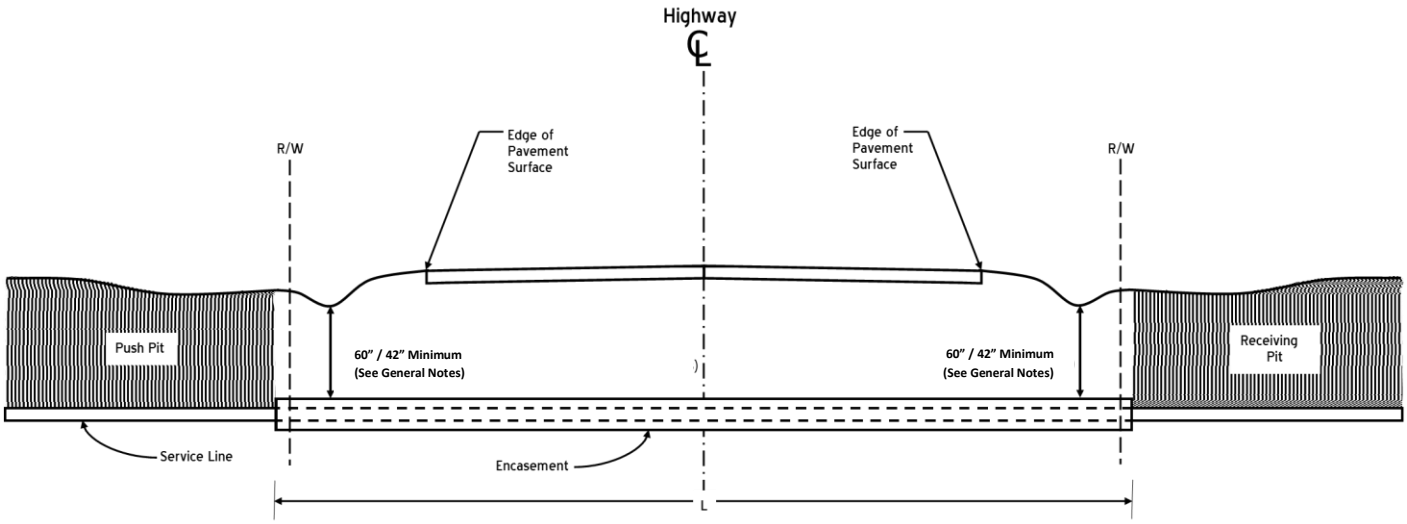
SECTION 3: ENCASEMENT INFORMATION

ENCASEMENT TYPE:	DIAMETER:

SECTION 4: BORE INFORMATION

BORE TYPE:	LENGTH (L):	DIAMETER:

SECTION 5: DETAIL FOR FULLY CONTROLLED HIGHWAYS



SECTION 6: GENERAL NOTES

- Push Pit and Receiving Pit shall be backfilled and thoroughly compacted.
- All ditch lines are to remain open at all times and restored to original condition.
- Shape, Seed and Straw all disturbed areas immediately after completing the work.
- Provide traffic control as required to ensure the safety of the traveling public in accordance with the current edition of the *Manual on Uniform Traffic Control Devices*.
- The minimum depth for underground electrical lines under roadways, ramps, and ditch lines and natural gas and petroleum fraction lines is **60"**. The minimum depth for underground electrical lines in all other areas and all other underground utilities is **42"**, unless NESC requires additional depth.
- See KYTC Permits Manual for all requirements and specifications.

Available Fault Currents

For equipment rating purposes the following tables list the maximum fault currents available at the City's transformer secondary terminals. These fault currents are based on the lowest impedance of transformers the City purchases and on infinite supply impedance on the primary side. Customer motor or parallel generator contributions and customer service conductor impedances are not included in figures given. Consideration for future load growth and subsequent transformer change-out may require initial installation of service equipment to have a larger fault current interrupting rating to ensure its suitability according to the NEC. Any cost associated with changes to the Customer-owned equipment shall be borne by the customer. For detailed information please contact the City.

Single Phase Transformers

Single Phase Transformers Available Fault Current

kVA 1Φ Unit Transformer Rating	amperes RMS Symmetrical 240 Volt
25 & below	10,500
50	13,900
75	20,900
100	27,800
167	46,400

Three Phase Overhead Transformers

Three Phase Overhead Transformer Available Fault Current

kVA		amperes Symmetrical Fault Current	
3 - 1Φ Units	Total 3 Bank	208Y/120 volts	480Y/277 volts
3-10	30	10,000	----
3-25	75	20,900	10,000
3-50	150	27,800	12,100
3-75	225	41,700	18,100
3-100	300	55,600	24,100
3-167	500	92,600	40,100
3-250	750	138,800	60,200
3-333	1,000	----	80,200
3-500	1,500	----	120,300

Three Phase Pad Mounted Transformers

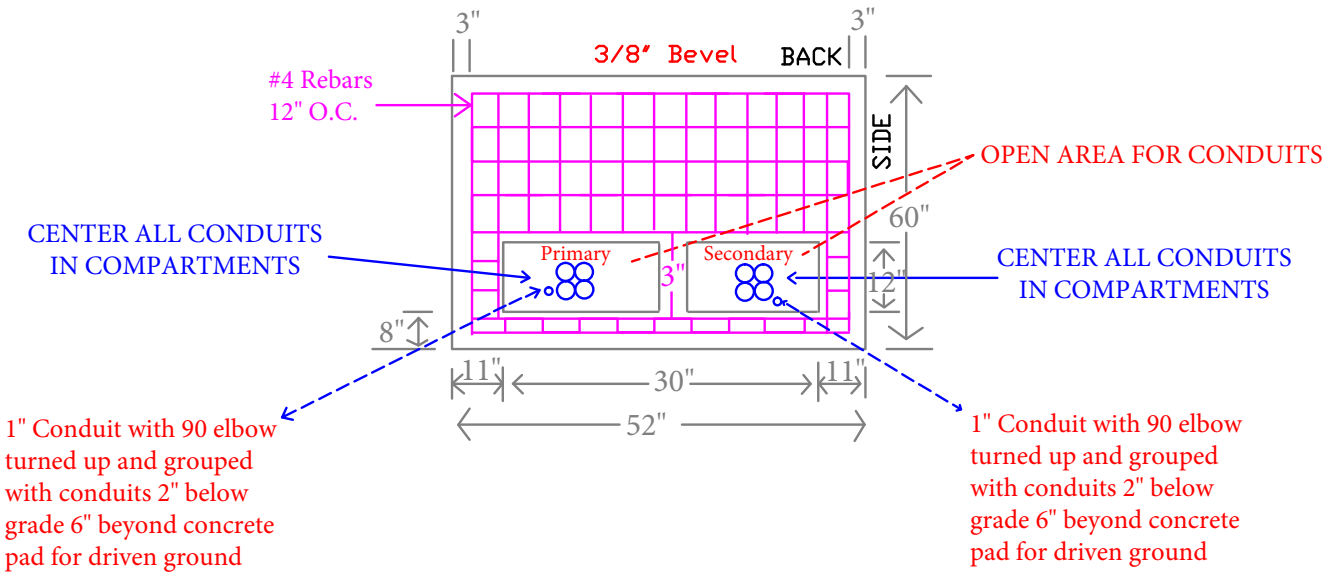
Three Phase Pad Mounted Transformer Available Fault Current

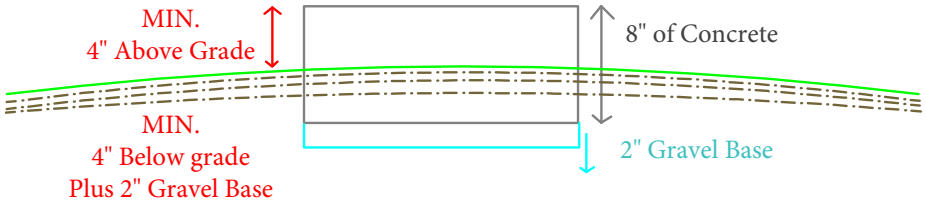
kVA	amperes Symmetrical Fault Current	
3Φ Units Pad Mounted	208Y/120 volts	480Y/277 volts
75	20,900	10,000
150	34,700	15,100
300	69,400	30,100
500	92,600	40,100
750	41,700 *	18,100 *
1,000	55,600 *	24,100 *
1,500	----	36,100 *
2,000	----	48,200
2,500	----	60,200

* Size interrupting rating for largest fault current the service could expect.

1PH Pad Specifications
100 - 250 KVA

MADISONVILLE ELECTRIC
609 McCoy Ave
Madisonville, KY 42431
(270) 824-2130





NOTES

1. MMED MUST BE CALLED FOR AN ONSITE MEETING TO LOCATE PAD AND AGAIN BEFORE CONCRETE IS POURED FOR A FINAL INSPECTION.

2. TRANSFORMER PAD LOCATION SHALL BE APPROVED BY MMED AND INSTALLED IN A LOCATION TO REMAIN READILY ACCESSIBLE FOR LINE TRUCKS. PADS SHALL HAVE A MINIMUM CLEARANCE FROM OBSTRUCTIONS AND BUILDINGS AS REQUIRED BY MMED.

3. SOIL UNDERNEATH PADS SHALL BE FREE OF ROOTS AND OTHER ORGANIC MATERIALS AND BE THOROUGHLY TAMPED TO PREVENT WASHING. EXERCISE CARE IN BACKFILLING AND GRADING AROUND PAD.

4. REINFORCE WITH #4 REBARS ON A 12" X 12" GRID TIED SECURELY 4" ABOVE GRAVEL BASE ON CLEAN CONCRETE OR BRICK SUPPORTS. END OF REBARS TO BE 3" FROM OURSIDE EDGE OF PAD.

5. CONCRETE TO BE 5 1/2% AIR ENTRAINED WITH A MINIMUM 28 DAY STRENGHT OF 3000 PSI MIXTURE TO BE 1-2-4 PROPORTIONS OF CEMENT, SAND, AND GRAVEL. USE NO MORE THAN 6 GALLONS OF WATER PER SACK OF CONCRETE.

6. TOP SURFACE TO BE LEVEL, SMOOTH, AND BEVELED APPROXIMATLY 1".

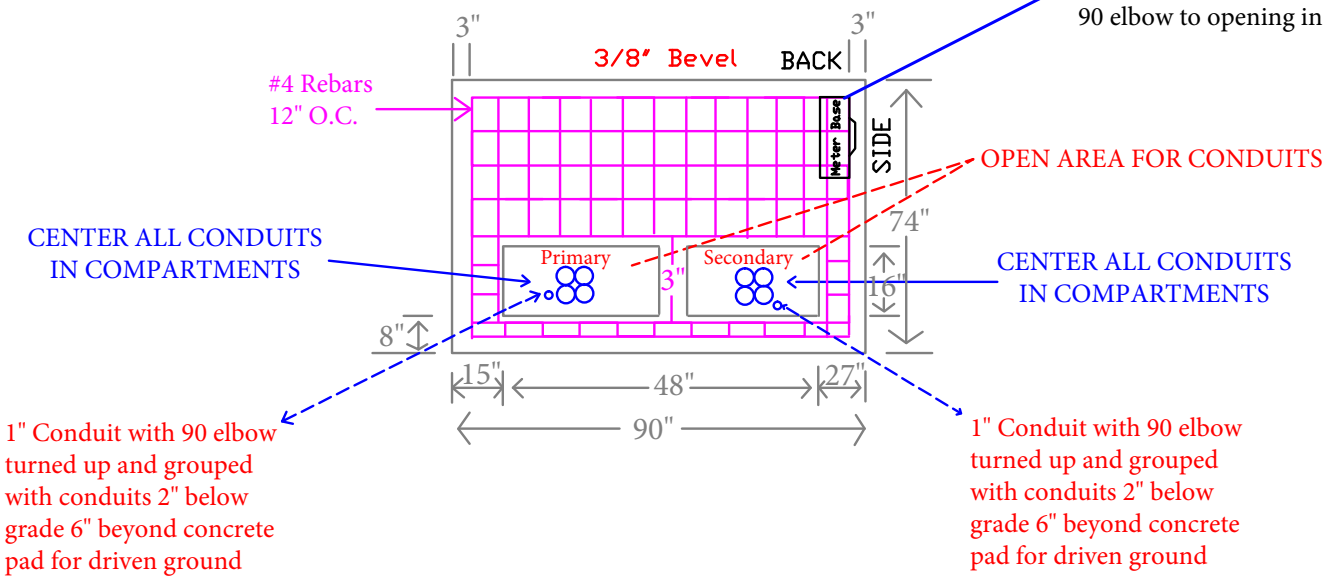
7. CONDUITS SHALL BE LOCATED IN THE CENTER OF THE APPROPRIATE COMPARTMENTS.

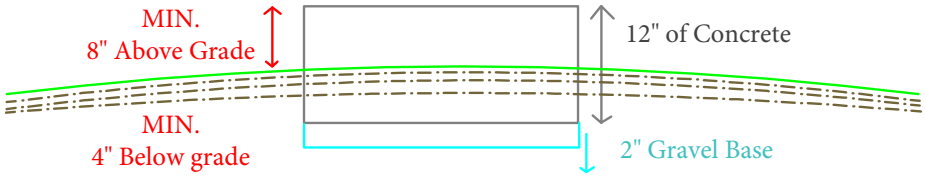
8. SOME OLDER MODEL TRANSFORMERS MAY HAVE SMALLER COMPARTMENTS AND IT MAY BE NESSASSARY TO GROUT A SMALL PORTION OF THE PAD OPENING.

3PH Pad Specifications
75 - 112.5 KVA

MADISONVILLE ELECTRIC
609 McCoy Ave
Madisonville, KY 42431
(270) 824-2130

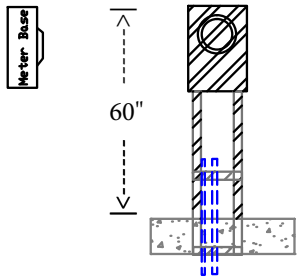
Meter base Pedestal to be installed 8" from back of pad and 8" from side of pad with 2 - 1" conduits to extend from meter base 90 elbow to opening in pad





Meter Application

Pedestal to be supplied by MMED and installed by contractor



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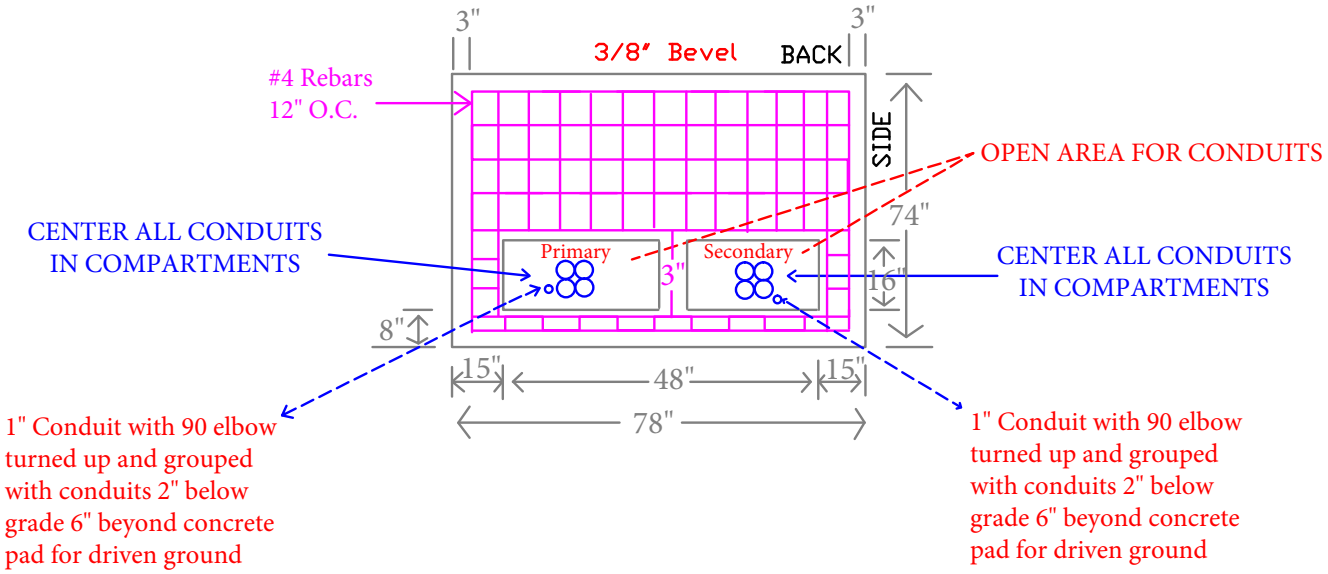
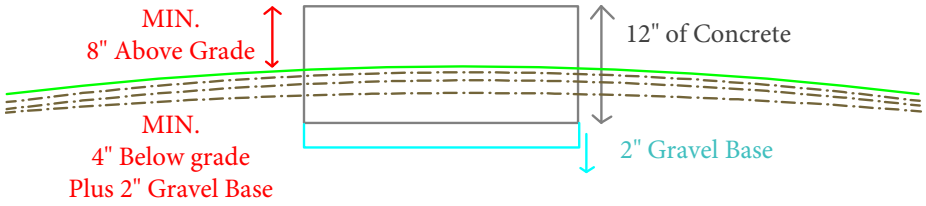
3PH Pad Specifications
75 - 112.5 KVA

MADISONVILLE ELECTRIC
609 McCoy Ave
Madisonville, KY 42431
(270) 824-2130





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3PH Pad Specifications
150 - 500 KVA

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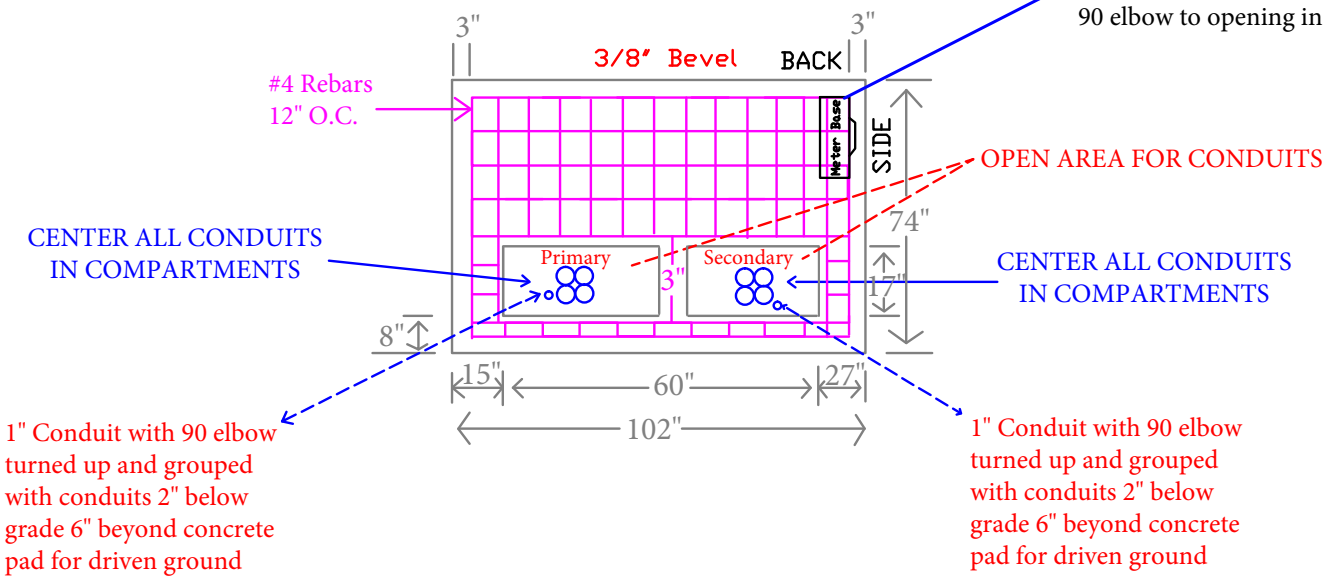
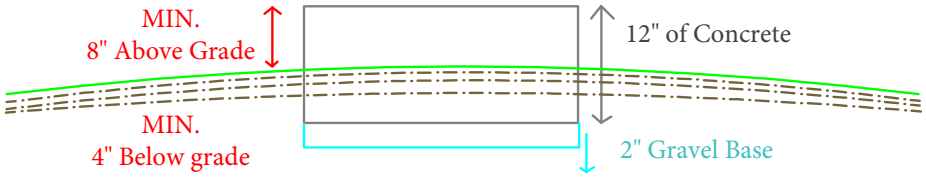
609 McCoy Ave
Madisonville, KY 42431
(270) 824-2130

Meter base Pedestal to be installed 8" from back of pad and 8" from side of pad with 2 - 1" conduits to extend from meter base 90 elbow to opening in pad





Meter Application

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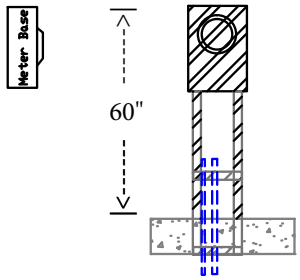

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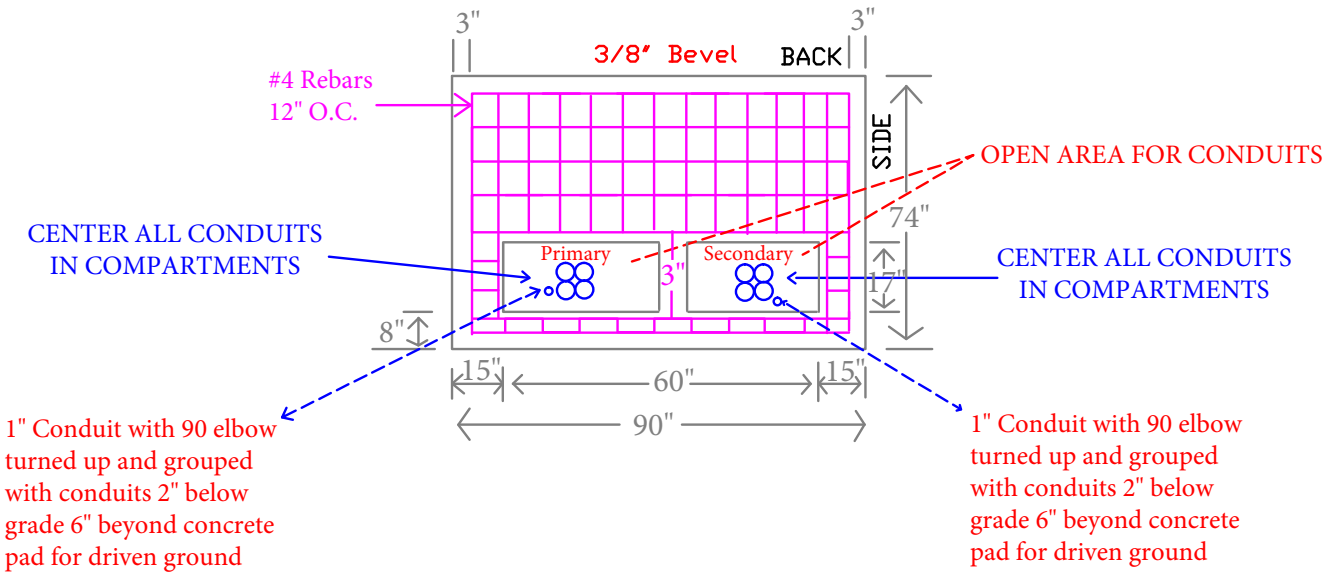
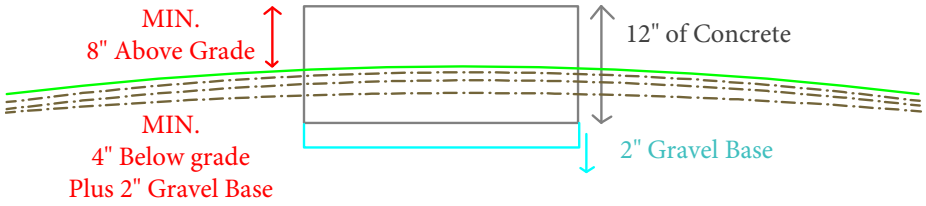
3PH Pad Specifications
150 - 500 KVA

MADISONVILLE ELECTRIC
609 McCoy Ave
Madisonville, KY 42431
(270) 824-2130





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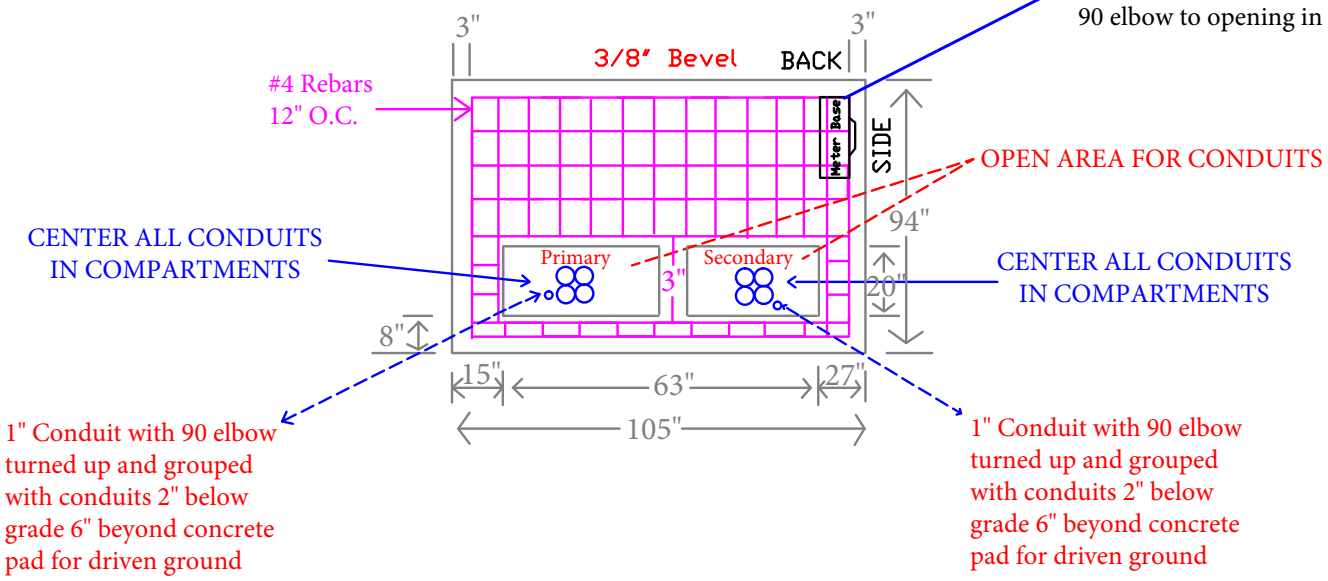
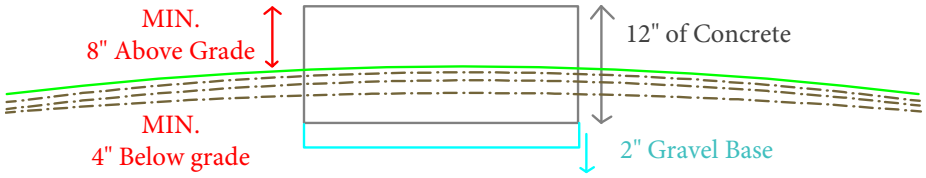
3PH Pad Specifications
750 - 1000 KVA

MADISONVILLE ELECTRIC
609 McCoy Ave
Madisonville, KY 42431
(270) 824-2130

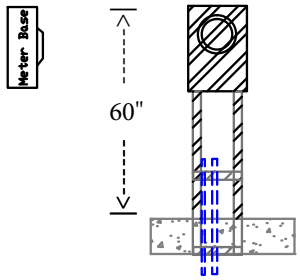
Meter base Pedestal to be installed 8" from back of pad and 8" from side of pad with 2 - 1" conduits to extend from meter base 90 elbow to opening in pad





Meter Application

Pedestal to be supplied by MMED and installed by contractor



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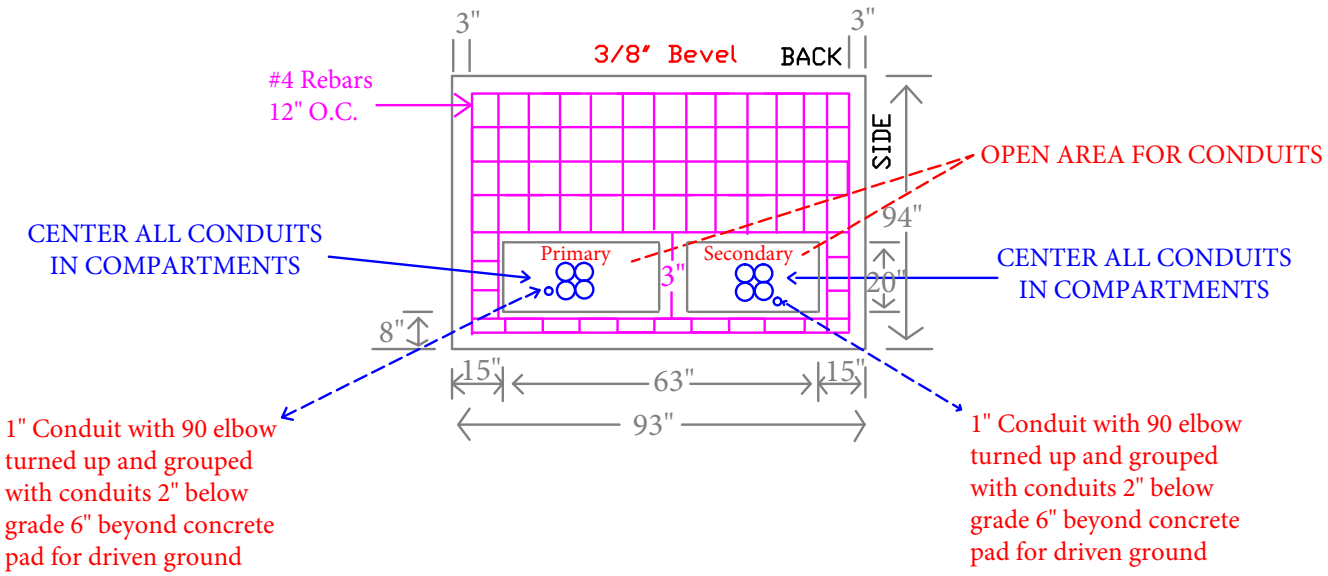
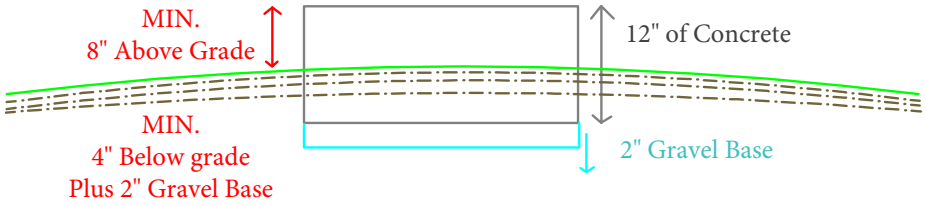
3PH Pad Specifications
750 - 1000 KVA

MADISONVILLE ELECTRIC
609 McCoy Ave
Madisonville, KY 42431
(270) 824-2130





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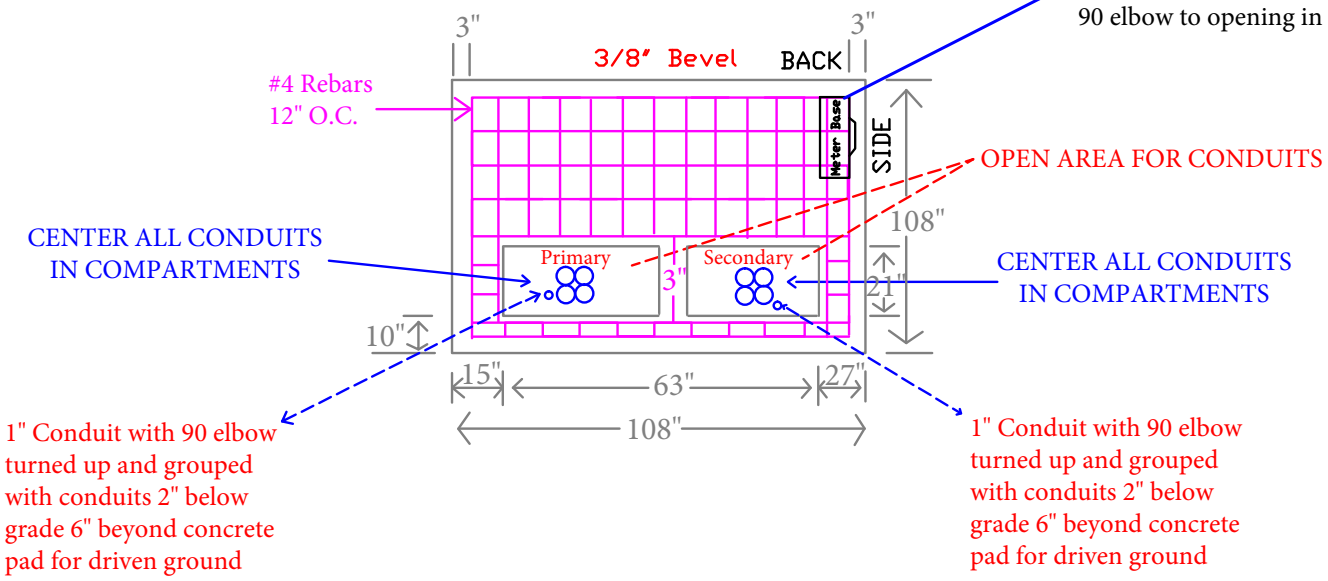
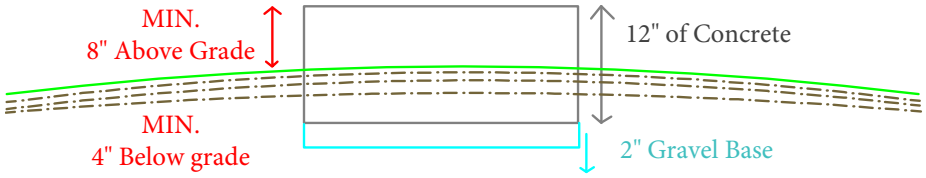
3PH Pad Specifications
1500 - 2500 KVA

MADISONVILLE ELECTRIC
609 McCoy Ave
Madisonville, KY 42431
(270) 824-2130

Meter base Pedestal to be installed 8" from back of pad and 8" from side of pad with 2 - 1" conduits to extend from meter base 90 elbow to opening in pad





Meter Application

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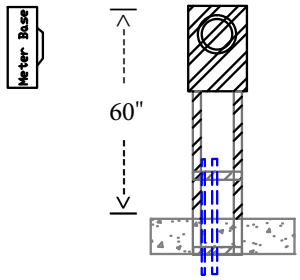

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3PH Pad Specifications
1500 - 2500 KVA

MADISONVILLE ELECTRIC
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Madisonville, KY 42431
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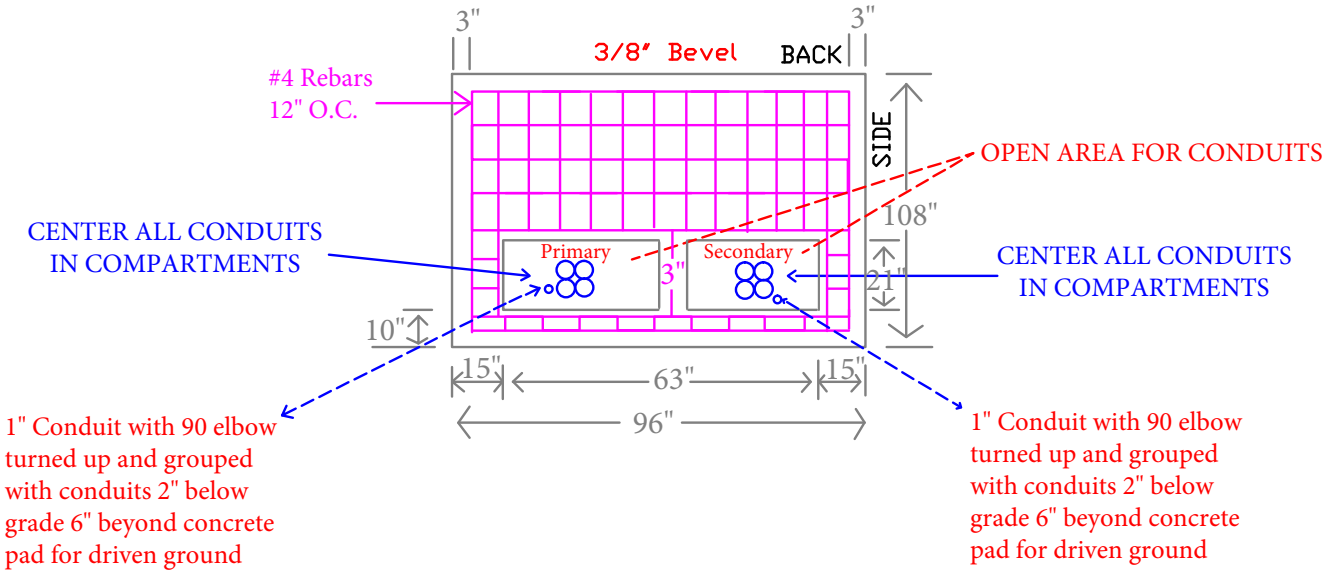

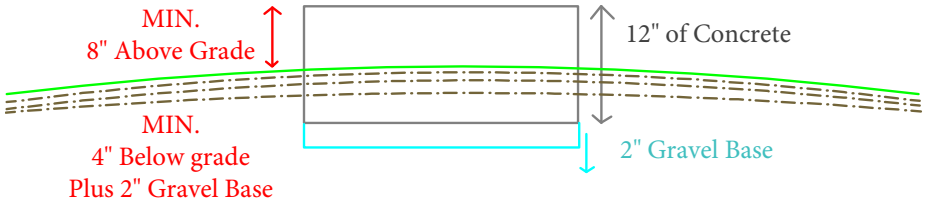

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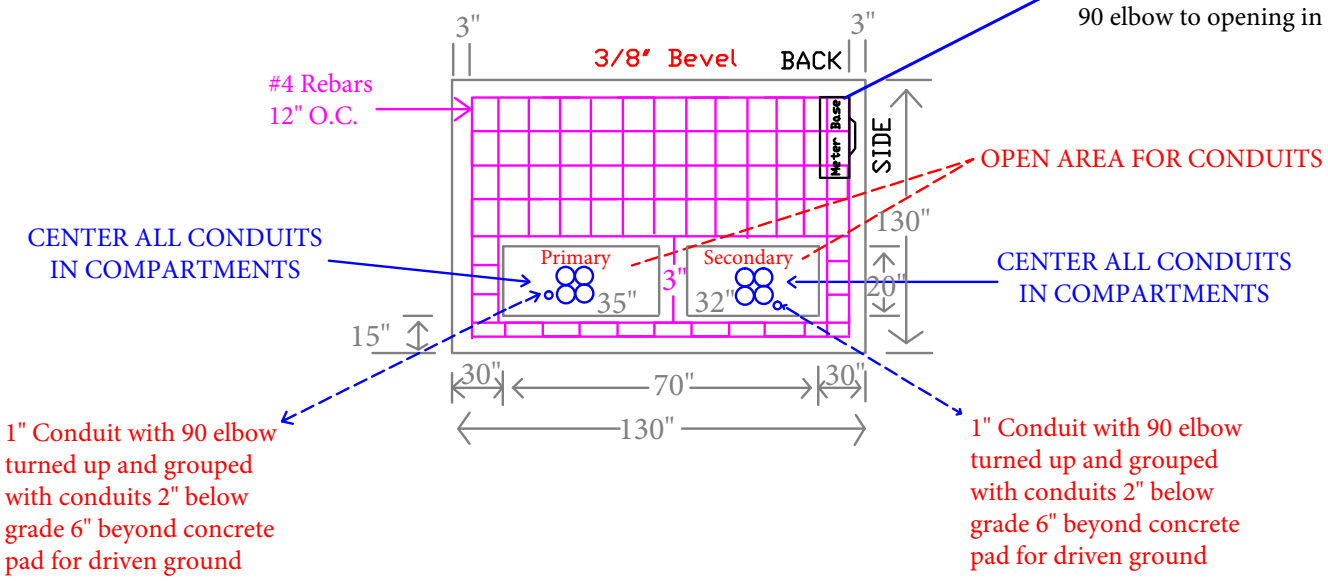

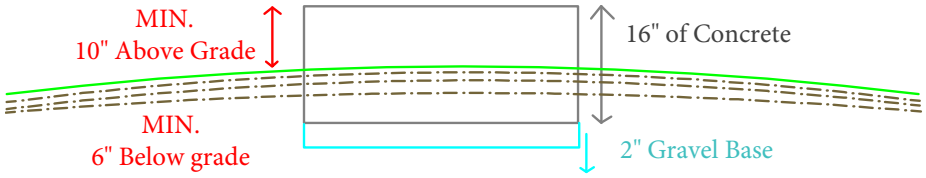

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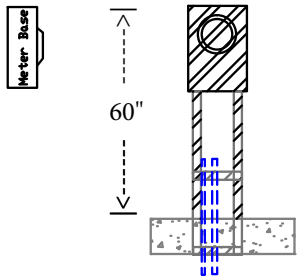

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