



Community Development Department
 1200 L.W. Besinger Drive - Room 206
 Carpentersville, IL 60110
 Hours: M-F 8:30 AM – 5:00 PM
 Phone (847) 551-3478
 Fax (847) 426-0864
<http://vil.carpentersville.il.us>

Electrical Service Upgrade

ADDRESS:	Date Received:
Applicant Name:	Check in by:
Applicant Daytime Phone:	Date Returned to Applicant:
Applicant Email Address:	

I understand that any missing or incomplete items or failure to clearly describe the proposed scope of work will cause this plan review to be delayed until the submittal is complete and/or the work is correctly described. Upon submittal of the remaining items, I understand that the plans are still subject to review by the Village and that corrective measures and/or additional information may be required.

Applicant Signature _____
Date

Submittal Checklist, minimum requirements:

OK	N/A	Item Description
		Homeowners Association approval letter, if required
		Completed electrical permit application
		Detailed scope of work and equipment information
		Electricians must be registered with the Village
		Electricians must submit a copy of their electrician's license from an Illinois Municipality that administers an electrical license examination
		Basic competency is expected of homeowners performing their own work

Type of Electrical Service:

Overhead/Drop or Service Lateral/Underground

Size of Upgrade Request:

100A - min 150A 200A Other _____ (400A - max)

Electric service upgrade shall be provided with an external electrical main disconnect/over current device - the main disconnect can be an integral part of the meter socket cabinet or in a separate outdoor panel and labeled for the application. Bonding and grounding shall take place at the first means of main disconnect

General Information:

Inside wiring shall be copper and installed in EMT.

Smoke detectors shall be hard wired, interconnected with a battery back up in each sleeping room, on each level and within 15' outside of the sleeping rooms. Carbon Monoxide detector outside the sleeping room is a requirement.

GFCI and ARC fault protections are required where code requires.

Minimum Required Inspections:

Final inspection is required when all work is completed.

Schedule Inspections With:

Community Development Department

Helpful Contact Information:

J.U.L.I.E. 811

Com Ed (800) 344-7661

Community Development (847) 551-3478

1. MAST OR SERVICE RUN

- Comply with service-entrance conductors

Clearances— based on particular site conditions select:

RMC or IMC Mast or

RMC, IMC or EMT Service Run

Clearances required by code that apply to both Mast and Service Run

Service conductors lowest point of bottom of drip loop \geq 10 ft. to ground below—same as areas accessible only to pedestrians

Service conductors \geq 12 ft. above residential driveways

Service conductors \geq 18 ft. above public streets

Service conductors \geq 8 ft. above roofs with $<$ 4:12

Service conductors \geq 3 ft. above roofs with \geq 4:12 (including garage roofs)

Provide a service clearance area 30 in. wide by 36 in. measured from front edge of panel

Above decks and balconies—10 ft. out to 3 ft. horizontal

Other clearances may apply (to pool, hot tub, A/C condenser, gas meter, venting pipes —contact Building Inspector for details)

Metal Mast additional code requirements when it is used as the attachment point:

Provide Vertical and Horizontal clearances—

Service conductors lowest point of bottom of drip loop \geq 18 in. above roof shingles

Metal Mast size according to size of overhead electrical service—

For a 100A service, the size of mast is 2.5 in—RMC or IMC

For larger services, use 3.0 in—RMC or IMC

Metal Mast equipment/devices—

Service head; service attachment; mounting clamps with $\frac{1}{2}$ in. bolts, nuts and washers; roof flashing

Metal Service Run—if the particular site condition clearances allow this type of installation—

- Provide additional vertical and horizontal clearances—
 - \geq 6 in. horizontal clearance from roof eave(s) or gutter(s) to service head
 - \geq 3ft. below or to sides of open able windows
- Metal Service Run size according to size of overhead electrical service—
 - Size of service run for 100A service is 1 ¼ in. in RMC; IMC; or EMT with rain tight couplings and connectors
 - Size of service runs for larger electrical services depends of size of service; the type of conduit, and the type of conductor insulation selected

2. ELECTRIC METER AND EXTERIOR MAIN SERVICE DISCONNECT/ OVERCURRENT DEVICE ENCLOSURE(S)

- Select one of the following configurations or describe other selected configuration for plan review—

Combination enclosure rated for wet location—containing the meter socket & main service disconnect/overcurrent device or

Electrical meter and main service disconnect/ overcurrent device enclosures. Both enclosures rated for wet location and properly interconnected

Other configuration selected—describe:

Service Equipment Location—code requirements apply to all equipment configurations:

Must be readily accessible

Electric Meter mid-point elevation shall be 30in to 60in above finished grade

Maximum height permitted for the grip of the operating handle of the main disconnect above finished grade/floor is 6ft.-7in. (same for main breaker pole)

Must be \geq 36in. from gas meter—from service equipment enclosure edge to gas meter edge

Must be \geq 36in. radius from any equipment venting outlet

Any equipment, such as, A/C condenser must be so located to allow a service area \geq 36in. from the service enclosure cover by \geq 30in.

3. PANEL BOARD

- Select one of the following configurations or describe other selected configuration for plan review—

Subpanel board with enclosure rated for dry location—containing a 2nd main service disconnect/over current device (breaker) or

Main Lugs Panel with enclosure rated for dry location or

Other configuration selected—describe:

Service Panel Board Location—code requirements apply to all equipment configurations:

Must be readily accessible

Working space in front of panel board is 36in. from panel board cover by 30in. wide with 6.5ft. head room

Maximum height permitted for the 2nd main service disconnect/over current device (breaker) is 6ft.-7in.

Provide dedicated electrical space per code requirements

Panel board shall not be installed in a bathroom, or in a clothes closet.

4. GROUNDING AND BONDING CODE REQUIREMENTS

- Among others:

Bonding and grounding shall take place at the first means of main disconnect

Provide a permanent and effective grounding path

Grounding electrode conductor shall be connected to the Water supply pipe (grounding electrode), street side of water meter within 5ft. of entry point to the building

Provide two-5/8in by 8ft long ground rods install @ 6ft o.c. (min.)—ground clamps to connect grounding conductors to ground rods shall be listed & labeled for direct burial type

5. OTHER CODE REQUIREMENTS:

- Among others:

- Work shall be in compliance with the 2005 National Electrical Code, the Municipal Code and ComEd requirements
- Equipment and materials shall be listed and labeled for the application
- Inside wiring shall be copper and installed in EMT
- Smoke detectors shall be installed as part of the service upgrade—hardwired, interconnected with a battery back up in each sleeping room, one outside of each separated sleeping area in the immediate vicinity of the bedrooms, on each level story of the dwelling
- Carbon Monoxide (CO₂) detector(s) shall be installed outside of each separated sleeping area within 15ft. from each sleeping room
- GFCI & ARC-FAULT protection devices are required where code requires

DESCRIBE SERVICE EQUIPMENT:

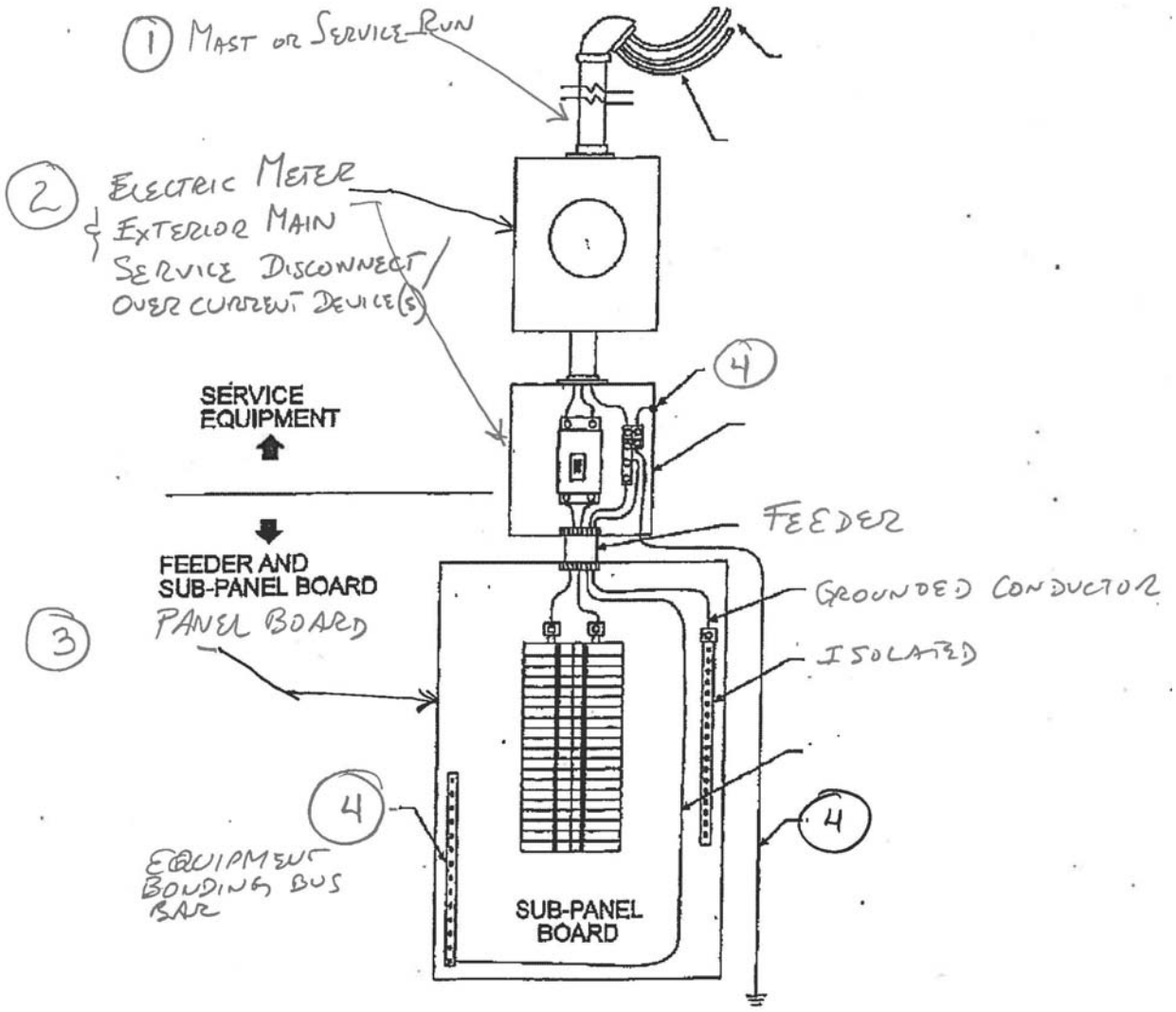
SIZE	CONFIGURATION:			MAIN DISCONNECT		OVERCURRENT DEVICE		AIC-rating For:
	COMBINED/SINGLE ENCLOSURE	INDIVIDUAL ENCLOSURES	OTHERS	SWITCH DISCONNECT	BREAKER	BREAKER	FUSES	BREAKER OR FUSES
100A								
150A								
200A								
OTHER								

DISCRIBE PANEL BOARD EQUIPMENT:

SIZE	CONFIGURATION:					
	SUBPANEL WITH 2 ND . MAIN BREAKER (for 100A—w/20 slots min)		MAIN-LUGS PANEL (for 100A—w/ 20 slots min)	GROUNDED CONDUCTORS MUST BE ISOLATED FROM GES—grounding electrode system	EQUIPMENT GROUNDING BUS BAR REQUIRED	NOTES:
	SIZE	AIC RATING				
100A						
150A						
200A						
OTHER						

DESCRIBE EQUIPMENT:

SERVICE SIZE	MAST		SERVICE RUN		MAIN FEEDER		SERVICE CONDUCTORS		GROUNDING ELECTRODE CONDUCTORS						BONDING CONDUCTORS		
									TO WATER METER			TO GROUND RODS					
	SIZE	TYPE	SIZE	TYPE	SIZE	TYPE	SIZE	TYPE	SIZE	TYPE	PIPE	SIZE	TYPE	PIPE	SIZE	TYPE	
100A																	
150A																	
200A																	
OTHER																	



VILLAGE OF CARPENTERSVILLE

1200 L. W. Besinger Drive
 Carpentersville, IL 60110
 847-551-3478

Paid	_____
CR#	CK# _____
Date	_____

DEPARTMENT OF CODE ENFORCEMENT APPLICATION FOR ELECTRICAL WORK

Date _____ Fee _____ Permit # **P-** _____

Cost _____

PRINT _____
 Address of Proposed Work _____
 OWNER _____
 ADDRESS _____
 CITY _____ STATE _____ ZIP _____
 PHONE _____

LIGHTING CIRCUITS AND OUTLETS

SERVICE SIZE	2 WIRE	3 WIRE	4 WIRE
15 AMP. CIRCUIT			
20 AMP. CIRCUIT			
30 AMP. CIRCUIT			
OUTLETS ON EXISTING CIRCUITS			

CONTRACTOR'S NAME _____
 ADDRESS _____
 CITY _____ STATE _____ ZIP _____
 PHONE _____

POWER

	NUMBER	TOTAL H.P.
AIR CONDITIONERS		
APPLIANCES		
MOTORS		

SINGLE FAMILY DWELLING

NO. OF SQ. FT.	NO. OF OPENINGS
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Describe Work:

NOTE: COPY OF ELECTRICAL LICENSE MUST BE PROVIDED WITH THIS APPLICATION.

APPLICANT'S SIGNATURE _____

SIGNATURE OF ELECTRICAL INSPECTOR _____