

SECTION 27 52 23

NURSE CALL / RESIDENT EMERGENCY CALL AND MONITORING SYSTEM

Specifier Note: This section is written for HUD Section 202, USDA Rural Development, and other subsidized or market-rate independent/congregate senior housing where a supervised wireless resident call system is required or desired to satisfy HUD NSPIRE resident-notification requirements. Edit bracketed items [] to suit project conditions. Coordinate with Section 26 05 00 (power) and Division 28 (security/life safety). This system is not a substitute for a required fire alarm system per NFPA 72.

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes:

1. Wireless resident emergency call buttons (fixed and portable).
2. Wearable pendant and wrist-worn emergency transmitters.
3. Radio-frequency (RF) signal repeaters/range extenders.
4. Property-office base station, gateway, and receiver hardware.
5. Connection to a 24-hour, live-attended, UL-listed monitoring/care center.

B. Related Sections:

1. Section 26 05 00 — Common Work Results for Electrical.
2. Section 27 15 00 — Communications Horizontal Cabling [if hardwired base station data drop required].
3. Section 28 31 00 — Fire Detection and Alarm [coordination only].

1.2 REFERENCES

- A. UL 1637 — Standard for Home Health Care Signaling Equipment.
- B. UL 827 — Standard for Central-Station Alarm Services.
- C. FCC Part 15 — Radio Frequency Devices.
- D. ICC A117.1 — Accessible and Usable Buildings and Facilities; ADA Standards for Accessible Design — Operable Parts (Section 309).
- E. HUD NSPIRE Standards — 24 CFR Part 5, Subpart G — resident emergency notification requirement for HUD-assisted housing.
- F. NFPA 72 — National Fire Alarm and Signaling Code [coordination reference only].

1.3 DEFINITIONS

- A. Care Center: A UL-listed, 24-hour, live-attended central monitoring station that receives, triages, and dispatches responses to alarm signals generated by this system.
- B. Supervised Signal: A periodic RF check-in transmitted by each battery-powered device confirming operational status to the base station/gateway.

1.4 SUBMITTALS

- A. Product Data: Manufacturer's data sheets for each device type specified in Part 2, including dimensions, power/battery data, RF frequency and range, waterproof/IP rating, operating temperature and humidity range, and certifications. See attached Product Data Sheet.
- B. Shop Drawings: Device location plan showing call button locations, wearable-device issuance count, base station/gateway location, and repeater placement based on RF site survey.
- C. RF Site Survey Report: Signal strength and coverage verification for the specific building(s), performed prior to final device/repeater placement.
- D. Warranty documentation.
- E. Monitoring center documentation: UL listing, staffing model (live-attended vs. automated), and average response-time data.

1.5 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Minimum ten (10) years' experience manufacturing wireless life-safety and personal emergency response (telecare) transmitters, receivers, and base stations.
- B. Monitoring Provider Qualifications: UL 827-listed (or equivalent) central station, staffed 24 hours a day, 7 days a week, 365 days a year by live human operators; automated-dispatch-only services are not acceptable.

1.6 WARRANTY

- A. Provide manufacturer's standard limited warranty (typical range for this device class: 1–2 years). Contact safely.living or the distributor of record for the current published term at time of bid.

PART 2 PRODUCTS

2.1 MANUFACTURER

- A. Basis of Design: Climax Technology Co., Ltd., as furnished, installed, and monitored under the safely.living program.
1. Contact: success@safely.living, +1 (816) 644-6968, safely.living/equipment.
- B. Substitutions: Comply with Section 01 25 00 — Substitution Procedures. [Specifier Note: delete if sole-source basis of design is required by owner/funding source.]

2.2 PERFORMANCE REQUIREMENTS

- A. All wireless devices shall transmit a supervised signal to the base station/gateway at a maximum interval per manufacturer's published specifications (industry standard range: every 1 to 24 hours), with missing-device reporting to the care center.
- B. Wearable transmitters shall function for a minimum of [1] year on original battery under normal use; battery-low condition shall be reported to the base station and care center.
- C. Fixed call buttons shall comply with ADA/ICC A117.1 operable-parts force (5 lbf maximum) and reach-range requirements at mounting locations noted on drawings.

2.3 CALL FOR AID BUTTONS (PULL-CORD REPLACEMENT TRANSMITTERS)

Model	Description	Dimensions	Rating
PB-23	Wall-mount or portable, single-press wireless call button	85 x 85 x 22 mm	IPX6, 433/868/869 MHz, 3V CR123 lithium, 10-yr life
PB-15 Series	Multiple form-factor wireless call button family	74 x 46 x 22 mm	IP44, 3V lithium battery

2.4 WEARABLE EMERGENCY TRANSMITTERS

Model	Description	Dimensions	Rating
WTRSC-1 / WTRSE*	Necklace/wristband convertible pendant, 3-level adjustable alarm-button pressure sensitivity	38.5 x 38.5 x 14 mm	IP67, 869/919 MHz, 3V CR2032, 8-yr life
BR1-WTRSB	Bluetooth LE pendant/wristband, smartphone-paired, GPS relay	Compact pendant/wristband form factor†	IP57
JLPD-1	Jewelry-form emergency pendant	Ø32 x 47 x 12 mm	IP68, 3V CR2032, 10-yr battery
WTRZ	Ergonomic wearable button	48 x 36 x 14 mm	Fully waterproof
WTRQ3	Compact pendant/wrist transmitter	39 x 25 x 11 mm	IPX8, 3V CR2032

* Marketed as WTRSC-1 (safely.living catalog naming) and WTRSE (current Climax model designation) — the same one-click necklace/wristband transmitter with adjustable pressure sensitivity. Either designation may appear on manufacturer documentation and packaging.

† Exact chassis dimensions for BR1-WTRSB are published in manufacturer literature; request the current cut sheet from safely.living or the distributor of record.

Optional: Mobile Lite R35-C, a 4G/LTE wristwatch/necklace PERS with built-in fall detection, geofencing, and GPS/Wi-Fi positioning, is available as an alternate to BR1-WTRSB where cellular (not smartphone-paired) off-site coverage is required. See Article 2.8.

2.5 RF REPEATERS / RANGE EXTENDERS

Model	Description	Dimensions	Power
RP-29 Series	SF1/F1 repeater, PIR-camera compatible, tamper-protected	186 x 130 x 30 mm	12V/1A with rechargeable battery backup

2.6 BASE STATIONS, GATEWAYS AND RECEIVERS

Model	Description	Dimensions	Connectivity
PWSR-5-LT	Wall-mounted property-office gateway, local-power variant	~155 x 105 x 26-27.7 mm***	869 MHz, 4 in/4 out, 9V/1A adapter
GX-MAX Series / CTC-1052-QT-DT35A/B**	All-in-one VoLTE telecare base station, up to 20 devices, medication-dispenser integration	DT35A: 156 x 156 x 47 mm; DT35B: 173 x 172.8 x 49 mm	LTE (AT&T/Verizon/T-Mobile), 12V/1A, 7.2V Ni-MH backup (24-28 hr)

** Marketed as the GX-MAX Series (safely.living catalog naming) and CTC-1052-QT-DT35A/B (current Climax model designation) — an all-in-one VoLTE telecare base station family. Device capacity and connected-radio support vary by configuration; confirm the specific model/SKU and its rated capacity with safely.living or the distributor of record at time of order.

*** PWSR-5-LT shares its chassis with its PoE-powered sibling model, differing only in power input (local 9V/1A adapter vs. IEEE 802.3af PoE); manufacturer literature for the sibling gives 155 x 105 x 26 mm (27.7 mm with mounting bracket).

2.7 MONITORING SERVICE

- A. Provide connection to a 24-hour, live-attended care center performing severity-based triage of incoming alarms and maintaining a documented response record for each event.

2.8 OPTIONAL — PERIMETER GEO-TRACKING / WANDERING MANAGEMENT [ADD ALTERNATE]

- A. Where indicated, provide a location and wandering-management add-on comprising a Base Unit (Model BUN-3), Locator units (Model LTN-3), optional Repeaters (Model RPN-3), and Geo Pendants (Model GPT-5-WTRSB), manufactured by Climax Technology Co., Ltd.

B. Performance: Base Unit shall support not less than 1,000 connected devices; Locator-to-Base Unit/Repeater range not less than 3 km; peripheral-to-Locator range adjustable among >500m, 500m, 300m, and 150m settings; signal-strength comparison across Locators for in-building position resolution; perimeter entry/exit alerting via Geo Pendant.

C. Connectivity: IP (Ethernet), Wi-Fi (802.11 b/g/n), and LTE cellular backhaul from the Base Unit to the monitoring platform.

D. Power: 12V/1A DC adapter with rechargeable Ni-MH battery backup providing not less than 24-hour runtime, each unit.

E. This Article is an owner's option and is not required to satisfy the base resident call system specified in Articles 2.3 through 2.7; coordinate scope with Owner where wandering-risk residents are present (e.g., memory care/dementia units).

F. Alternate: in lieu of Article 2.8.A, provide Model Mobile Lite R35-C 4G/LTE wristwatch/necklace PERS locator (Climax Technology Co., Ltd.) where cellular, phone-independent off-site location coverage is required in addition to, or instead of, the Bluetooth-based wearable specified in Article 2.4. Mobile Lite R35-C shall provide built-in fall detection, geofence entry/exit alerting, GPS/Wi-Fi positioning, and two-way voice, reporting to the same Care Alert Platform as Article 2.8.A.

PART 3 EXECUTION**3.1 EXAMINATION**

A. Verify RF coverage by site survey prior to final device and repeater placement. Confirm repeater quantity against actual as-built wall construction, corridor length, and building wing configuration; do not rely solely on drawing-set assumptions.

3.2 INSTALLATION

A. Install fixed call buttons at locations shown on drawings (typical: bathrooms, bedrooms, common areas, staff stations) at mounting height and orientation complying with ADA/ICC A117.1 operable-parts requirements.

B. Install one base station/gateway per building at the property office or other continuously staffed location with dedicated power and a verified network or cellular data path.

C. Install repeaters as determined by the RF site survey required under Article 3.1.

D. Issue one wearable pendant or wrist transmitter per unit resident at move-in; program and functionally test each device prior to occupant handoff.

3.3 FIELD QUALITY CONTROL

A. Test each installed device for successful supervised-signal receipt at the base station and successful event escalation to the care center.

B. Verify low-battery and tamper reporting on a representative sample (minimum 10 percent) of installed devices.

C. Correct deficiencies and retest before Substantial Completion.

3.4 DEMONSTRATION AND TRAINING

A. Train Owner's property management/staff on base station operation, alarm escalation procedure, and device battery replacement/service.

END OF SECTION 27 52 23