

ENERGY RESOURCES DEPARTMENT

Natural Gas Development Guidelines



October 2020



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The purpose of this guidebook is to provide a roadmap through the Energy Resources private development process for residential, commercial, and industrial development projects. Our goal is to provide clear and concise direction to efficiently facilitate the processing of development projects within the City of Long Beach Energy Resources. This guidebook explains the progressions and timelines required to successfully process a private development project for new, modified, or replacement natural gas service. This guideline is also intended to outline and delineate the collaborative efforts with the Development Services Department (including both the Planning and Building & Safety Bureaus) and Public Works Department.

While we strive to meet the timeframes outlined within this guideline, it is important to understand that each development project is unique and requires a varying level of effort. Therefore, there will be instances where the timeframes provided within this guideline are exceeded. We will do our best to maintain open communication regarding progression and timeframes for your specific development project.

It is also important to understand that this is a living document that will be updated periodically to reflect any changes in process. We welcome your suggestions on how to make the process faster, more reliable, streamlined, or simply better.

Each project is unique if you have any questions or comments please contact LBGasDeveloperProjects@longbeach.gov. We look forward to collaborating with you to make Long Beach an even better place to live, work, or invest in.

1.1 Safety First

Whether you're planning to build a major development or just landscaping your yard, protect your safety and the safety of those around you by calling Underground Service Alert at 811 or by submitting a location request online at call811.com at least two working days (not including the day of notification) prior to excavating. You may call Underground Service Alert between 6 a.m. and 7 p.m., Monday through Friday (excluding holidays). Underground Service Alert will coordinate with Long Beach Energy Resources and other utility providers in the area to mark the locations of buried utility-owned lines. There is no cost to you for this service and it can help prevent injury, costly property damage and loss of utility service. Here is a link for more info: [Call811](#).



PHOTO: JAMAR PENNY, UNSPLASH.COM

1.2

The Role of Energy Resources in the Private Development Process

Established in 1924, the natural gas utility under the Long Beach Energy Resources Department (LBER) provides service to approximately 500,000 residents and businesses in the cities of Long Beach and Signal Hill. The Energy Resources Department maintains over 1,900 miles of gas pipelines within its jurisdiction. Energy Resources is responsible for planning, designing, engineering, and constructing service facilities and extensions using Energy Resources standards for material, design, and construction. All extension facilities installed under line extension procedures shall be owned, operated, and maintained by Energy Resources, except for substructures and enclosures that are on, under, within or part of a building or structure. Typically, gas distribution and facilities beyond the gas meter are the responsibility of the property owner and/or rate payer. However, Energy Resources staff will work with the various agencies and departments to ensure safe installation of private gas facilities.

The Energy Resources Department works closely with the City of Long Beach's Development Services Department (LBDS) including Planning and Building Safety Bureaus along with the Public Works Department (LBPW). For projects with the boundaries of the City of Signal Hill, LBER works closely within the Community Development (SHCD) and Public Works (SHPW) Departments of Signal Hill. Generally speaking, LBDS/SHCD is responsible for everything within a development's property line (PL) while LBPW/SHPW is responsible for everything outside of a development's PL. The Energy Resources Department works with the four departments to coordinate the proper design and construction of gas facilities for new development and redevelopment including services, supply, and distribution pipelines. It is a collaborative effort that requires an open dialogue and communication between all parties.

1.3 Private Development Process Overview

Private development projects typically start with the City of Long Beach Development Services Department or the City of Signal Hill Community Development Department depending on the location of the project. The LBDS or SHCD Department reviews your proposed project to ensure compliance with zoning, environmental and land planning laws and codes along with compatibility with the community and surrounding neighborhoods. The public works departments of each city work closely with LBDS and SHCD to ensure compatibility with existing public infrastructure by issuing appropriate conditions to be included in the entitlement process. The LBER department works with both LBPW and SHPW departments to determine the appropriate gas facilities and locations of such facilities including services, distribution pipelines, and pressure needs for the entitlement process.

Once the entitlement process is complete the applicant must satisfy all the conditions prior to receiving Building, Public Works, and/or LBER Permits. If public improvements, dedications, vacations, easements, and/or subdivision mapping are required, the applicant will need to hire a civil engineering design professional to prepare the necessary documents and submit to their designated public works department for review and approval. If natural gas improvements such as the demolition of existing services, new or modified services, new distribution lines, the relocation of existing distribution pipelines, or pressure modifications are required, the applicant will need to pay fees to LBER for analysis of system impacts and the gas improvement design required for the project. Upon completion of any gas facility improvement design and the approval of any public improvement design, PW will issue clearance to the DS Department allowing the issuance of Building permits and/or issue an encroachment permit for the construction of improvements in

the public right of way (ROW). The applicant would then pay fees to LBER to install the approved gas facility improvements. This work would be coordinated with the applicant's construction of private and public improvements and the various city departments.

The above overview greatly simplifies the process. In the following guideline, we will outline each of the individual processes that are involved in getting your project to completion. The manual is organized to mimic the life cycle of a project i.e. planning – design – construction – turnover but as is often the case, projects do not fit neatly into this linear format. Therefore, the manual is designed to be able to skip steps or in other cases refer to earlier steps in the manual.


1.4 Acronyms and Definitions

LBDS	Long Beach Development Services	Days	Business days, i.e. Monday – Friday, excluding holidays
SHCD	Signal Hill Community Development	NOFA	Notice of Final Action
LBPW	Long Beach Public Works	GPCF	General Plan Conformance Finding
SHPW	Signal Hill Public Works	PWOP	Public Walkways Occupancy Permit
ROW	Right of Way	TCO	Temporary Certificate of Occupancy
CE	Civil Engineer	TIA	Traffic Impact Analysis
PL	Property Line		
PDP	Private Development Program		
COA	Conditions of Approval		
SPR	Site Plan Review		
ZA	Zoning Administrator		
PC	Planning Commission		



2

Planning Process



Most projects will start with the Long Beach Development Services Department or the Signal Hill Community Services Department who are responsible for Planning and Building services for their respective cities. For more information see the following links for their development processes:

Long Beach, <http://www.lbds.info/planning/default.asp>

Signal Hill, <https://www.cityofsignalhill.org/DocumentCenter/View/2829/Project-Development-Guide?bidId=>

2.1 Planning Process Overview

The City's Planning staff will review your project and determine which process your project will need to follow depending on the size and complexity of your project.

Long Beach

In Long Beach, the Planning staff may require the applicant to go through the Site Plan Review (SPR) process. The SPR process was established to ensure that all development (public and private) meets the City's land planning and development standards and to guide the evolution of development to ensure compatibility and enhancement with the surrounding neighborhood. The following projects have been identified to require Site Plan Review by LBDS:

- Residential projects that include five units or more
- Commercial projects that include the addition of 1000 SF or more of floor area; attached/ roof mounted cellular or personal communication devices; exterior remodeling of spaces 50 feet or more of street frontage; new construction of news or flower stands; and outdoor storage.
- Industrial or assembly use projects with additions or new construction that exceed 5,000 SF of floor area.
- Projects on City land that are 500 SF or more.
- All projects located within Planned Development Areas.

The applicant submits conceptual plans and supporting documents to the City planning department (see link, <http://www.longbeach.gov/lbds/planning/current/permit/>). Various city departments will review the application for conformance with City codes, standards, and policies. During the SPR process, the City's DS/PW staff will circulate the application and plans for review by the Energy Resources private development review staff. The LBER staff will review your proposed gas facilities and services and provide comments and draft conditions to the DS/PW department staff for inclusion into the "Conditions of Approval (COA)" document that will be reviewed by either the Planning Commission or Zoning Administrator depending on the size and complexity of the project. Upon approval of the project and COA by the Planning Commission or Zoning Administrator, the applicant can proceed with design and ultimately submit their project for Building Permits and Public Works Encroachment permits (work in the public right of way) as applicable.

Projects that don't require SPR or a discretionary approval from the Zoning Administrator (ZA) or Planning Commission (PC) can proceed to design and subsequent submittal for Building Permits and PW Encroachment permits as applicable. See Section 3 below.

Signal Hill

The Signal Hill planning process is similar to the Long Beach process. Certain projects will require the City's Site plan and Design Review process and must be approved by the Planning Commission at a duly noticed public hearing. This process is used by the City to determine acceptability of design, architecture, materials, colors, parking, landscaping, lighting, fences, signs and other factors affecting the appearance of the project and its compatibility with surrounding existing development. A complete submittal will generally include the following: architectural rendering, site plan, architectural elevations, floor plan, preliminary grading plan, preliminary landscape plan, and materials color board. View sensitive projects will include view analysis exhibits. The following projects require Site Plan Review and Planning Commission approval:

- Residential projects, new dwellings, second story additions, and addition of 500 square feet or more of floor area.
- Commercial and industrial projects that include new buildings, second story additions, and addition of 10,000 square feet or more of floor area.

- All projects within "view" sensitive and hillside areas.
- All projects located within Study Areas as shown on the City's Official Plan Lines Map. Contact SHPW at (562) 989-7351 for map.

The outcome of the process results in a specific set of directions, called Conditions of Approval (COA), that are set by the Community Development Director or the Planning Commission. The conditions of approval are the road map that the applicant must follow to proceed with the successful completion of their proposed development project. Once the conditions of approval have been set, the applicant can proceed with that approved design. Upon completion of design, the applicant can submit their project for plan check review by the Building Division of the SHCD and the City Engineering Services Division of the SHPW.

Projects that don't require Site Plan Review or a discretionary approval from the Planning Commission can obtain Community Development Director approval, proceed to design and subsequent submittal for Building and Public Works permits. See Section 3 below.

Preliminary Submittal Requirements

In addition to the submittal requirements for each city, preliminary reviews by LBER staff will at a minimum require:

- a. Preliminary utility site plan showing fully dimensioned building locations, proposed gas meter locations, or meter rooms, etc.
- b. Elevation plan showing approximate location of meters.
- c. Distribution plan – proposed gas piping plans and schematics showing proposed point of connection to LBER facilities.
- d. Anticipated Gas loads – provide breakdown of loads for the proposed gas appliances and other gas-powered equipment.

PROCESSING TIPS:

- There is no need to submit a separate application or documents to LBER at this point. However, if your project requires a pre-application conference as specified below, please make an appointment with LBER staff as soon as possible.
- To expedite review, make sure to include information and dimensions as required in the LBDS /PW guidelines. Clear depiction of your proposed gas facilities with full dimensions, proposed loads, and locations of meters and other equipment is required to avoid multiple submittals and subsequent processing delays.

2.2 Pre-Application Conference with LBER

Applicants are advised to schedule a pre-application conference with Energy Resources staff if they are proposing private development projects that include the following:

- Subdivisions creating new streets, alleys and public easements where an extension of gas service will be required
- Vacations of alleys or portions of streets that contain gas facilities and pipelines
- New multiple commercial or residential units with distribution systems and multiple meter locations are being proposed
- Development proposing new gas services for new construction of multi-story projects
- Commercial uses with high demand and/or pressures.
- Projects proposing meter rooms
- Extension of existing gas mains

The Energy Resources Pre-Application conference appointments can be made by contacting the LBER Private Development Review Staff via email at LBGasDeveloperProjects@longbeach.gov

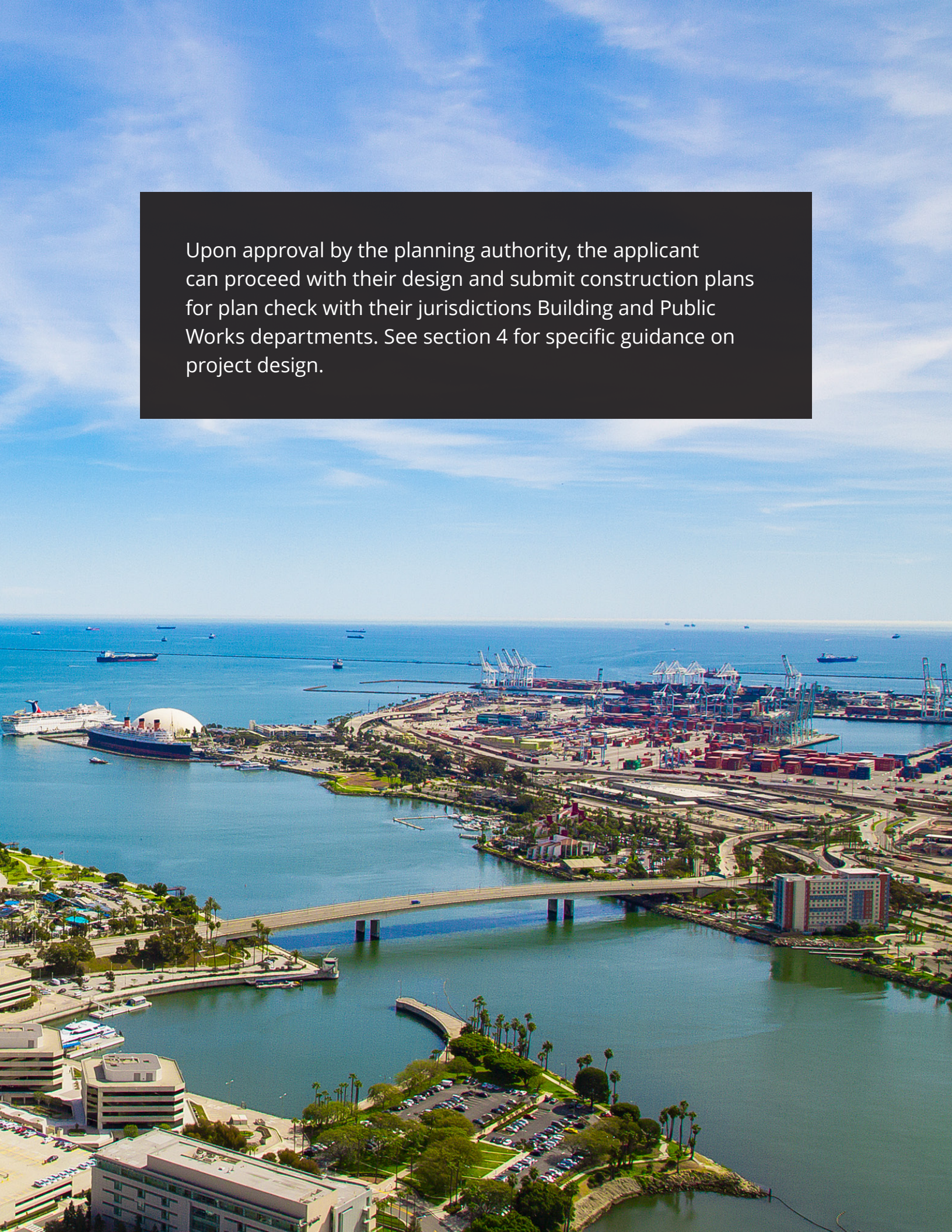


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Design and Review Process



Upon approval by the planning authority, the applicant can proceed with their design and submit construction plans for plan check with their jurisdictions Building and Public Works departments. See section 4 for specific guidance on project design.



3.1 Plan Check Submittal Requirements (Minor & Major Projects)

Plan submittals to Building and LBER must contain the following minimum information to ensure timely review.

- a. Site plan consistent with approval by the planning authority, LBDS or SHCD, showing:
 - » Lot lines, easements, dedications, vacations, setback lines
 - » Structures properly dimensioned from property lines
 - » Structures and features on adjoining lots
 - » Streets, alleys, and driveways showing centerlines, both curb lines, medians, right of way lines, and street striping.
 - » Sidewalks, parking (off and on street), driveways, parkway, street trees, catch basins, utility poles, fire hydrants, traffic signal poles, traffic signal cabinets and streetlights.



- » Water, sewer, and dry utilities including associated above ground appurtenances, panels, etc. (both existing and proposed).
- » Gas meter locations with dimensions and clearances shown
- » Fully dimensioned and detailed gas meter rooms, if needed.
- » Trash storage/bins, delivery, docks, ramps, loading facilities



- b. Elevation plan showing location of meters.
- c. Distribution plan – finalized gas piping plans and schematics showing confirmed point of connection to LBER facilities.
- d. Anticipated Gas loads – provide a breakdown of loads for the proposed gas appliances and other gas-powered equipment.
- e. Approval from LBER for elevated gas pressure (if requested).

3.2 Minor Projects

Some small or minor projects may only require a sketch, while more complex projects will require plans prepared by a registered architect or a Professional Engineer. Projects deemed “minor” are generally projects that do not need engineered plans, such as:

- Relocation of an existing gas service
- Meter upgrade
- Service turn-off and demolition of an existing building
- New service and meter not requiring modifications or extension of a gas distribution line

Typically, Minor projects start at the Building Department for either Long Beach or Signal Hill based upon the project location. The Building Departments will direct you to LBER if you need modifications or new gas service for your “minor” project. You can call, (562) 570-5991, or email at LBGasDeveloperProjects@longbeach.gov to initiate the process. The process for a Minor project is as follows:

- Customer should contact the Utility Service Billing Division at (562) 570-5991, provide the property address and contact information, and the requested services.
- The customer will fill out an “Consumer Gas Load Information Form” for each meter listing all existing or new gas-powered equipment or appliances and their associated input BTU usage. Customers needing assistance may contact LBER Inspection at (562) 570-2085.
- LBER Utility Billing Services will issue an investigation with this information to LBER Inspection.

- LBER Inspection will review the Gas Service request, and contact the customer at the name and telephone that has been provided to schedule an on-site meeting with the customer or the customer’s representative for the following:

- » Review and approve meter sizing, location, and routing (layout).
- » LBER Inspection will prepare the required Signature/Responsibility Card for customer’s signature. Completion of these forms is required prior to completing any other steps in the process.
- » LBER Inspection will prepare the construction documents/sketch and estimated cost.
- » LBER Inspection will prepare and forward the Investigation Form, construction sketch(es), cost estimate, and Signature/Responsibility Card to LBER Utility Billing Services.

- Customer will obtain a Building permit for work on private property
- LBER Utility Billing Services will prepare and mail the appropriate bill.
- Customer should make payment to LBER Utility Billing Services after receiving the bill. Payment can be made via check or phone with an ATM card, Mastercard or Visa.
- Upon payment and confirmation that a Building Permit has been obtained, LBER Utility Billing Services will prepare and forward the construction service order to LBER Inspection.
- LBER Inspection will prepare and forward the paperwork to the LBER Construction Division.

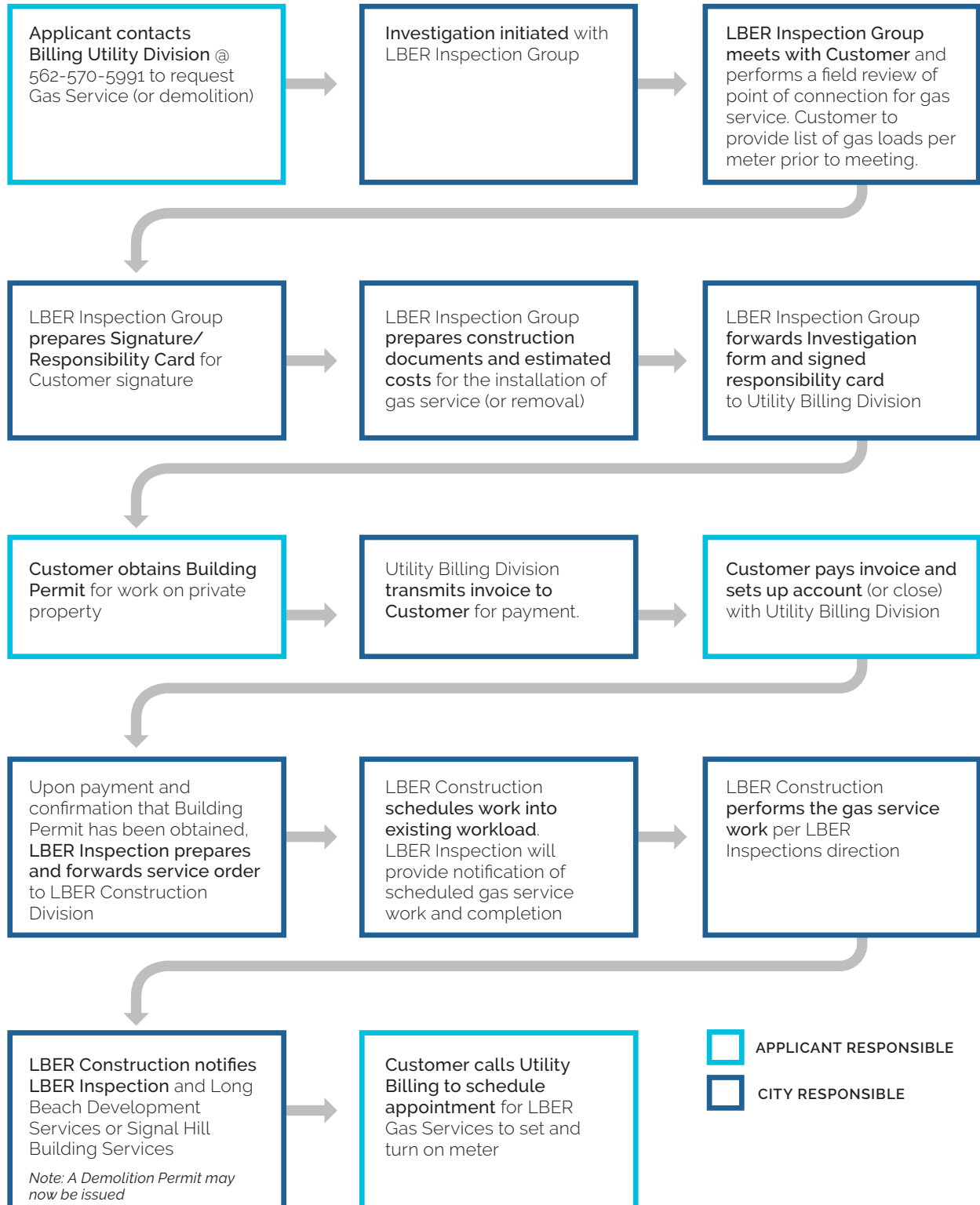
- LBER Construction will schedule the work into the existing workload
- LBER Inspection will provide notification of scheduled work and estimated completion of the gas service.
- Upon completion of the work and Building Permit completion (sign off and/ or Certificate of Occupancy), LBER will coordinate with the customer to initiate gas service.

The process for demolition/service removal is similar to the above process with the exception that the Building Permit for property demolition cannot be issued until LBER terminates service at the gas main and removes the gas meter.

Minor Projects include:

- Relocation of an existing gas service
- Meter upgrade
- Service turn-off and demolition of an existing building
- New service and meter not requiring modifications or extension of a gas distribution line

3.2 Minor Projects



3.3 Major Projects

All other projects would be considered “major” and would require engineered plans to be submitted to the Building Department and as required to the Public Works Department. Projects deemed “major” include:

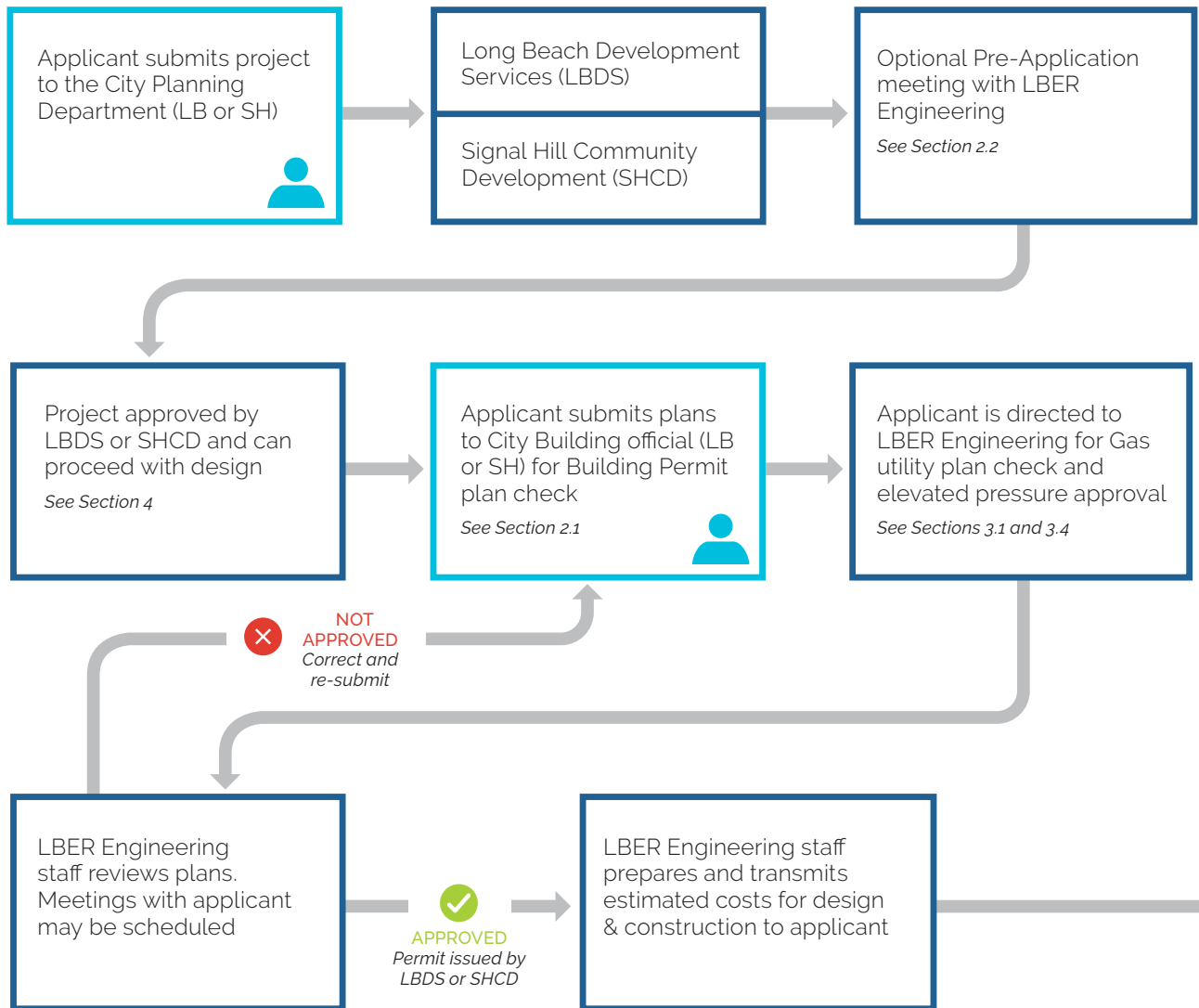
- Subdivisions creating new streets, alleys and public easements where an extension of gas service will be required.
- Vacations of alleys or portions of streets that contain gas facilities and pipelines
- New multiple commercial or residential units with distribution systems and multiple meter locations are being proposed.
- Development proposing new gas services for new construction of multi-story projects.
- Commercial uses with high demand or elevated pressures (>5000 scfh). See section 3.4.
- Extensions of existing gas mains facilities.
- Projects proposing meter rooms or meters in enclosed spaces.

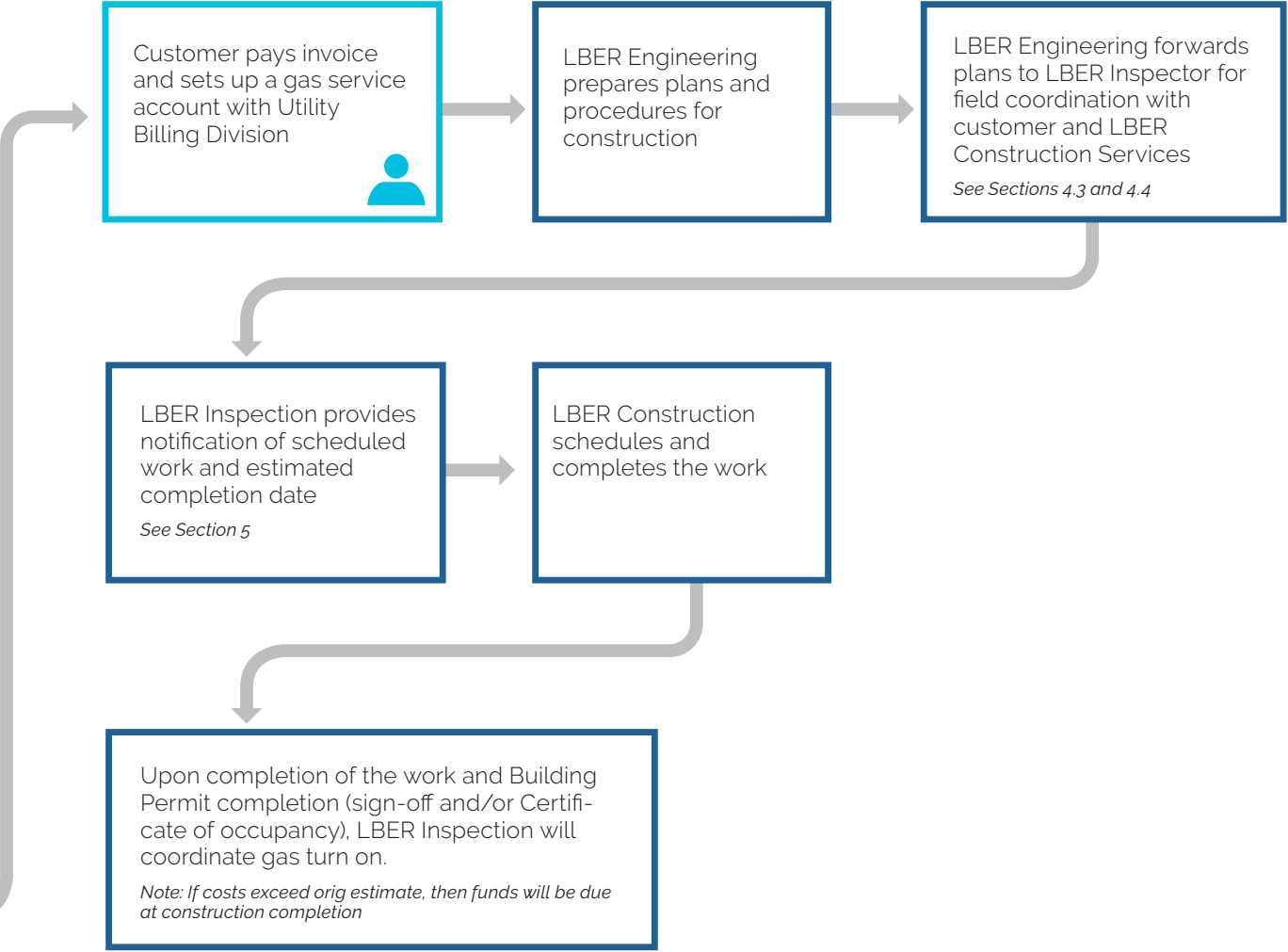
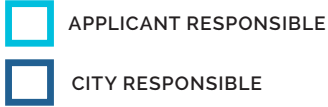
The process for a Major project is as follows:

- The customer or their representative will submit engineered plans to the Building Department for plan check. The Building Department will forward plans to LBER for plan check review for gas facilities.

- LBER Engineering staff reviews the customer’s plans for compliance to gas construction standards and codes and provides plan check comments. Meetings with the customer may be scheduled.
- Multiple resubmittal and associated plan checks as required until the proposed service(s) is deemed acceptable and ready for LBER design.
- LBER Engineering staff will prepare an estimate of the proposed work including estimated design hours and cost required, estimated fees per the City’s approved rate schedule and an estimated cost for LBER contractors or LBER construction crew to construct.
- LBER Engineering will provide the estimate and the appropriate invoice for deposit for design and construction services.
- Customer makes payment to LBER Engineering after receiving the deposit invoice. Payment can be made via check to City of Long Beach, Energy Resources Department, Attn: LBER Engineering.
- Additionally, the customer sets up their gas service account with LBER Utility Billing Services.
- Once the design is complete, LBER Engineering staff may review the estimate again and notify the customer if the cost projections exceed what was originally estimated and will be payable at the completion of the work.
- LBER Engineering staff will forward the completed design plans to LBER Inspection for coordination with LBER Construction.
- LBER Inspection will prepare and forward the paperwork to the LBER Construction Division.
- LBER Construction will schedule the work into the existing workload
- LBER Inspection will provide notification of scheduled work and estimated completion of the gas service.
- Upon completion of the work and Building Permit completion (sign off and/or Certificate of Occupancy), LBER will confirm all special provision requirements have been met for point of connection, Unistrut, pipe supports, meter rooms (see section 4.6), and other conditions according to LBER standards and will coordinate with the customer to initiate gas service.

3.3 Major Projects





3.4 Elevated Pressure

Standard delivery pressure for LBER services is 7 inches water column or approximately ¼ psig. Elevated pressures are available in the following increments:

- 2 psig
- 5 psig
- 10 psig
- Main line pressure (dependent on location)

Projects requesting elevated pressure are considered major projects and will be processed as stated above. In addition to the required plans, projects requiring elevated pressures must provide a request in writing to LBER. The request must include the necessity for requesting the elevated pressure and a completed form showing the total projected connected load, *High Volume Sizing Sheet* per meter, <http://www.longbeach.gov/globalassets/energy-resources/media-library/documents/info/natural-gas-service-guidelines/high-volume-sizing-sheet>

Elevated pressure will only be approved for single metered connected loads when required by an appliance at its inlet pipe or, based upon the design of the houseline gas system at standard pressure, the pipe size at the meter connection exceeds 2 inches diameter. Elevated pressure is not available to economize construction or to boost inadequate design.

If the request is approved, the LBER engineering staff will specifically approve the elevated pressure and stamp/sign the plans.



4

Design Guidelines



4.1 General Information

The purpose of these design guidelines is to provide basic guidance with typical gas service installations and to provide applicants with the knowledge to effectively navigate through the design process including legal, regulatory, and safety considerations that may be required. Applicants should meet with Energy Resources Engineering staff for project specific questions and guidance of complex projects per section 2.1 Pre-Application Conference with LBER.

4.1.1. Underground Service alert

Whether you are pursuing major redevelopment or a simple re-landscaping of your property, LBER recommends contacting Underground Service Alert (USA) by calling 811 or online at call811.com. Any work that requires excavation of more than a few inches is required by law to utilize USA procedures as follows:

- Mark the proposed excavation area in white chalk paint (removable with power wash) and contact USA at least two working days before beginning the work.
- Confirm that all utilities have marked their facilities. Note that Gas utilities are marked in yellow. If there are no facilities, you will be contacted or “no natural gas” may be painted on your excavation area. Note that LBER does not mark private gas lines downstream of the meter.
- Use only hand tools when working within two feet of a marked facility.
- If you damage or find problems with gas facilities, immediately contact LBER. If you detect or suspect a gas leak evacuate the area and contact 911 and 562-570-2140.

4.1.2. Common Gas Load Requirements

Appliance Type	Natural Gas Usage MBTU/Hour
Cooking - Range Top	30 – 80
Cooking - Oven	30 – 50
Water Heating – Conventional Tank-type 30 to 50 Gal	30 – 50
Water Heating - Tankless or On-demand	120 – 199
Space Heating - Conventional Furnace	80 – 120
Space Heating – Hydronic Boiler	60 – 100
Space/Water Heating Combo – Hydronic Unit	80 – 150
Laundry - Clothes Dryer	30 – 50
Pool/Spa Heater	250 – 500
Natural Gas Fireplace	20 – 80
Natural Gas BBQ	20 – 60
Natural Gas Lights	2 – 5

4.2 Service Location

Typically, all services originate at the LBER main in the public right of way and extend 90 degrees along the most direct and practical route to the nearest property line, then on to the approved meter location. Gas services are not permitted under or through buildings. When planning service line routing, please note that future construction of structures and substantial improvements over gas service lines are not permitted per LBMC 15.40.130. Each natural gas service must have a shutoff valve located outside of a building in a readily-accessible location (24/7) and cannot be in a privately-locked security area. Service lines passing through retaining walls is discouraged but may be approved by LBER Engineering on a case by case basis. If approved, the gas service must be sleeved as specified by LBER Engineering.

- Multiple service laterals – LBER will not normally allow more than one service lateral for any one building or group of buildings for a single enterprise on a single premise. Special consideration may be allowed on a case by case basis by LBER Engineering staff.
- Single service lateral/multiple structures – Multiple structures on one property may utilize a single service lateral with multiple meter manifolds, however, the number of meters will be limited by available gas supply.
- Distribution main with easements – Service to multiple structures and associated meters can be accomplished by installation of a distribution main and the dedication of an easement to LBER. Easements must be approved by LBER and sized appropriately to ensure access for maintenance and emergency purposes. All clearances around and above the easement must be approved by LBER.
- Submetering is discouraged but may be allowed on a limited case by case basis by LBER Engineering. Applicants desiring to submeter should contact the California Public Utilities Commission (CPUC) to understand and comply with the CPUC code for submetering.

4.3 Trenching

LBER or their approved contractors are permitted to trench for the natural gas service laterals. The cost of the service lateral installation and any onsite yard lines and/or building piping is the responsibility of the applicant. The following guidelines apply to all trenching activities.

- Compliance with City regulations/permits – trenching shall comply with all City of Long Beach and Signal Hill regulations and standard plans
- Separation from other utilities – one (1) foot minimum, may increase due to special conditions as determined by LBER Engineering.
- Required depths – Gas mains within City right of ways, 30"-48" min. cover; Services in City right of ways, 24"- 36" min. cover; and services/ yard lines on private property, 18" - 24" min. cover.
- Joint trenches – Only dry utilities (electrical, telephone, data, CATV) are allowed in a joint trench with gas facilities. Joint trenches must comply with LBER standard drawing, A-982 and maintain appropriate separation with crossing laterals.
- Bedding requirements – Minimum twelve inches (12") of rock and debris free sand.
- Backfill requirements – Minimum twelve inches (12") of rock and debris free sand with native backfill over the pipe. Sand Slurry backfill may be substituted for backfill.
- Paving in City right of way – Trench paving shall be in accordance with City trench paving standards. Note that City paving moratoriums may affect the process, amount of paved area, and techniques required to restore the City's street pavement.

4.4 Meter Location

Specific meter installation requirements are shown in the LBER Standard Plans (contact Engineering or Inspection). In general, preferred meter locations are:

- Outside
- Above ground
- Well ventilated
- Easily accessible
- Visible from the street or alley
- In an area where there is little likelihood of damage by vehicles

Locations not meeting the above criteria, such as meter rooms, may be considered on a case by case basis; however, the following locations are always prohibited:

- Rooms containing electric meter, heaters, engines, boilers, elevator equipment.
- Within three feet of an ignition source in a ventilated area.
- Within eight horizontal feet of a mechanical air intake, air conditioners, or swamp cooler.
- Within living quarters, closets, bathrooms, shower, toilet rooms, enclosed patios.

- Under outside fire escapes, decks, and stairways.
- Under electric meter locations or tele/comm panel locations.
- Locations not providing clearances for access and maintenance.
- Meter Protection - The applicant, builder, or developer is responsible for installing meter guards/bollards. Meter bollards are required where aboveground meter set assemblies (MSA) are within three feet of driveways, roadways, alleys, parking stalls, wheel bumpers, trash collection areas and areas where industrial equipment (forklifts, loaders, etc.) may operate. Meter bollards may be used in conjunction with manmade barriers such as wing walls, planters, steps, fences, and fireplaces to provide adequate protection to the MSA. Clearances between MSA and bollards shall be 18" to 24" with a maximum of 42" between bollards. LBER staff will determine the proper type of protection needed for your application.

4.4.1 Single Residential/ commercial

For single residential and commercial meter installations, refer to the LBER Standard Plans.

4.4.2 Multiple meter manifolds Residential/ Commercial

Multiple meter manifolds are used to serve multi-family residential units and businesses where required. Multiple meter installations are installed at a single location and preferably on a protected exterior wall of the multiple use structure. Multiple meter installations may utilize up to a three-tier installation and not more than 10 meters across. See the LBER Standard Plans for more details.

4.5 Meter Cabinets and Screens

4.5.1 Meter cabinets, recesses, and enclosures

Meter cabinets, recesses, and enclosures must comply with the general meter location requirements outlined in these guidelines. Additionally, they must comply with the following guidelines:

- Be gas-tight at all interior seams and corners, including the seal around the houseline entrance into the recess/enclosure.
- All seals must be permanent to prevent natural gas from entering the building or walls; materials such as silicone-based compounds can be used to make permanent seals.
- Meter recess interiors can be the same material as the structure's exterior provided it is gas-tight; if additional sealing is required, it must be completed before MSA installation and approved by LBER Engineering.
- Meter cabinets can be surface-mounted or partially recessed.
- Meter cabinets must be pre-approved by LBER to be used.
- Only natural gas-related facilities are allowed within a natural gas meter recess/enclosure; foreign equipment (such as electrical conduits, water lines, telephone or TV cable, irrigation controls, etc.) is prohibited; natural gas meter recesses/enclosures are not to be used as storage areas.
- Vented doors, lattice work or vented covers are permitted on the meter recess; the entire opening of the recess must be clear for installation and maintenance of the MSA and approved by LBER Engineering.
- A minimum three-foot (four-foot preferred) clear and level working space must be maintained in front of the cabinet, enclosure or recess opening to a height of 90" above final grade. Lesser clearances may be approved by LBER Engineering on a case by case basis.
- The wall area above the cabinet, enclosure or recess must be free of projections that might present a hazard to personnel servicing the MSA.
- The bottom floor of the recess or enclosure may be earth or paved and must be graded to prevent water from collecting inside the recess; if recess floor is paved, an opening four inches in diameter PVC sleeve must be provided around the riser; the required riser location is inside the recess and outside of the cabinet/enclosure.
- The recess walls and ceiling where they meet the exterior wall must be uncased and without open joints or other interruptions to the exterior wall finish.
- The ceiling must have a slope from back to front to facilitate escape of natural gas to the outside and be approved by LBER Engineering on a case by case basis.
- Meter-stacking is limited to three-tier for enclosure and recess designs. See LBER Standard Drawing A-985 L&R.
- Minimum dimensions for single MSAs are shown in the following table.
- Termination point for regulator vent piping shall be in an outside location pointing down at an elevation high enough to prevent water or foreign objects from entering or obstructing the vent opening. See Section 4.6.2.

Minimum dimension requirements for single or multiple MSAs can be obtained through your LBER representative.

4.5.2 Screens

Visual screens are permitted to improve the aesthetics of the meter installation with the following criteria:

- A minimum three-foot (four-foot preferred) clear and level working space must be maintained between the exterior structure wall and the screen.
- The workspace must be open to a height of 90" above final grade. Lesser clearances may be approved by LBER Engineering on a case by case basis.
- The workspace must be open on one side (no screen door, gate, or obstructions of any kind and accessible to LBER Staff and emergency personnel at all times).



4.6 Meter Rooms

Meter rooms are defined as an enclosed space within a building or structure that is to be used solely to house natural gas metering and regulating equipment. They must be physically separated by solid walls (doorways or accessways are discouraged) from other spaces that are for other uses. Meter rooms must not be used as storage areas at any time per City Municipal code, 15.40.080-B. It is the responsibility of the applicant to comply with all meter room provision and obtain all approvals and releases from LBER and LBDS before installation of gas service and meters by LBER. See LBER Standard Drawing A-983

The following criteria must be incorporated into the design of any meter room:

- All interior surfaces, joints, openings (penetrations) shall be gas-tight to prevent natural gas from leaking into the building. Doors and access are discouraged, however, if allowed they must be gas-tight when closed.
- All interior walls, ceilings, floors, and doors must be fire rated for a minimum of two hours.
- Floor drains are not permitted
- The floor to ceiling height must not be less than 7.5 feet high and no more than 15 feet high.
- The proposed meter location and meter room piping must be approved by LBER and in conformance with this manual, the most current edition of the California Plumbing code, Chapter 12; the California Mechanical code, Chapter 13; City Municipal Code; and Pipeline Safety Regulations, 49 C.F.R. Part 192.
- All meter rooms are classified by LBER as hazardous locations, Class I, Division 2 pursuant to NFPA 70, National electrical Code, Article 500. Therefore, all electrical installation in or that pass through the meter room (equipment, switches, light fixtures, etc.) shall conform to article 501 – Class I Location of the latest edition of NFPA 70, National Electrical Code.
- Light switches for meter rooms shall be located outside of the room and adjacent to the entry door with switch function identification.
- The meter room shall be provided with lighting meeting the minimum requirements of the California Building Code and shall be on an emergency back-up or an uninterruptable power supply (UPS).
- If the proposed building is designed for fire sprinklers the meter room shall be sprinklered per NFPA 13.
- Unistrut mounting to be provided per LBER Standard Drawing, A-983.
- Remote meter reading per section 4.7.
- After installation and commissioning of the gas meter room, the owner/ property management is to include in their standard operating procedures or CC&Rs the requirement for maintenance of mechanical ventilation and combustible gas detector equipment through annual testing and calibrations. A copy of the equipment test/calibration documents shall be sent to LBER Principal Construction Inspector's attention at LBGasDeveloperProjects@longbeach.gov to confirm the information has met the safety standard set for meter rooms. Please note that if LBER does not receive this annual documentation, LBER will provide a warning letter (red tag) that gas will be turned off within 90 days of non-response.

4.6.1 Mechanical Ventilation Requirements

Mechanical ventilations systems must be compliant with the requirements of the LBER, California Building Code, California Mechanical Code and the City of Long Beach Municipal Codes and ordinances. The applicant must submit calculations and documentation prepared by a California licensed professional engineer which demonstrates that the ventilation system for the natural gas meter room satisfies all requirements of the LBER as well as all applicable codes and standards. The mechanical ventilation design shall meet the following criteria prior to LBER installation of gas:

- A minimum of six air exchanges per hour.
- Air inlet vents and outlet exhaust fans must be configured and located to ensure a full exchange of air occurs throughout the entire room with each exchange.

- Either a back-up redundant exhaust fan system that detects and activates upon failure of the primary fan system, or a real-time continuous monitoring system with an output to an onsite manned building control room or off-site manned monitoring control center.
- Formal documentation to be provided as proof that the equipment for mechanical ventilation have appropriate alarms/lights tied in and have been tested and calibrated properly.

4.6.2 Regulator Relief Vent Pipe Requirements

A steel regulator relief vent pipe will be installed by LBER for each regulator proposed with the following criteria*:

- Minimum size shall be equal to or larger than the outlet of the regulator vent. The size of the pipe shall be increased by one nominal pipe diameter for every 20' of pipe.
- To the extent possible, the design shall minimize the length of vent pipe.
- Each regulator must have its own relief vent pipe. Vent pipes cannot be combined.
- Each vent pipe shall be marked to identify the regulator or device to which it is connected.
- The vent pipe design shall avoid liquid traps and be routed to the outside of the building at a location that meets all LBER clearances from openings or sources of combustion.
- The vent pipe shall terminate in a way as to prevent the entry of insect, foreign matter, and moisture.

**Alternative regulators may be utilized by LBER Engineering approval.*

4.6.3 Combustible Gas Detector Requirements

Each meter room shall have a combustible gas detection system with an audible alarm and strobe light located outside the meter room. The gas detection system equipment must be distinctly labeled as such and be installed and tested prior to the installation of meters. The combustible gas detector shall meet the following criteria:

- The Gas Sensor shall be mounted within the meter room no more than six inches from the ceiling.
- The transmitter shall be connected to the controller, outside of the meter room, with conduit meeting the requirements of Article 501 of NFPA 70, National Electrical Code for Class I, Division 2 locations.
- The controller shall be located outside of the meter room near the entry door and have a display showing the % lower explosive limit (%LEL) and the ability to silence the audible alarm upon acknowledgment of the alarm.
- A flashing red strobe light and audible alarm, to be activated when the %LEL is exceeded, shall be mounted on the exterior of the meter room visible and audible from the nearest public right of way.
- Formal documentation to be provided as proof that the equipment for gas detection have appropriate sensor alarms/lights tied in and have been tested and calibrated properly.

4.6.4 Security and Access Requirements

Access to the meter room must be available to LBER staff for meter reading, testing, inspection, maintenance, and emergency response at all times. Meter rooms shall have keys in a lockbox (provided by LBER) immediately adjacent to the meter room entry. Multiple meter rooms on the same property shall be keyed alike. All access doors shall be labeled as "Gas Meter Room" with LBER 24-hour emergency phone numbers listed.

4.7 Remote Meter Reading Requirements

As part of the LBER Automated Meter Reading (AMR) program, all newly-installed meters will have the ability to be read and monitored remotely. To do so may require LBER to install a remote module to ensure proper radio frequency transmissions. An ethernet and power connection may be required in locations where typical radio frequency communications are ineffective. This necessary equipment may be installed on nearby natural gas facilities, interior walls or an outside location.

4.8 Street/Alley Vacations

A vacation is defined by the *California Streets & Highways Code* as “The complete or partial abandonment or termination of the public right to use a street, highway, or public service easement”. Developers of private properties adjacent to streets and alleys may desire to improve their project through the vacation of portions of public right of way. The process of vacation or abandonment of public easements or rights of way is governed by Division 9, Part 3 - Public Street, Highways and Service Easement Vacation Law that require that certain information and findings be made and formal action by the legislative body, City Council, before public easements or rights of way can be vacated. See Section 2.3 of the *City of Long Beach Public Works Development Guideline*, <http://longbeach.gov/globalassets/pw/media-library/documents/permits/permits/public-works-development-guidelines> for more information on the vacation process in Long Beach or contact Signal Hill Public Works Engineering, (562) 989-7351, for proposed vacations within the City of Signal Hill.

Proposed vacations require the relocation of existing gas facilities to existing right of way and/or dedication of an easement to leave the existing gas facility in place as approved by LBER Engineering. Applicants are encouraged to schedule a pre-application conference. The LBER Pre-Application conference appointments can be made by contacting the ER Private Development Review Staff via email at LBGasDeveloperProjects@longbeach.gov.

4.9 Easements

Often during the Site Plan Review (SPR) process, a project will be conditioned to provide an easement when gas distribution lines are desired on private property. If a dedication or easement has already been included within a subdivision map no further review or fees are required unless the map originates within the City of Signal Hill. If the map is processed by the City of Signal Hill, the City of Long Beach will need to accept the easement as well. Quit claims are required when a project is removing or relocating an existing easement for gas service.

NOTE:

1. *Prior to submitting an application for a quit claim, the use of the easement must no longer be required. I.e. all utilities must be removed and/ or alternate access routes provided. Often times this requires a new easement, and construction work before the Quit Claim can be finalized.*
2. *A permit to build over an easement shall not be issued until a quit claim has been completed and recorded.*

Easements shall be approved by LBER Engineering and sized to provide adequate access for LBER equipment and personnel. Construction of structures over or near gas facilities within easements is prohibited. Certain decorative improvements in easements such as planters, decorative paving, site furniture, etc. may be considered on a case by case basis by LBER Engineering. The easement shall stipulate that:

- The easement provides 24/7 access to LBER for any purpose.
- Property owner shall be responsible to restore any improvements within the easement that are disturbed by LBER personnel for the purpose of accessing their facilities.

4.9.1 Easement Document Intake & Review

The LBDS with the assistance of LBPW handles the processing of all easements for the City of Long Beach. For projects within the City of Signal Hill, the applicant will be required to submit the proposed easement documents to LBPW for review and acceptance. The applicant shall submit the following items to LBPW:

- Legal Description and sketch prepared by a Licensed Surveyor including but not limited to:
 - » The block that the project lies within should be shown in its entirety, labeling the surrounding streets.
 - » Dimension the property in its entirety, and identified by lot, block and tract.
 - » Fully dimension the area in question.
 - » Shade or texture the area and identify pattern with legend.
 - » Label existing and proposed property lines.
- Current Title Report not less than 90 days old.
- Categorical exemption or environmental review (by LBDS or SHCD)
- Notice of Final Action/Conditions of Approval (If project went through the Site Plan Review process)

- Articles of Incorporation (For LLC ONLY)
- Confirmation letter from easement grantor that the easement is no longer required (Required for quit claim only)
- Copy of the easement to be quitclaimed (Quit Claim Only)

LBPW distributes the easement documents to the interested parties for review. Interested parties are requested to provide any comments or concerns within 30 days or sooner. LBPW then compiles all comments and conditions, then sends to the applicant. In total this step may take approximately 40 days.

Various City reviewers will check the proposed easements for conformance with existing conditions, City records, and surveying standards as well as consistency with adjacent City and private projects. Site visits are performed as applicable.

Multiple submittals may be required before the easement review is deemed complete. The timing of the plan check review process is dependent on the responsiveness of the applicant to make corrections. Applicants are encouraged to contact the reviewers if questions arise regarding the plan check comments.

4.9.2 Easement Document Processing

Within 3 days of all concerns being addressed, LBPW requests the following to happen:

1. LB City Attorney to draft the applicable document. This typically takes 10 days.
2. The request is placed on the LB City Council agenda. The date set is typically 8 weeks from the date of request.

LBPW shall provide the document to the applicant for execution. The applicant shall return the following items to finalize the LB City Council date:

- Executed documents
- Final legal description
- Final stamped and signed sketch suitable for recordation

NOTE: The executed documents MUST be returned a minimum of 4 weeks before the date of LB City Council action.

The LB City Council hears the item and either denies or approves the request. This step is typically complete approximately 8 weeks after the document processing step above. If approved, the process continues. If denied, the process will return to the resolution of concerns step.

Within 3 days of city council action, LBPW shall request the following:

1. LB City Attorney approve the document as to form.
2. LBPW Director of Public Works to execute the document.
3. LBPW to record the document.

Typically, the process to obtain all signatures and approvals takes 10 days.

Within 3 days of documents being finalized, LBPW shall send the document to the county for recordation. Typically, the process to record takes 10 days.

After the documents are recorded, the executed documents shall be provided to the applicant.

4.9.3 Easement Timeline

As shown in the preceding process, the timeline to execute an easement for gas service distribution lines on private property can take several months. Applicants are encouraged to start this process early in the project processing to ensure that the easements will be in place when desired. Note that, LBER staff cannot install your gas service distribution lines until the easement documents have been accepted by the Long Beach City Council and the documents have been submitted for recordation.



5

Construction



5.1 Construction Timeline

Upon completion of the following milestones, the proposed installation will be able to be scheduled for construction:

- A gas service account has been set up with LBER Utility Billing
- A deposit for the estimated cost of construction has been paid.
- LBDS or SHCD has issued a building permit for MEP work for the project
- SHPW has issued an encroachment permit to LBER Construction for work within the public right of way
- If Gas distribution lines on private property are requested, an easement must be approved (See Section 4.9).

In addition to the above requirements the scheduling of the services is dependent on the readiness of the construction project. LBER requires that adjacent street improvements be in place before installation of the service(s) by LBER Construction.

- Main line installation – Curb and gutter must be installed
- Service line installation – house line point of connection must be installed and signed off by LBDS or SHCD.
- Meter installation – All fees paid and a plumbing release from LBDS or SHCD.

Finish improvements such as paving, walkways, landscaping should be phased as to allow service installations. LBER will not be held responsible for damage if sufficient space is not reserved for the gas service(s) installation.

5.2 Construction within the vicinity of an active Gas line/service

All excavations on public and private property require a valid Dig Alert ticket from Underground Service Alert (USA). Excavators must contact USA by dialing 811 at least 48 hours prior to any excavation work.

The excavator shall immediately contact LBER 24-hour emergency at (562)-570-2140 upon damaging or exposing any LBER main or service. All active LBER facilities shall be protected in place by the excavator. Wrap damage of LBER mains or services will be repaired by LBER free of charge. Any other damage to LBER facilities will be repaired by LBER at the excavator's expense. Any repair or relocation work required on LBER facilities must be performed by LBER and will be subject to LBER's availability of resources.

Any exposed, active LBER main or service shall be supported at the excavator's expense with an approved LBER method. Any active LBER main or service exposed for a duration of over five days shall be protected from exposure to sunlight. Support design shall be submitted to LBER Engineering for approval prior to implementation.

A minimum 12" clearance around LBER's facilities shall be maintained by the excavator when installing new pipelines or other structures near LBER facilities. The excavator shall notify LBER Inspection at (562)570-2085 prior to backfilling around any active LBER main or service. The backfill material and method used by the excavator is subject to LBER Inspection's review and approval.

6

Fees, Guidelines, and Pertinent Info



6.1 Fees

CITY OF LONG BEACH FEES

<http://www.longbeach.gov/finance/services-and-permits/fees-and-charges/>

CITY OF SIGNAL HILL FEES

<https://www.cityofsignalhill.org/115/Fees>

6.2 Guidelines and Handbooks

CITY OF LONG BEACH ENERGY RESOURCES NATURAL GAS SERVICE GUIDELINES

<http://www.longbeach.gov/energyresources/information/engineering-specs-and-standards/>

CITY OF LONG BEACH PUBLIC WORKS DEVELOPMENT GUIDELINE

<http://longbeach.gov/globalassets/pw/media-library/documents/permits/permits/public-works-development-guidelines>

LONG BEACH PLANNING DEPARTMENT

<http://www.lbds.info/planning/default.asp>

SIGNAL HILL COMMUNITY DEVELOPMENT

<https://www.cityofsignalhill.org/16/Community-Development>

SIGNAL HILL PUBLIC WORKS

<https://www.cityofsignalhill.org/19/Public-Works>

SIGNAL HILL, A NEIGHBOR'S GUIDE TO DEVELOPMENT

<https://www.cityofsignalhill.org/DocumentCenter/View/3839/A-Neighbors-Guide-to-Development?bidId=>

SIGNAL HILL PROJECT DEVELOPMENT GUIDE

<https://www.cityofsignalhill.org/DocumentCenter/View/2829/Project-Development-Guide?bidId=>

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