BEAC
PUBLIC HEARING 2
AMENDMENTS

LOCAL ADOPTION OF THE LATEST CALIFORNIA BUILDING STANDARDS CODE AND UNIFORM HOUSING CODE

April 18, 2022

PREPARED BY

This information is available in alternative format by request at (562) 570-5237. For an electronic version of this document, visit our website at longbeach.gov/lbds/building/plan-review-service/code/.
TABLE OF CONTENT

<table>
<thead>
<tr>
<th>CHAPTER/SECTION NUMBER</th>
<th>TITLE</th>
<th>STATUS¹</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.96.040</td>
<td>Storm Water and Runoff and Pollution Control – Definitions</td>
<td>A</td>
<td>3</td>
</tr>
<tr>
<td>8.96.130</td>
<td>Storm Water and Runoff and Pollution Control – Control of Pollutants from New Development/Redevelopment Projects</td>
<td>A</td>
<td>3</td>
</tr>
<tr>
<td>8.96.210</td>
<td>Storm Water and Runoff and Pollution Control – Fees</td>
<td>A</td>
<td>3</td>
</tr>
<tr>
<td>18.05.010</td>
<td>Submittal Documents – General</td>
<td>A</td>
<td>4</td>
</tr>
<tr>
<td>18.05.030</td>
<td>Submittal Documents – Construction Documents</td>
<td>A</td>
<td>4</td>
</tr>
<tr>
<td>18.07.050</td>
<td>Inspections – Required Inspections</td>
<td>A</td>
<td>4</td>
</tr>
<tr>
<td>18.08.030</td>
<td>Certificate of Occupancy – Contents of Certificate</td>
<td>A</td>
<td>5</td>
</tr>
<tr>
<td>18.40.330</td>
<td>Building Code – Suspended Ceiling</td>
<td>A</td>
<td>5</td>
</tr>
<tr>
<td>18.40.500</td>
<td>Building Code – Quality of Nails</td>
<td>A</td>
<td>6</td>
</tr>
<tr>
<td>18.40.540</td>
<td>Building Code – Wood-frame Shear Walls</td>
<td>A</td>
<td>6</td>
</tr>
<tr>
<td>18.40.600</td>
<td>Building Code – Attachment of Sheathing</td>
<td>A</td>
<td>7</td>
</tr>
<tr>
<td>18.40.630</td>
<td>Building Code – Intermodal Shipping Containers</td>
<td>A</td>
<td>7</td>
</tr>
<tr>
<td>18.41.170</td>
<td>Residential Code – Minimum Number of Braced Wall Panels</td>
<td>A</td>
<td>15</td>
</tr>
<tr>
<td>18.49.010</td>
<td>Existing Building Code – Adoption of California Existing Building Code</td>
<td>A</td>
<td>15</td>
</tr>
<tr>
<td>18.49.020</td>
<td>Existing Building Code – Terms not Defined</td>
<td>E*</td>
<td>15</td>
</tr>
<tr>
<td>18.49.030</td>
<td>Existing Building Code – Change of Occupancy, Compliance</td>
<td>A*</td>
<td>15</td>
</tr>
<tr>
<td>18.49.040</td>
<td>Existing Building Code – Change of Occupancy, Change in the Character of Use</td>
<td>E*</td>
<td>16</td>
</tr>
<tr>
<td>18.49.060</td>
<td>Existing Building Code – Moved Structures, Conformance</td>
<td>E*</td>
<td>16</td>
</tr>
<tr>
<td>18.61</td>
<td>NPDES and SUSMP Regulations</td>
<td>D</td>
<td>16</td>
</tr>
<tr>
<td>18.66</td>
<td>Visibility of Dwelling Units</td>
<td>D</td>
<td>17</td>
</tr>
<tr>
<td>18.71.060</td>
<td>Voluntary Earthquake Hazard Reduction in Existing Reinforced Concrete Buildings and Concrete Frame Buildings with Masonry Infills – Dynamic Lateral Analysis Procedure</td>
<td>A</td>
<td>20</td>
</tr>
<tr>
<td>18.74</td>
<td>Low Impact Development Standards</td>
<td>D</td>
<td>20</td>
</tr>
</tbody>
</table>

FOOTNOTE:
1. E = Existing chapter with no changes
   A = Altered chapter
   D = Deleted chapter
   * = These items are included only for a Title clarification

Please note: Only chapters and their associated sections with known amendments being presented at the April BEAC meeting are included in this document. Chapters and sections with additional anticipated amendments, to be presented at a future BEAC meeting, have been excluded from the table of contents and this document, as a whole, and will be addressed in the supporting documentation for upcoming BEAC meetings. The use of ellipses (…) in this document represent the omission of text within a chapter or section.

Omitted text is anticipated to remain unchanged and may be found in the 2020 Long Beach Municipal Code at https://library.municode.com/ca/long_beach/codes/municipal_code.

RATIONALE AND FINDINGS:

A description of the specific rationale and findings for the amendments referenced in this document can be found in the separate "Findings" document prepared for BEAC Public Hearing 2.
PROPOSED AMENDMENTS:

CHAPTER 8.96
STORMWATER AND RUNOFF AND POLLUTION CONTROL

8.96.040 – Definitions.

C. "Director" shall mean the Director of Public Works of the City of Long Beach, the Director of Environmental Planning of the Port of Long Beach, the Director of Development Services of the City of Long Beach or duly authorized designee.

8.96.130 – Control of pollutants from new development/redevelopment projects.

A. Applicability. Prior to the construction of any new development and redevelopment project that is subject to development the planning and land development program or construction program requirements specified in the MS4 NPDES Permit, such project shall be evaluated by the City for its potential to discharge pollutants to the MS4 and shall reduce or prevent such discharge to the maximum extent possible. Such projects also shall comply with the development requirements specified in the Los Cerritos Channel Watershed Management Program, Near Shore Long Beach Watershed Management Program, the Lower San Gabriel River Watershed Management Program, or any other Watershed Management Program to which the City is currently a participant applicable requirements of the MS4 NPDES Permit and Low Impact Development (LID) standards and implemented in accordance with National Pollutant Discharge Elimination System (NPDES) Manual developed by the City. The City’s Watershed Management Programs are hereby incorporated by reference and shall be made available for review and use by the public in the Public Works Department Office.

B. Requirement. Once a development planning-subject project has been evaluated for its potential to discharge pollutants to the MS4, the City shall require appropriate BMPs, both structural and nonstructural, to be implemented on a post-construction basis, and shall require a maintenance agreement to assure the proper performance of such BMPs in accordance with the procedure of the NPDES Manual.

C. Enforcement. The Director shall be authorized to require plan review of construction documents, issuance of applicable permits, conduct pre- and post-construction inspections and request reports for the purpose of verifying proper operation and maintenance of structural BMPs in accordance with the procedure of the NPDES Manual.

D. NPDES Manual. The Director shall prepare, maintain, and update, as deemed necessary and appropriate, the NPDES Manual and shall include technical information and implementation parameters, alternative compliance for technical infeasibility, as well as other rules, requirements and procedures as the City deems necessary, for implementing the provisions of this Section.

8.96.210 – Fees.

The City Council may establish fees to recover costs for complying with the requirements of this Chapter, including, but not limited to, plan checking review fees, cleanup and abatement fees, and industrial and commercial inspection fees, which may be fixed and established from time to time by the City Council by resolution.
CHAPTER 18.05
SUBMITTAL DOCUMENTS

18.05.010 – General.

Submittal documents consisting of construction documents, written record of computations, statement of special inspections, geotechnical report and other pertinent data shall be submitted with each permit application. The construction documents shall be prepared by a registered design professional licensed in the State of California to practice as such. Where special conditions exist, the Building Official is authorized to require additional construction documents to be prepared by a registered design professional. Where allowed by the building official, documents may be submitted in a digital format.

EXCEPTION: The Building Official is authorized to waive the submission of construction documents and other data not required to be prepared by a registered design professional if the Building Official finds that the nature of the work applied for is such that the review of construction documents is not necessary to obtain compliance with the provisions of this title, municipal code or other ordinances of the City or laws and statutes of the State.

18.05.030 – Construction documents.

A. Information on building or structure required.

6. Construction documents shall show all mitigation measures required under the National Pollutant Discharge Elimination System (NPDES) permit issued to the City of Long Beach and the requirements of the Standard Urban Storm Water Mitigation Plan (SUSMP) mandated by the California Regional Water Quality Control Board in accordance with Chapter 18.61 NPDES and SUSMP Regulations Section 8.96.130.

CHAPTER 18.07
INSPECTIONS

18.07.050 – Required inspections.

A. Building. The Building Official, upon notification as specified in Section 18.07.030, shall make the inspections set forth in subsection, if applicable.

5. Types IV-A, IV-B and IV-C construction protection inspection. In buildings of Types IV-A, IV-B and IV-C construction, where connection fire-resistance ratings are provided by wood cover calculated to meet the requirements of Section 2304.10.1, inspection of the wood cover shall be made after the cover is installed, but before any other coverings or finishes are installed.

65. Lath, gypsum board and gypsum panel product inspection. Lath, gypsum board and gypsum panel product inspections shall be made after lathing, gypsum board and gypsum panel products, interior and exterior, are in place, but before any plastering is applied or gypsum board and gypsum panel product joints and fasteners are taped and finished.
76. Fire- and smoke-resistant penetrations. Protection of joints and penetrations in fire resistance-rated assemblies, smoke barriers and smoke partitions shall not be concealed from view until inspected and approved.

87. Energy efficiency inspections. Inspections shall be made to determine compliance with the California Energy Code adopted in Chapter 18.46 and shall include, but not be limited to, inspection for: envelope insulation R- and U-values, fenestration U-value, duct system R-value, and HVAC and water-heating equipment efficiency.

98. Reinforced concrete. When forms and reinforcing steel are in place ready for concrete.

109. Reinforced masonry. In grouted masonry when vertical reinforcing steel is in place and other reinforcing steel distributed and ready for placing, but before any units are laid up.

1110. Structural steel. When structural steel members are in place and required connections are complete, but before concealing any members or connection.

1211. Other inspections. In addition to the inspections specified in this subsection, the Building Official is authorized to make or require other inspections of any construction work to ascertain compliance with the provisions of this title and other laws that are enforced by the Building Official.

1312. Special inspections. When special inspections are required by Chapter 17 of the California Building Code adopted in Chapter 18.40.

1413. Final inspection. Final inspection shall be made after all work required by the permit is completed and prior to occupancy. If located in a flood hazard area, flood hazard documentation required in Chapter 16 and Appendix G of the California Building Code adopted in Chapter 18.40, or Chapter 3 of the California Residential Code adopted in Chapter 18.41 shall be submitted to the Building Official prior to final inspection.

CHAPTER 18.08
CERTIFICATE OF OCCUPANCY

18.08.030 – Contents of certificate.

11. If an automatic sprinkler system is provided, the type of automatic sprinkler system and whether the sprinkler system is required.

CHAPTER 18.40
BUILDING CODE

18.40.330 – Add CBC Section 1613.6—Suspended ceiling.
1613.6.4 Special Requirements for Means of Egress. Suspended ceiling assemblies located along means of egress serving an occupant load of 30 or more and lobbies accessory to Group A Occupancies shall comply with the following provisions.

1613.6.4.1 General. Ceiling suspension systems shall be connected and braced with vertical hangers attached directly to the structural deck along the means of egress serving an occupant load of 30 or more and at lobbies accessory to Group A Occupancies. Spacing of vertical hangers shall not exceed 2 feet (610 mm) on center along the entire length of the suspended ceiling assembly located along the means of egress or at the lobby.

18.40.500 – Add CBC Section 2304.10.3.12.1—Quality of nails.

Section 2304.10.3.12.1 is added to Chapter 23 of the California Building Code to read as follows:

2304.10.3.12.1 Quality of Nails. In Seismic Design Category D, E or F, mechanically driven nails used in wood structural panel shear walls shall meet the same dimensions as that required for hand-driven nails, including diameter, minimum length penetration and minimum head diameter. Clipped head or box nails are not permitted in new construction. The allowable design value for clipped head nails in existing construction may be taken at no more than shall be multiplied by the nail-head-area ratio of the clipped head nails to that of the same size hand-driven nails.

18.40.540 – Amend CBC Section 2306.3—Wood-frame shear walls.

Section 2306.3 of the California Building Code is amended to read as follows:

2306.3 Wood-frame shear walls. Wood-frame shear walls shall be designed and constructed in accordance with ANSI/AWC SDPWS. For structures assigned to Seismic Design Category D, E, or F, application of Tables 4.3A and 4.3B of ANSI/AWC SDPWS shall include the following:

1. Wood structural panel thickness for shear walls shall not be less than 3/8 inch thick and studs shall not be spaced at more than 16 inches on center.

2. The maximum nominal unit shear capacities for 3/8 inch wood structural panels resisting seismic forces in structures assigned to Seismic Design Category D, E or F is 400 pounds per linear foot (plf).

   Exception: Other nominal unit shear capacities may be permitted if such values are substantiated by cyclic testing and approved by the building official.

3. Nails shall be placed not less than 1/2 inch in from the panel edges and not less than 3/8 inch from the edge of the connecting members for shear greater than 350 plf using ASD or 500 plf using LRFD. Nails shall be placed not less than 3/8 inch from panel edges and not less than 1/4 inch from the edge of the connecting members for shears of 350 plf or less using ASD or 500 plf or less using LRFD.

4. Table 4.3B application is not allowed for structures assigned to Seismic Design Category D, E, or F.
For structures assigned to Seismic Design Category D, E, or F, application of Table 4.3C of ANSI/AWC SDPWS shall not be used below the top level in a multi-level building for structures.

Where panels are fastened to framing members with staples, requirements and limitations of ANSI/AWC SDPWS shall be met and the allowable shear values set forth in Table 2306.3(1), 2306.3(2) or 2306.3(3) shall only be permitted for structures assigned to Seismic Design Category A, B, or C.

Exception: Allowable shear values where panels are fastened to framing members with staples may be used if such values are substantiated by cyclic testing and approved by the building official.

The allowable shear values in Tables 2306.3(1) and 2306.3(2) are permitted to be increased 40 percent for wind design. Panels complying with ANSI/APA PRP-210 shall be permitted to use design values for Plywood Siding in the ANSI/AWC SDPWS.

18.40.600 – Amend CBC Section 2308.6.9—Attachment of sheathing.

Section 2308.6.9 of the California Building Code is amended to read as follows:

2308.6.9 Attachment of sheathing. Fastening of braced wall panel sheathing shall not be less than that prescribed in Tables 2308.6.1 or 2304.10.24. Wall sheathing shall not be attached to framing members by adhesives. Staple fasteners in Table 2304.10.24 shall not be used to resist or transfer seismic forces in structures assigned to Seismic Design Category D, E or F.

Exception: Staples may be used to resist or transfer seismic forces when the allowable shear values are substantiated by cyclic testing and approved by the Building Official.

All braced wall panels shall extend to the roof sheathing and shall be attached to parallel roof rafters or blocking above with framing clips (18 gauge minimum) spaced at a maximum of 24 inches (6096 mm) on center with four 8d nails per leg (total eight 8d nails per clip, minimum). Braced wall panels shall be laterally braced at each top corner and at intervals not to exceed maximum 24 inches (6096 mm) intervals along the top plate of discontinuous vertical framing.

18.40.630 – Add Amend CBC Section 31143115—Intermodal shipping containers.

Section 3114 is added to 3115 of the California Building Code is amended to read as follows:

SECTION 31143115
INTERMODAL SHIPPING CONTAINERS

31143115.1 General. The provisions of Section 31143115 and other applicable sections of this code shall apply to intermodal shipping containers that are repurposed for use as buildings or structures, or as a part of buildings or structures.

Exceptions:

1. Stationary storage battery arrays located in intermodal shipping containers complying with Chapter 12 of the California Fire Code. Intermodal shipping containers previously approved as existing relocatable buildings complying with Chapter 14 of the California Existing Building Code.
2. **Intermodal shipping containers that are listed as equipment complying with the standard for equipment, such as air chillers, engine generators, modular datacenters, and other similar equipment.** Stationary battery storage arrays located in intermodal shipping containers complying with Chapter 12 of the California Fire Code.

3. **Intermodal shipping containers housing or supporting experimental equipment are exempt from the requirements of Section 3114 provided they comply with all of the following:** Intermodal shipping containers that are listed as equipment complying with the standard for equipment, such as air chillers, engine generators, modular datacenters, and other similar equipment.
   
   a. Single-unit stand-alone intermodal shipping containers shall be supported at grade level and used only for occupancies as specified under Risk Category I in Table 1604.5;
   
   b. Single-unit stand-alone intermodal shipping containers shall be located a minimum of 8 feet from adjacent structures and are not connected to a fuel gas system or fuel gas utility; and
   
   c. In hurricane-prone regions and flood hazard areas, single-unit stand-alone intermodal shipping containers are designed in accordance with the applicable provisions of Chapter 16.

4. **Intermodal shipping containers approved as temporary structures complying with Section 3103.** Intermodal shipping containers housing or supporting experimental equipment are exempt from the requirements of Section 3115, provided they comply with all of the following:

   4.1. Such units will be single stand-alone units supported at grade level and used only for occupancies as specified under Risk Category I in Table 1604.5.
   
   4.2. Such units are located a minimum of 8 feet (2438 mm) from adjacent structures, and are not connected to a fuel gas system or fuel gas utility.
   
   4.3. In hurricane-prone regions and flood hazard areas, such units are designed in accordance with the applicable provisions of Chapter 16.

5. **Single-unit stand-alone intermodal shipping containers used as temporary storage or construction trailer on active construction sites.** Construction support facilities for uses and activities not directly associated with the actual processes of construction, including but not limited to, offices, meeting rooms, plan rooms, other administrative or support functions shall not be exempt from Section 3114. [HCD] Shipping containers constructed or converted off-site that meet the definition of Factory-built Housing in Health and Safety Code Section 19971 or Commercial Modular(s) as defined in Health and Safety Code Section 18001.8 shall be approved by the Department of Housing and Community Development.

6. **Single-unit stand-alone intermodal shipping containers used as temporary storage or construction trailer on active construction sites.** Construction support facilities for uses and activities not directly associated with the actual processes of construction, including but not limited to, offices, meeting rooms, plan rooms, other administrative or support functions shall not be exempt from Section 3115.

3114.3115. Construction documents. The construction documents shall contain information to verify the dimensions and establish the physical properties of the steel components, and wood floor components, of the intermodal shipping container, in addition to the information required by Chapter 18.05 of the Long Beach Municipal Code and Section 1603.
31143115.3 Intermodal shipping container information. Intermodal shipping containers shall bear the manufacturer's existing data plate containing the following information as required by ISO 6346 and verified by an approved agency. A report of the verification process and findings shall be provided to the building owner.

1. Manufacturer’s name or identification number.
2. Date manufactured.
3. Safety approval number.
4. Identification number.
5. Maximum operating gross mass or weight (kg) (lbs).
6. Allowable stacking load for 1.8G (kg) (lbs).
7. Transverse racking test force (Newtons).
8. Valid maintenance examination date.

Where approved by the building official, the markings and manufacturer’s existing data plate are permitted to be removed from the intermodal shipping containers before they are repurposed for use as buildings or structures or as part of buildings or structures.

31143115.4 Protection against decay and termites. Wood structural floors of intermodal shipping containers shall be protected from decay and termites in accordance with the applicable provisions of Section 2304.12.1.1.

31143115.5 Under-floor ventilation. The space between the bottom of the floor joists and the earth under any intermodal shipping container, except spaces occupied by basements and cellars, shall be provided with ventilation in accordance with Section 1202.4.

31143115.6 Roof assemblies. Intermodal shipping container roof assemblies shall comply with the applicable requirements of Chapter 15.

Exception: Single-unit, stand-alone intermodal shipping containers not attached to, or stacked vertically over, other intermodal shipping containers, buildings or structures.

31143115.7 Joints and voids. Joints and voids that create concealed spaces between intermodal shipping containers, that are connected or stacked, at fire-resistance-rated walls, floor or floor/ceiling assemblies and roofs or roof/ceiling assemblies shall be protected by an approved fire-resistant joint system in accordance with Section 715.

31143115.8 Structural. Intermodal shipping containers that conform to ISO 1496-1 and are repurposed for use as buildings or structures, or as a part of buildings or structures, shall be designed in accordance with Chapter 16 and this section.

31143115.8.1 Foundations and supports. Intermodal shipping containers repurposed for use as a permanent building or structure shall be supported on foundations or other supporting structures designed and constructed in accordance with Chapters 16 through 23.

31143115.8.1.1 Anchorage. Intermodal shipping containers shall be anchored to foundations or other supporting structures as necessary to provide a continuous load path for all applicable design and environmental loads in accordance with Chapter 16.
3115.8.1.2 Stacking. Intermodal shipping containers used to support stacked units shall comply with Section 3115.8.4.

31143115.8.2 Welds. All new welds and connections shall be equal to or greater than the original connections. The strength of new welds and connections shall be no less than the strength provided by the original connections. All new welds and connections shall be designed and constructed in accordance with Chapters 16, 17 and 22.

3114.8.3 Openings in containers. Where openings are made in container walls, floors, and roofs for doors, windows and other similar openings:

1. The openings shall be framed with steel elements that are designed in accordance with Chapter 16 and Chapter 22.

2. The cross section and material grade of any new steel element shall be equal to or greater than the steel element removed.

3115.8.3 Structural design. The structural design of the intermodal shipping containers repurposed for use as a building or structure, or as part of a building or structure, shall comply with Section 3115.8.4 or 3115.8.5.

31143115.8.4 Detailed structural design procedure. A structural analysis meeting the requirements of this section shall be provided to the building official to demonstrate the structural adequacy of the intermodal shipping containers.

Exception: Structures using an intermodal shipping container that meet the limitation of Section 3114.8.5.1 and designed in accordance with the simplified procedure in Section 31143115.8.5.

31143115.8.4.1 Material properties. Structural material properties for existing intermodal shipping container steel components shall be established by material testing where the steel grade and composition cannot be identified by the manufacturer’s designation as to manufacture and mill test Section 2202.

31143115.8.4.2 Seismic design parameters. The seismic force-resisting system shall be designed and detailed in accordance with ASCE 7 and one of the following:

1. Where all or portions of the intermodal shipping container sides profiled steel panel elements are considered to be the seismic force-resisting system, design and detailing shall be in accordance with AISI S100 and the ASCE 7, Table 12.2-1 requirements for light-frame bearing-wall systems with shear panels of all other materials steel systems not specifically detailed for seismic resistance, excluding cantilevered column systems.

2. Where all or portions of intermodal shipping container sides the profiled steel panel elements are retained, but are not considered to be part of the seismic force-resisting system, an independent seismic force-resisting system shall be selected, designed and detailed in accordance with ASCE 7 Table 12.2-1 or.

3. Where all or portions of the intermodal shipping container sides profiled steel elements are retained and integrated into a seismic force-resisting system other than as permitted by Section 31143115.8.4.2 Item 1, seismic design parameters shall be developed from testing and analysis in accordance with Section 18.03.060 of the Long Beach Municipal Code and ASCE 7 Section 12.2.1.1 or 12.2.1.2.

31143115.8.4.3 Allowable shear value. The allowable shear values for the intermodal shipping container profiled steel panel side walls and end walls shall be demonstrated by testing and analysis in accordance with Section 18.03.060 of the Long Beach Municipal Code determined in accordance with the design approach selected in Section 3115.8.4.2. Where penetrations are
made in the side walls or end walls designated as part of the lateral force-resisting system, the penetrations shall be substantiated by rational analysis.

\textbf{31143115.8.5} Simplified structural design procedure of single-unit containers. Single-unit intermodal shipping containers conforming to the limitations of Section \textbf{31143115.8.5.1} shall be permitted to be designed in accordance with Sections \textbf{31143115.8.5.2} and \textbf{31143115.8.5.3}.

\textbf{31143115.8.5.1} Limitations. Use of Section \textbf{31143115.8.5} is subject to all the following limitations:

1. The intermodal shipping container shall be a single-unit, stand-alone unit supported on a foundation and shall not be in contact with or supporting any other shipping container or other structure.

2. The intermodal shipping container’s top and bottom rails, corner castings, and columns or any portion thereof shall not be notched, cut, or removed in any manner.

3. The intermodal shipping container shall be erected in a level and horizontal position with the floor located at the bottom.

\textbf{31143115.8.5.2} Structural design assumptions. Where permitted by Section \textbf{31143115.8.5.1}, single-unit, stand-alone intermodal shipping containers shall be designed using the following assumptions for the profiled steel panel side walls and end walls:

1. The appropriate detailing requirements contained in Chapters 16 through 23.

2. Response modification coefficient, \( R = 2.5 \).

3. Over strength factor, \( \Omega_0 = 2.5 \).

4. Deflection amplification factor, \( C_d = 2 \).

5. Limits on structural height, \( h_n = 9.5 \text{ feet (2900 mm)} \).

\textbf{31143115.8.5.3} Allowable shear value. The allowable shear values for the intermodal shipping container profiled steel panel side walls (longitudinal) and end walls (transverse) for wind design and seismic design using the coefficients of Section \textbf{31143115.8.5.2} shall be in accordance with Table \textbf{31143115.8.5.3}, provided that all of the following conditions are met:

1. The total linear length of all openings in any individual side walls or end walls shall be limited to not more than 50 percent of the length of that side walls or end walls, as shown in Figure \textbf{31143115.8.5.3(1)}.

2. Any full height wall length, or portion thereof, less than 4 feet (305 mm) long shall not be considered as a portion of the lateral force-resisting system, as shown in Figure \textbf{31143115.8.5.3(2)}.

3. All side walls or end walls used as part of the lateral force-resisting system shall have an existing or new boundary element on all sides to form a continuous load path, or paths, with adequate strength and stiffness to transfer all forces from the point of application to the final point of resistance, as shown in Figure \textbf{31143115.8.5.3(3)}. The existing door interlocking mechanism shall not be considered as a component of the required load path.
4. Where openings are made in container walls, floors or roofs for doors, windows and other openings:

4.1. The openings shall be framed with steel elements that are designed in accordance with Chapters 16 and 22.

4.2. The cross section and material grade of any new steel element shall be equal to or greater than the steel element removed.

4.5. A maximum of one penetration not greater than a 6-inch (152 mm) diameter hole for conduits, pipes, tubes or vents, or not greater than 16 square inches (10 322 mm²) for electrical boxes, is permitted for each individual 8 feet length (2438 mm) of lateral force-resisting wall. Penetrations located in walls that are not part of the wall lateral force-resisting system shall not be limited in size or quantity. Existing intermodal shipping containers vents shall not be considered a penetration, as shown in Figure 31143115.8.5.3(4).

5.6. End wall door or doors designated as part of the lateral force-resisting system shall be intermittently welded closed around the full perimeters of the door panels.

### TABLE 31143115.8.5.3
ALLOWABLE SHEAR VALUES FOR INTERMODAL SHIPPING CONTAINER PROFILED STEEL PANEL
SIDE WALLS AND END WALLS FOR WIND OR SEISMIC LOADING

<table>
<thead>
<tr>
<th>CONTAINER DESIGNATION</th>
<th>CONTAINER DIMENSION (Nominal Length)</th>
<th>CONTAINER DIMENSION (Nominal Height)</th>
<th>ALLOWABLE SHEAR VALUES (PLF)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Side Wall</td>
</tr>
<tr>
<td>1EEE</td>
<td>45 feet (13.7 M)</td>
<td>9.5 feet (2896 mm)</td>
<td>75</td>
</tr>
<tr>
<td>1EE</td>
<td></td>
<td>8.6 feet (2591 mm)</td>
<td></td>
</tr>
<tr>
<td>1AAA</td>
<td>40 feet (12.2 M)</td>
<td>9.5 feet (2896 mm)</td>
<td>84</td>
</tr>
<tr>
<td>1AA</td>
<td></td>
<td>8.5 feet (2592 mm)</td>
<td></td>
</tr>
<tr>
<td>1A</td>
<td></td>
<td>8.0 feet (2438 mm)</td>
<td></td>
</tr>
<tr>
<td>1AX</td>
<td></td>
<td>&lt;8.0 feet (2483 mm)</td>
<td></td>
</tr>
<tr>
<td>1BBB</td>
<td>30 feet (9.1 M)</td>
<td>9.5 feet (2896 mm)</td>
<td>112</td>
</tr>
<tr>
<td>1BB</td>
<td></td>
<td>8.5 feet (2591 mm)</td>
<td></td>
</tr>
<tr>
<td>1B</td>
<td></td>
<td>8.0 feet (2438 mm)</td>
<td></td>
</tr>
<tr>
<td>1BX</td>
<td></td>
<td>&lt;8.0 feet (2438 mm)</td>
<td></td>
</tr>
<tr>
<td>1CC</td>
<td>20 feet (9.1 M)</td>
<td>8.5 feet (2591 mm)</td>
<td>168</td>
</tr>
<tr>
<td>1C</td>
<td></td>
<td>8.0 feet (2438 mm)</td>
<td></td>
</tr>
<tr>
<td>1CX</td>
<td></td>
<td>&lt;8.0 feet (2438 mm)</td>
<td></td>
</tr>
</tbody>
</table>

a. The allowable strength shear values for the side walls and end walls of the intermodal shipping containers are derived from ISO 1496-1 and reduced by a factor of safety of 5.

b. Container designation type is derived from ISO 668.

c. Limitations of Sections 31143115.8.5.1 and 31143115.8.5.3 shall apply.
FIGURE 3443115.8.5.3(1)
Bracing Unit Distribution – Maximum Linear Length

FIGURE 3443115.8.5.3(2)
Bracing Unit Distribution – Minimum Linear Length
FIGURE 3443115.8.5.3(3)
Bracing Unit Distribution – Boundary Elements

FIGURE 3443115.8.5.3(4)
Bracing Unit Distribution – Penetrating Limitations
CHAPTER 18.41
RESIDENTIAL CODE

18.41.170 – Amend CRC Section R602.10.2.3—Minimum number of braced wall panels.

Section R602.10.2.3 of the California Residential Code is amended to read as follows:

R602.10.2.3 Minimum number of braced wall panels. Braced wall lines with a length of 16 feet (4877 mm) or less shall have not less than a minimum of two braced wall panels of any length or one braced wall panel equal to 48 inches (1219 mm) or more. Braced wall lines greater than 16 feet (4877 mm) shall have not less than a minimum of two braced wall panels. In Seismic Design Category D0, D1, or D2, no braced wall panel shall have a contributing length be less than 48 inches in length or as required in Section R602.10.3, whichever is greater. In Seismic Design Category D0, D1, or D2.

CHAPTER 18.49
EXISTING BUILDING CODE

18.49.010 – Adoption of California Existing Building Code.

The City Council adopts and incorporates by reference as though set forth in full in this chapter the 2022 Edition of the California Existing Building Code (herein referred to as “California Existing Building Code”). The California Existing Building Code is Part 10 of the California Code of Regulations, Title 24, also referred to as the California Building Standards Code. This part is based on the provisions of the 2021 Edition of the International Existing Building Code (herein referred to as the “International Existing Building Code”) as developed by the International Code Council with necessary California amendments. The following appendix and chapters of the California Existing Building Code are included: Appendix A, Chapters A2, A3, and A4. The following sections, chapters or appendices of the California Existing Building Code are deleted: Sections 101 through 117 of Chapter 1, Division II; Chapters 6 through 143; Appendix A, Chapter A1, Appendices B through D; and Resource A.

The adoption of the California Existing Building Code is subject to the changes, amendments and modifications to said code as provided in this chapter, and certain provisions of the Long Beach Municipal Code, which shall remain in full force and effect as provided in this title. Such codes and code provisions shall constitute and be known as the Long Beach Existing Building Code. A copy of the California Existing Building Code, printed as code in book form, shall be on file in the Office of the City Clerk.

18.49.020 – Amend CEBC Section 201.4—Terms not defined.

Section 201.4 of the California Existing Building Code is amended to read as follows:

201.4 Terms not defined. Where terms are not defined through the methods authorized by this section, such terms shall have ordinarily accepted meanings such as the context implies. Webster’s Third New International Dictionary of the English Language, Unabridged, shall be considered as providing ordinarily accepted meanings.

18.49.030 – Amend CEBC Section 506.1—Change of occupancy, compliance.

Section 506.1 of the California Existing Building Code is amended to read as follows:

506.1 Compliance. No change shall be made in the use or occupancy of any building unless such building is made to comply with the requirements of the California Building Code for the use or...
occupancy. Changes in use or occupancy in a building or portion thereof shall be such that the existing building is not less complying with the provisions of this code than the existing building or structure was prior to the change. Subject to the approval of the Building Official, the use or occupancy of existing buildings shall be permitted to be changed and the building is allowed to be occupied for purposes in other groups without conforming to all of the requirements of this code for those groups, provided the new or proposed use is less hazardous, based on life and fire risk, than the existing use. For the purpose of this section, the order of least hazardous group to highest hazardous group is as follows:

Group U (least hazardous group)
Groups R-3 and R-3.1
Group S-2
Groups B, C, F, L, M, H and S-1
Groups R-1, R-2, R-2.1 and R-4
Groups A, E and I (highest hazardous group)

Exception: The building or structure need not be made to comply with Chapter 16 of the California Building Code unless required by Section 506.54.

18.49.040 – Amend CEBC Section 506.1.1—Change of occupancy, change in the character of use.

Section 506.1.1 of the California Existing Building Code is amended to read as follows:

506.1.1 Change in the character of use. A change in occupancy with no change of occupancy classification or an increase in occupant load within the same occupancy classification shall not be made to any building or structure that will subject the building or structure to any special provisions of the applicable California codes, without approval of the Building Official. Compliance shall be only as necessary to meet the specific provisions and is not intended to require the entire building be brought into compliance.

18.49.060 – Amend CEBC Section 1401.2—Moved structures, conformance.

Section 1401.2 of the California Existing Building Code is amended to read as follows:

1401.2 Conformance. The building or structure shall be safe for human occupancy as determined by the California Fire Code and Chapter 18.45 of the Long Beach Municipal Code. Any repair, alteration or change of occupancy undertaken within the moved building or structure shall comply with the requirement of this code applicable to the work being performed. Buildings or structures moved into or within the City shall comply with the provisions of this code and Chapter 18.60 of the Long Beach Municipal Code for new buildings or structures, whichever is more restrictive. Any field-fabricated elements shall comply with the requirements of the California Building Code or the California Residential Code as applicable. [HCD 1 & HCD 2] After July 1, 1978, local ordinances or regulations for moved apartment houses and dwellings shall permit the retention of existing materials and methods of construction, provided the apartment house or dwelling complies with the building standards for foundations applicable to new construction and does not become or continue to be a substandard building. For additional information, see Health and Safety Code Section 17958.9.

18.61.010 — Purpose.

CHAPTER 18.61
NPDES AND SUSMP REGULATIONS
The purpose of this chapter is to provide regulations and give legal effect to certain requirements of the National Pollutant Discharge Elimination System (NPDES) permit issued to the City of Long Beach, and the subsequent requirements of the Standard Urban Storm Water Mitigation Plan (SUSMP), mandated by the California Regional Water Quality Control Board, Los Angeles region (RWQCB). The intent of these regulations is to effectively prohibit non-storm water discharges into the storm drain systems or receiving waters and to require source control BMP to prevent or reduce the discharge of pollutants into the storm water to the maximum extent practicable.

18.61.020 — Definition.

Unless otherwise expressly stated, the following words and terms shall, for the purpose of this chapter, have the meanings as defined in the NPDES and SUSMP Regulations Manual. Where the terms are not defined in the NPDES and SUSMP Regulations Manual, such terms shall have ordinarily accepted meaning such as the context implies. Webster’s Third New International Dictionary of the English Language, Unabridged shall be considered as providing ordinarily accepted meanings.

18.61.030 — Exception.

Non-storm water discharges into the storm drain systems or to receiving waters are prohibited except where such discharges are expressly permitted in the NPDES and SUSMP Regulations Manual.

18.61.040 — Applicability.

New development projects and redevelopment projects in the City subject to the design and implementation of post-construction controls to mitigate storm water pollution, prior to completion of the projects, shall apply if required in the NPDES and SUSMP Regulations Manual.

18.61.050 — NPDES and SUSMP Regulations Manual.

A. The Building Official shall prepare, maintain, and update, as deemed necessary and appropriate, the NPDES and SUSMP Regulations Manual and shall include technical information and implementation parameters, alternative compliance for technical infeasibility, as well as other rules, requirements and procedures as the City deems necessary, for implementing the provisions of this chapter.

B. The Building Official shall develop, as deemed necessary and appropriate, in cooperation with other City departments and stakeholders, informational bulletins, training manuals and educational materials to assist in the implementation of this chapter.

CHAPTER 18.66
VISITABILITY OF DWELLING UNITS

18.66.010 — Purpose and intent.

The purpose of this chapter is to provide regulations which will make certain dwelling units visitable by disabled persons. This chapter shall be applicable to new construction of single-family or duplex dwelling units which receive assistance from the City as defined below. Additions or alterations to existing affected dwelling units are exempt.

18.66.020 — Definitions.

For the purpose of this chapter, the following definitions shall apply:
"Affected dwelling unit" means new construction which is a single-family or duplex residential unit, the developer, builder or owner of which receives City assistance for construction. In the case of a duplex, each unit shall be considered an affected dwelling unit subject to this chapter.

"City assistance" means funding in the form of loans or grants from the City, or any agency or program in which the City participates, including, but not limited to:

A—A building contract or similar contractual agreement involving a City funded program or fund, or a program or fund in which the City participates in decision making on funding;

B—A real estate purchase, lease, or donation by the City or its agents;

C— Preferential tax treatment, bond assistance, mortgage assistance, or similar financial advantages from the City or its agents;

D— Disbursement of Federal or State construction funds including Community Development Block Grant Funds;

E— A City contract to provide funding or a financial benefit for housing.

18.66.030 – Applicability of visitability requirements.

Each affected dwelling unit shall meet the requirements of Section 18.66.040.

18.66.040 – Design and construction requirements.

A— Accessible entrances. An affected dwelling unit must provide at least one (1) accessible entrance that complies with the following:

1. The accessible entrance door must have a minimum net clear opening of thirty-two inches (32") measured between the face of the door and the stop, when the door is in the ninety degree (90º) open position.

2. A floor or landing shall be provided on each side of the accessible door, measuring forty-four inches (44") at right angles to the plane of the door in its closed position. The floor or landing on the interior side shall be level. The exterior side may be sloped up to one-fourth inch (1/4") per-foot.

3. The width of the level area on the side to which the door swings shall extend twenty-four inches (24") past the strike edge of the door if the door swings to the outside and eighteen inches (18") past the strike edge if the door swings into the unit.

4. The floor or landing on the exterior side shall not be more than one-half inch (1/2") below the floor level on the inside of the door.

5. The floor or landing shall not be more than one-half inch (1/2") lower than the threshold of the doorway, except at sliding doors where it may be three-fourths inch (3/4").

6. On the interior side of the door only, hardware shall be located between thirty inches (30") and forty four inches (44") above the floor. Hand activated hardware shall be operable with a single effort by lever type hardware, panic bars, push-pull activating bars, or other hardware designed to provide passage without requiring the ability to grasp the opening hardware.

7. The accessible entrance may be at the front, side or back of the affected dwelling unit.
8. An accessible route that can be negotiated by a person using a wheelchair shall be provided that connects the accessible entrance to the sidewalk, garage or driveway such that the affected dwelling unit can be entered from the public right-of-way.

B. Accessible routes within the dwelling unit. An affected dwelling unit must provide an accessible route through the hallways and passageways of the first floor of the dwelling unit. The route must provide a minimum width of thirty-six inches (36") and be level with ramped or beveled changes at door thresholds, except that sunken or raised areas shall be permitted when an accessible route that connects a portion of the living or family room, bathroom, and the accessible entrance door is provided.

C. Bathroom. At least one (1) bathroom, consisting of at least a toilet and a lavatory, must be provided on the first floor of an affected dwelling unit, using the following standards:

1. Door. Door or opening into the bathroom shall provide a minimum of thirty-two inches (32") nominal clear space, measured between the face of the door and the stop, when the door is in the ninety degree (90º) open position. A thirty-four inch (34") door is acceptable. Door hardware shall meet the requirements of Subsection 18.66.040.A.6 on both sides of the door.

2. A clear space measuring thirty inches (30") by forty-eight inches (48") inside the bathroom shall be provided. This space may include maneuverable space under fixtures, if provided.

3. Light switches. A light switch located no higher than forty-two inches (42") above the floor shall be provided inside the bathroom.

4. Grab bar backing.

   a. Where the toilet is placed adjacent to a side wall, reinforcement shall be installed on both sides or one side and the back. If reinforcement is installed at the back it shall be installed between thirty-two inches (32") and thirty-eight inches (38") above the floor. The grab bar reinforcement shall be a minimum of six inches (6") nominal in height. The backing shall be a minimum of forty inches (40") in length. Reinforcement installed at the side of the toilet shall be installed thirty-two inches (32") to thirty-eight inches (38") above the floor. The reinforcement shall be installed a maximum of twelve inches (12") from the rear wall and shall extend a minimum of twenty-six inches (26") in front of the water closet stool. The grab bar reinforcement shall be a minimum of six inches (6") nominal in height.

   b. Where the toilet is not placed adjacent to a side wall, the bathroom shall have provisions for installation of floor mounted, foldaway or similar alternative grab bars. The reinforced wall or floor shall be capable of supporting a load of at least two hundred fifty (250) pounds.

18.66.050 – Exemption.

A. When the Building Official determines that compliance with any portion of any regulation under this chapter would create an undue hardship and that equivalent facilitation is available, an exception to that portion of the regulation shall be granted when equivalent facilitation is provided.

B. When the Building Official determines that compliance with any portion of any regulation under this chapter would create an undue hardship due to topographical conditions of the site and that no equivalent facilitation is available, an exemption to that portion of the regulation shall be granted.

...
CHAPTER 18.71
VOLUNTARY EARTHQUAKE HAZARD REDUCTION IN EXISTING REINFORCED CONCRETE BUILDINGS AND CONCRETE FRAME BUILDINGS WITH MASONRY INFILLS

18.71.060 – Dynamic lateral analysis procedure.

C. Mathematical model. The three-dimensional mathematical model of the physical structure shall represent the spatial distribution of mass and stiffness of the structure to an extent which is adequate for the calculation of the significant features of its dynamic response. All concrete and masonry elements shall be included in the model of the physical structure.

EXCEPTION: Concrete or masonry partitions that are adequately isolated from the concrete frame members and the floor above.

Cast-in-place reinforced concrete floors with span-to-depth ratios less than three (3) to one (1) may be assumed to be idealized as rigid diaphragms. Other floors, including floors constructed of precast elements with or without a reinforced concrete topping, shall be analyzed in conformance with ASCE 7-16 Section 12.3.1.3 to determine if they may be considered idealized as flexible diaphragms. All other floors not permitted to be idealized as rigid or flexible diaphragms shall be analyzed considering the effective in-plane stiffness of the diaphragm, including effects of cracking and discontinuity between precast elements, shall be considered as described in ASCE 7-16 Section 12.3.1. Ramps that interconnect floor levels shall be modeled as having mass appropriately distributed on that element. The lateral stiffness of the ramp may be calculated as having properties based on the uncracked cross section of the slab exclusive of beams and girders.

CHAPTER 18.74
LOW IMPACT DEVELOPMENT STANDARDS

18.74.010 – Purpose.

The purpose of this chapter is to require the use of low impact development (LID) standards in the planning and construction of development projects. LID standards promote the goal of environmental sustainability by helping improve the quality of receiving waters, protecting the Los Angeles and San Gabriel River watersheds, maintaining natural drainage paths, and protecting potable water supplies within the City. The LID objective of controlling and maintaining flow rate is addressed through land development and stormwater management techniques that imitate the natural hydrology (or movement of water) found on the site. Using site design and best management practices that allow for storage and retention, infiltration, filtering, and flowrate adjustments achieve the goals of LID, advances sustainability and reduces the overall cost of stormwater management. The use of engineered systems, structural devices, and vegetated natural designs distributes stormwater and urban runoff across a development site maximizing the effectiveness of LID.

18.74.020 – Definitions.

"Brownfield" means a piece of industrial or commercial property that is abandoned or underused and often environmentally contaminated, especially one considered as a potential site for redevelopment.

"Development" means any construction to build any new public or private residential projects (whether single-family, multi unit or planned unit development), new industrial, commercial, retail and other non-
residential projects, including public agency projects; new impervious surface area; or mass grading for future construction. It does not include routine maintenance to maintain original line and grade, hydraulic capacity, or original purpose of facility, nor does it include emergency construction activities required to immediately protect public health and safety.

“LID Best Management Practices Manual” means a manual of LID standards and practices for stormwater pollution mitigation, including technical feasibility and implementation parameters, alternative compliance for technical infeasibility, as well as other rules, requirements and procedures as the City deems necessary, for implementing the provisions of this section of the Long Beach Municipal Code.

“Multi-Phased Project” shall mean any Development or Redevelopment implemented over more than one phase and the Site of a Multi-Phased Project shall include any land and water area designed and being used to store, treat or manage stormwater runoff in connection with the Development or Redevelopment, including any tracts, lots, or parcels of real property, whether Developed or not, associated with, functionally connected to, or under common ownership or control with such Development or Redevelopment.

“Offsite Runoff Mitigation Fee” means fee paid to the City for the management of storm water runoff generated from the 0.75-inch water quality storm in excess of the storm water runoff that is infiltrated, evapotranspired and/or stored for use. The Offsite Runoff Mitigation Fee shall be used by the City to construct or apply towards the construction of an offsite mitigation project within the same sub-watershed that will achieve at least the same level of water quality protection as if all of the runoff was retained on site.

“Redevelopment” means land-disturbing activities that result in the replacement of more than fifty percent (50%) of an existing building, structure or impervious surface area on an already developed site. It does not include routine maintenance to maintain original line and grade, hydraulic capacity, or original purpose of facility, nor does it include emergency construction activities required to immediately protect public health and safety or grinding/overlaying and replacement of existing parking lots.

“Site” means the land or water area where any “facility or activity” is physically located or conducted, including adjacent land use in connection with the facility or activity.

18.74.030 — LID requirements and applicability.

A. The provisions of this section set forth the requirements for and shall apply to all new Development and Redevelopment projects in the City of Long Beach. The following Development or Redevelopment projects are exempt from the requirements of this chapter:

1. Any Development or Redevelopment projects that creates, adds or replaces less than five hundred (500) square feet of impervious surface area;

2. Any Development or Redevelopment projects involving emergency construction activities required to immediately protect public health and safety;

3. Any Development or Redevelopment projects involving the grinding/overlaying and replacement of existing parking lots;

4. Any Development or Redevelopment projects where land disturbing activities result in the replacement of fifty percent (50%) or less of an existing building, structure or impervious surface area; or

5. Any Development or Redevelopment projects that are technically infeasible pursuant to Subsection 18.74.040.B; or

6. Any Development or Redevelopment projects that do not require a building permit.
B. LID requirements for new Development or Redevelopment projects:

1. Residential Development of 4 units or less
   a. For new Development less than one (1) acre, or if Redevelopment alters more than fifty percent (50%) of existing buildings, structures or impervious surfaces of an existing developed site, comply with the standards and requirements of this chapter and implement at least two (2) adequately sized LID BMP alternatives from the LID Best Management Practices Manual.
   b. For new Development that is one (1) acre and greater, the entire Site shall comply with the standards and requirements of this chapter and the LID Best Management Practices Manual.

2. Residential Developments of 5 units or more and nonresidential Developments
   For new Development, or if Redevelopment alters more than fifty percent (50%) of existing buildings, structures or impervious surfaces of an existing developed site, the entire Site shall comply with the standards and requirements of this chapter and of the LID Best Management Practices Manual.

3. Nonresidential Developments in the Port of Long Beach Harbor District
   For new Development or Redevelopment projects located in the Port of Long Beach Harbor District as designated in Title 21 Zoning Regulations, the site shall comply with the LID BMP alternatives set forth in the Port of Long Beach Post-Construction Design Guidance Manual and in the LID Best Management Practices Manual.

C. This chapter shall not apply to those projects for which a building permit application has been filed for and deemed complete by the Building Official prior to February 19, 2013.

18.74.040 – LID plan review.

A. Compliance with the LID standards of this chapter shall be demonstrated through a LID plan review. Permit applicant shall be required to submit a LID plan for review to the Building Official. The LID plan shall demonstrate how the project will meet the standards and requirements of this chapter and of the LID Best Management Practices Manual. A submitted LID plan shall indicate compliance with the following standards:

1. Stormwater runoff will be infiltrated, captured and reused, evapotranspired, and/or treated onsite through stormwater best management practices allowed in the LID Best Management Practices Manual.

2. The onsite stormwater management techniques must be properly sized, at a minimum, to infiltrate, evapotranspire, and/or store for use without any storm water runoff leaving the site to the maximum extent feasible, for at least the volume of water produced by a storm event that results from:
   a. The volume of runoff produced from a 0.75 inch storm event; or
   b. The eighty-fifth (85th) percentile twenty-four (24) hour runoff event determined as the maximized capture stormwater volume for the area using a forty-eight (48) to seventy-two (72) hour draw-down time, from the formula recommended in Urban Runoff Quality Management, WEF Manual of Practice No. 23/ASCE Manual of Practice No. 87, (1998); or
c. The volume of annual runoff based on unit basin storage water quality volume, to achieve eighty percent (80%) or more volume treatment by the method recommended in the California Stormwater Best Management Practices Handbook — Industrial/Commercial, (2003).

B. When the onsite LID requirements are technically infeasible, the infeasibility shall be demonstrated in the submitted LID plan and shall be reviewed in consultation with the Building Official. The technical infeasibility may result from conditions that may include, but are not limited to:

1. Locations where seasonal high groundwater is within ten feet (10') of surface grade;
2. Locations within one hundred feet (100') of a groundwater well used for drinking water;
3. Brownfield Development sites or other locations where pollutant mobilization is a documented concern;
4. Locations with potential geotechnical hazards; or
5. Locations with impermeable soil type as indicated in applicable soils and geotechnical reports.

C. If complete onsite compliance of any type is technically infeasible, a Development or Redevelopment project shall be required to comply with, at a minimum, all applicable Standard Urban Stormwater Mitigation Plan (SUSMP) requirements of Chapter 18.61 in order to maximize onsite compliance. For the remaining runoff that cannot feasibly be managed onsite, one or a combination of the following shall be required:

1. An Offsite Runoff Mitigation Fee pursuant to Subsection 18.74.050.B shall be paid to the City of Long Beach’s Stormwater Pollution Abatement Fund for offsite mitigation, as described in the LID Best Management Practices Manual. The funding will be applied towards the construction of an offsite mitigation project(s) within the same sub-watershed that will achieve at least the same level of water quality protection as if all of the runoff was retained onsite.

2. To provide an incentive for onsite management of storm water runoff, Development and Redevelopment projects will receive the following reduction in the Offsite Runoff Mitigation Fee based on the percentages of storm water runoff that is managed on site through infiltration, evapotranspiration, and/or capture and use:

<table>
<thead>
<tr>
<th>Stormwater Runoff Managed Onsite</th>
<th>Fee Reduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between 90% and 99%</td>
<td>75%</td>
</tr>
<tr>
<td>Between 75% and 89%</td>
<td>50%</td>
</tr>
<tr>
<td>Between 50% and 74%</td>
<td>25%</td>
</tr>
</tbody>
</table>

3. A Multi-Phased Project must design a system acceptable to satisfy these standards and requirements for the entire Site during the first phase and will implement these standards and requirements for each phase of Development or Redevelopment projects of the Site during the first phase or prior to commencement of construction of a later phase, to the extent necessary to treat the stormwater from such later phase.

18.74.050 — LID plan review, permit, and Offsite Runoff Mitigation fees.

A. Permit applicants who seeks to engage in new Development or Redevelopment as defined in this chapter by obtaining a building permit shall pay the required plan examination and permit fees as set forth in Chapter 18.06.

B. Permit applicants who seeks to engage in new Development or Redevelopment as defined in this chapter by obtaining a building permit and does not demonstrate complete onsite compliance as
described in the LID Best Management Practices Manual are required to pay an Offsite Runoff Mitigation Fee in the manner and amount as set forth in the schedule of fees and charges established by City Council resolution.

C. Any Development or Redevelopment projects that are exempted from this chapter shall have the option to voluntarily opt in and incorporate into the project the LID requirements of this chapter. In such case, the LID plan review, permit and Offsite Runoff Mitigation fees associated with the project shall be waived.


A. The Building Official shall prepare, maintain, and update, as deemed necessary and appropriate, the LID Best Management Practices Manual to include LID standards and practices and standards for stormwater pollution mitigation. The LID Best Management Practices Manual shall also include technical feasibility and implementation parameters, alternative compliance for technical infeasibility, as well as other rules, requirements and procedures as the City deems necessary, for implementing the provisions of this chapter.

B. The Building Official shall develop, as deemed necessary and appropriate, in cooperation with other City departments and stakeholders, informational bulletins, training manuals and educational materials to assist in the implementation of the LID requirements.

18.74.070 — Hardship determination.

Whenever there are practical difficulties involved in carrying out the provisions of this chapter, the Director shall have the authority to grant modifications to the provisions of this chapter for individual cases, provided the Director shall first find that special individual reason makes the strict letter of this chapter impractical and the modification is in compliance with the intent and purpose of this chapter and that such modification does not lessen the goals of LID, sustainability or increase the overall cost of stormwater management.

...