



# A G E N D A

## PLANNING COMMISSION

Connie Coleman-Lacadie • Don Daniels • Robert Estrada • James Guerrero • Robert Pourpasand • Paul Wagemann • Christopher Webber

### **Regular Meeting**

**Wednesday, December 16, 2015, at 6:30 pm**

**City Hall, Council Chambers**

6000 Main Street SW, Lakewood, Washington

**1. Call to Order**

**2. Roll Call**

**3. Approval of Minutes from November 18, 2015**

**4. Public Comments**

(Members of the audience may comment on items that are not included on the agenda. Each person will be allowed 3 minutes to speak, to a total of 15 minutes per topic. Groups with a designated speaker may have a total of 10 minutes to speak.)

**5. Public Hearings**

- None

**6. Unfinished Business**

- None

**7. New Business**

- Satellite Parking

**8. Reports from Commission Members & Staff**

(Planning Commission members and staff may make committee reports and announcements relating to items not on the agenda.)

**Enclosures:** November 18, 2015 Draft Minutes  
Staff Report re: Satellite Parking (Zoning Text Amendment)  
Ordinance No. 601  
2015 JBLM Implementation Appendix B  
Map, Lakewood's Air Corridor  
Map, AICUZ APZ II

**Members Only:**

Please call Karen Devereaux at 253.983.7767 by Tuesday, December 1, 2015, if you are unable to attend. Thank you.

**The next meeting is tentatively scheduled for January 6, 2016**



**PLANNING COMMISSION  
REGULAR MEETING  
WEDNESDAY November 18, 2015  
Council Chambers  
6000 Main Street SW  
Lakewood, WA 98499**

The meeting was called to order at 6:00 p.m. by Chairman, Mr. Don Daniels.

**Roll Call**

Planning Commission Members Present: Don Daniels, Chair; Connie Coleman-Lacadie, James Guerrero, Christopher Webber and Robert Pourpasand

Planning Commission Members on Leave of Absence: Paul Wagemann, Vice-Chair

Planning Commission Members Excused: Robert Estrada

Planning Commission Members Absent: None

Staff Present: David Bugher, Assistant City Manager/Community and Economic Development Director; Frank Fiori, Planning Manager; and Karen Devereaux, Recording Secretary

Council Liaison: Councilmember Paul Bocchi

**Acceptance of Agenda**

No changes were made to the agenda.

**Approval of Minutes**

Chairman, Mr. Don Daniels, opened the floor for discussion of the draft minutes of the meeting held November 4, 2015.

**Mr. Robert Pourpasand made the motion to approve the November 4, 2015 minutes as written. The seconded was made by Mr. James Guerrero. A unanimous voice vote carried the motion.**

**Public Comments**

None.

**Public Hearing**

Flood Hazard Overlay and Critical Areas Amendments Public Hearing  
(Continuance from November 4, 2015)

Mr. Frank Fiori addressed questions which were raised by a concerned citizen at the November 4th hearing regarding the flooding in certain parts of the City due to what was believed to be an inoperable City maintained pump facility as well as an unmaintained channel adjacent to Clover Creek. Community Development staff contacted Public Works staff that promptly confirmed proper operation and noted that recent heavy rains were appropriately cleared and suitably handled by the pump. Public Works staff was also familiar with the unmaintained channel area adjacent to Clover

Creek disclosing that the channel is located on private property thus preventing the City staff from performing any maintenance work.

Mr. Frank Fiori provided to the commissions a Washington Department of Fish and Wildlife document entitled "2015 Aquatic Plants and Fish", a pamphlet that establishes rules for aquatic plant removal and control. The pamphlet serves as the Hydraulic Project Approval (HPA Pamphlet Permit) for some types of aquatic weed or plant control and removal including physical and mechanical methods and is a guide for property owners wishing to remove aquatic plants. This pamphlet is available to the public on the City website. Chair, Mr. Don Daniels requested that staff provide the document directly to the concerned citizen from the previous hearing. (That citizen was not in attendance at this hearing).

Mr. Frank Fiori noted over the last two weeks agreement has been reached with FEMA in regards to Title 14A and no changes were made to this document since the last meeting. Regarding Title 18A, two changes to the provided language have been made in sections 18A.40.170.6 (b), page 15 and 18A.40.170.6(c), page 15. It was also noted two definitions were struck with two new more comprehensive definitions added in section 18A.40.190.

Mr. Frank Fiori noted FEMA is in agreement with most of the Title 18A amendments. We are still working one issue of the buffers established in our Shoreline Master Program (SMP) as opposed to the ones in the state water typing program that are in the setbacks and buffers for water bodies.

Mr. Frank Fiori concluded after discussions today with representatives from FEMA those issues will be resolved within the next few weeks. Mr. Frank Fiori sent extensive documentation of 144 page shoreline analysis report that was done in October 2014 which breaks down every shoreline under Lakewood's jurisdiction and discusses the ecological value of those and the reasons for our buffer widths that we placed in our SMP, which were then approved by the State and Department of Ecology. We now just need to make that case with FEMA. Mr. Frank Fiori is confident agreement will be reached once it is understood that the ordinances we have in place, both through our Title 14A, Title 18A and our Shoreline Master Program, offer the protection FEMA is looking for through the Biological Opinion (BiOp). Mr. Frank Fiori advocates forwarding these amendments as written to City Council with a recommendation for approval.

Mr. David Bugher informed the commissioners that City Council is scheduled to discuss this item at the next study session November 23<sup>rd</sup>. Council may decide to take action on December 7<sup>th</sup> to be in compliance with some of their GMA responsibilities.

Mr. Don Daniels, Chair, queried staff if any other public written testimony had been received in the last two weeks to which staff replied none had been received.

Mr. James Guerrero referenced a letter in the packet from Terrence Roarke regarding a man-made pond on his Lakewood property. Mr. Frank Fiori explained the pond is in a

Zone X where the flood regulations do not pertain to him. Mr. Roarke would be able to develop other areas of his property outside of a flood zone, just not on the ponded area. He will not be required to have flood insurance. This map correction was an error on FEMA's part, had the City noted it earlier changes could have been made but the comment period has since passed and is closed. Mr. David Bugher noted follow-up conversations included these explanations to the citizen who is satisfied with the information.

**Ms. Connie Coleman-Lacadie made the motion to accept the Draft Resolution 2105-03 recommending approval of various amendments to the City's Land Use Development Code, Chapter 18A, and the Critical Areas and Natural Resource Lands Regulations, Chapter 14A, of the Lakewood Municipal Code as presented. Mr. James Guerrero seconded the motion. A voice vote was taken and the motion carried unanimously.**

**Unfinished Business**

None.

**New Business**

None.

**Reports from Commission Members and Staff**

Mr. David Bugher quickly informed commissioners of staff project updates:

The City will be seeking two volunteers from each of the Planning Commission, Parks and Recreation Advisory Board and Landmarks and Heritage Advisory Board to participate in the Motor Avenue Urban Design Project task force. Three meetings are planned to be held in 2016, and possibly a tour on a Saturday. Both Ms. Connie Coleman-Lacadie and Mr. Robert Pourpasand volunteered.

Staff met with the Department of Commerce today to discuss Joint Land Use issues. As part of that meeting an interesting discussion was held on the population allegations in relationship to the air corridor and Lakewood's unique situation needed to reduce population. Additional meetings will be held to discuss this topic in the near future.

**Next Meeting** is to be held December 2, 2015 at 6:30 p.m. in Council Chambers. (The December 2 meeting has since been cancelled and all commissioners have been notified. The next meeting will be held December 16, 2015.)

**Meeting Adjourned** at 6:58 p.m.

---

Don Daniels, Chair  
Planning Commission      12/16/2015

---

Karen Devereaux, Recording Secretary  
Planning Commission      12/16/2015

## PLANNING COMMISSION AGENDA ITEM CITY OF LAKEWOOD, WASHINGTON

<b>AGENDA TITLE:</b>	Star Lite Satellite Parking (Zoning Text Amendment); LU-14-00061	
<b>DEPARTMENT:</b>	Community & Economic Development Department	
<b>PRESENTED BY:</b>	David Bugher, Assistant City Manager & Community & Economic Development Director	
<input type="checkbox"/> Public Hearing	<input type="checkbox"/> Study Session	<input type="checkbox"/> Recommendation
<input type="checkbox"/> Discussion	<input checked="" type="checkbox"/> Update	<input type="checkbox"/> Other

**BACKGROUND:** On December 15, 2014, the City Council considered Ordinance No. 601, a zoning text amendment, to allow satellite parking in the Air Corridor II zoning district.

The proposed amendment was requested by the owner of the Star Lite Swap Meet to allow the use of a vacant lot across 84th Street SW from the Swap Meet as a satellite parking area. The proposed amendment would add the AC2 zoning district to the list of areas where satellite parking lots may be considered.

Satellite parking lots are currently allowed (with an administrative use permit) in “commercial zones” per LMC Section 18A.50.550 (F). The term “commercial zones” includes the NC1, NC2, ARC, CBD, TOC, C1, C2 and C3 zoning districts per LMC Section 18A.02.130.K. The proposed amendment would change LMC 18A.50.550 (F), to allow satellite parking areas “in commercial and AC2 zones within one-half mile of the sending site.”

Both the Community and Economic Development Department and the Planning Advisory Board, now Planning Commission, had recommended denial of the amendment.

The City Council, after reviewing the public record, and taking into account the recommendations, took the following action:

COUNCILMEMBER BRANDSTETTER MOVED TO POSTPONE ACTION ON THE ZONING CODE AMENDMENT (ORDINANCE NO. 601) UNTIL COMPLETION OF THE JOINT LAND USE STUDY AND A RECONSIDERATION BY THE PLANNING COMMISSION OF THE CODE PERTAINING TO SATELLITE PARKING IN COMMERCIAL ZONES. SECONDED BY COUNCILMEMBER BARTH.

ROLL CALL VOTE WAS TAKEN ON THE MOTION AS FOLLOWS:

AYES: 6 – BOCCHI, BRANDSTETTER, MOSS, SIMPSON, BARTH AND  
MAYOR ANDERSON.

NAYS: 1 – DEPUTY MAYOR WHALEN.

THE MOTION WAS DECLARED ADOPTED.

As of October 29, 2015, the Joint Base Lewis McChord Joint Land Use Study (JLUS) was completed and accepted by the elected officials representing the South Sound Military Communities Partnership (SSMCP).

On November 2, 2015, the City Council received an update memorandum from the Department regarding JLUS. The memorandum referred to Appendix B of the JLUS Implementation Plan. The Appendix provided a series of charts that identify what is considered compatible or not for the CZ, APZ I & II, and the Noise Zones per federal guidance. "Auto Parking" is listed as not compatible under the CZ designation, and compatible in the APZ I & II designations. At first glance, satellite parking would not appear to be a problem.

However, when applying the existing swap meet operations with the other data tables within the JLUS Implementation Plan, it is likely that the swap meet exceeds intensity limitations (number of people per acre) during weekend operations during the months of May through early/mid-October depending on weather conditions. The inclusion of new parking facilities could actually exacerbate existing conditions, thus, representing an encroachment upon McChord Field at least in the APZ II location.

Staff recommended and the City Council concurred to will schedule a review of Ordinance No. 601, and its relationship with the JBLM JLUS, and the JLUS Implementation Plan, with the Planning Commission, after the Commission has completed its work of the critical areas/floodplain regulations.

Action by the Planning Commission on the critical areas/floodplain regulations was taken on November 18, 2015. City Council adopted these amended regulations on December 7, 2015, thus, it would be appropriate to revisit the subject of satellite parking.

**DISCUSSION:** A copy of Ordinance No. 601 is attached to this report. The actual text of the amendment is very simple. It adds satellite parking to the list of allowable uses within the AC2 zone subject to the approval of an administrative use permit. The reader of this report is referred to Section 1, Part "F" of the Draft Ordinance.

The 2015 JBLM Implementation Appendix B is attached. Commissioners will want to examine the section listed as "Detailed Compatibility Guidelines."

A map is enclosed showing the City's Air Corridor boundaries and the AICUZ boundaries contained within JLUS. Please note that the City's Air Corridor boundaries are different than the boundaries used under the recently adopted JLUS.

Lakewood's boundaries are based on property lines, and less restrictive. Under the City's designation, the entire swap meet property is located "outside" any Air Corridor/JLUS regulation.

The JLUS uses the AICUZ reporting system. AICUZ means, "Air Installation Compatible Use Zone." AICUZ is an extensive analysis of the effects of noise, aircraft accident potential, and land use development upon air installations. Within AICUZ, there are three sub-categories: Clear Zone; Accident Potential I (APZ I); and Accident Potential II (APZ II).

The Clear Zone, APZ I and APZ II designations are based on a measurement from the centerline of the runway extending 1,500 feet on either side, and ends around 74<sup>th</sup> Street SW in Tacoma. APZ I is found entirely in Lakewood. Roughly, two thirds of APZ II is located in Lakewood, and the remaining one third is located in Tacoma (again, up to about 74<sup>th</sup> Street SW).

APZ I and APZ II boundaries are not based on property lines and are more restrictive. Using the JBLM JLUS report, and, thus, AICUZ, 70 to 80 percent of the swap meet is located in APZ II.

One of the primary questions within this zoning ordinance amendment is which boundary does the City use to review this proposal? Does the City use its adopted Air Corridor regulation or the JLUS APZ II?

**Required Findings:** When contemplating the appropriateness of a zoning amendment, the Commission should consider the proposal in light of the findings contained in the LMC, Section 18A.2.414:

The proposed amendment is consistent with the comprehensive plan.

The proposed amendment and subsequent development of the site would be compatible with development in the vicinity.

The proposed amendment will not unduly burden the transportation system in the vicinity of the property with significant adverse impacts which cannot be mitigated.

The proposed amendment will not unduly burden the public services and facilities serving the property with significant adverse impacts which cannot be mitigated.

The proposed amendment will not adversely affect the public health, safety and general welfare of the citizens of the city.

The entire range of permitted uses in the requested zoning classification is more appropriate than the entire range of permitted uses in the existing zoning classification, regardless of any representations made by the petitioner as to the intended use of subject property.

Circumstances have changed substantially since the establishment of the current zoning map or zoning district to warrant the proposed amendment.

The negative impacts of the proposed change on the surrounding neighborhood and area are largely outweighed by the advantages to the city and community in general, other than those to the individual petitioner.

### **Differing Perspectives:**

- A. If the Commission uses the existing Air Corridor regulations, then there fewer issues, since the property is outside AC II. There may be other issues such as pedestrian activity at South Tacoma Way and 84<sup>th</sup> Street SW, traffic control and parking, the duration of satellite parking, and, lastly, unintended consequences. The process to construct satellite parking already requires issuance an administrative use permit and it's only good for five years; thus, there exists sufficient controls in place to address any intensity and development related issues.
- B. There is also the question that the City may propose amendments to zoning prohibiting swap meets in the C2 zone at some future date. If that is a topic which the City wants to consider, should the City entertain this amendment?
- C. If the Commission uses the JLUS APZ II guidelines, one of the problems associated with this proposal has to do with the number of people who attend the swap meet during peak periods. If the level of customer activity is under the AICUZ's maximum threshold of 50 persons per acre, then there is less of a problem with the text amendment. The Star Lite is 12.99 acres. Maximum intensity population is calculated at 650 persons. At the moment, the City does not have information on the approximate customer counts during peak periods of operation to determine whether or not this is an issue. However, based on staff personal observations, it appears the swap meet likely exceeds 650 persons on weekends during the months of May through early/mid-October.
  - C.1 Let's assume that the Star Lite is close, at, or over its maximum capacity, what is the relevancy? After all, if there is an intensity violation it is of a very limited duration, about seven hours per day on Saturdays and Sundays. Over a one week period, the Star Lite could be in violation only 8 percent of the time.
  - C.2 The City should not be using JLUS APZ II guidelines because these are not the rules the City has adopted. The rules are those listed in Section A. above.

- D. Whether the City's uses the Air Corridor regulations or the JLUS APZ II guidelines, the City already has an extensive list of Clear Zone and Air Corridor encroachments. Examples include: manufacturing and warehousing activities having been authorized in the Clear Zone; and housing development in violation of Department of Defense density standards (seven percent of the City's entire housing stock is located in AC I and AC II).

Over the years, the City has taken an aggressive stand to remove encroachments adjacent to military installations:

- An elementary school was forced to close.
- A mobile home park was closed.
- Two motels were closed and converted into a compatible use.
- Vacant, residential lands were purchased by the City and converted into open space.
- Certain types of development activity located in AC I and AC II have been either modified or outright denied at the expense of the City's redevelopment efforts.

And now comes the Star Lite Swap Meet.

The swap meet proposes additional parking that arguably expands operations and could increase intensity levels above 50 persons per acre, albeit for a very limited duration. The question becomes, is this an issue for Lakewood? Or, is the proposal of a *de minimis* nature?

A counter position is that given the current level of encroachment, taking an uncompromising position in an effort to protect JBLM from possible Base Realignment and Closure (BRAC) actions is a reasonable approach. Over time, actions to limit encroachment, cumulatively, have a positive impact in protecting military installations. That stance, of course, is not consistent with the desires of the swap meet.

**Next Steps:** The Commission should review the attached materials. This is a subject where debate is strongly encouraged. The applicant's agent has been invited to attend. The Commission should accept testimony, if any.

If there is a need for additional information, please inform City staff.

Once the Commission has sufficient information to make a decision, the Commission needs to discuss process by which to take action:

- The Commission, under "Unfinished Business" could make a recommendation by resolution, and forward the resolution to the City Council.
- Or, the Commission could conduct a public hearing, take additional testimony, and, thereafter, formalize its decision by resolution to the City Council.

Enclosures:

Ordinance No. 601

2015 JBLM Implementation Appendix B

Maps, Air Corridor and AICUZ CZ, APZ I, & APZ II

ORDINANCE NO. 601

AN ORDINANCE of the City Council of the City of Lakewood, Washington, amending Section 18A.50.550 Lakewood Municipal Code relative to Use and Site Specific Standards for Parking.

WHEREAS, as allowed by Lakewood Municipal Code (LMC) 18A.2.410, the City of Lakewood received a proposed Zoning Text amendment; and

WHEREAS, the Planning Advisory Board held a duly-noticed public hearing on July 16, 2014 that was continued to August 20, 2014, to receive and consider public testimony on said proposed code changes and on September 17, 2014 made a recommendation which has been forwarded to the City Council, which has the final authority to act on the amendment; and

WHEREAS, the City Council has evaluated the proposal under the standards and criterion set forth in LMC 18A.2.415 and has determined that the request is consistent with these standards and criteria;

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF LAKEWOOD, WASHINGTON DO ORDAIN as follows:

Section 1: Section 18A.50.550 Lakewood Municipal Code entitled “Use and Site Specific Standards,” is amended to read as follows:

A. Transit Support Facilities.

1. For developments that generate a parking demand of greater than twenty (20) parking spaces, the developer shall fund the purchase and installation of one (1) or more transit shelters and/or other related transit support facilities as determined by the Community Development Director and Pierce Transit operational criteria, based on the size and nature of the use.

2. For developments that generate a parking demand of fewer than twenty parking spaces, the developer shall install a bench and a concrete pad adjacent to the sidewalk at a bus stop where at least five transit riders are expected to board buses on an average weekday, and a shelter shall be provided at a bus stop where at least ten (10) transit riders are expected to board buses on an average weekday.

3. Any single-family development with fifty to two hundred (50-200) units, or multi-family residential with thirty to one hundred (30-100) units that will be located on a street where regularly scheduled transit service is provided shall be required to provide a transit shelter with all required transit support facilities.

4. Any single-family development with over two hundred (200) units, or multi-family residential with over one hundred (100) units that will be located on a street where regularly scheduled

transit service is provided shall be required to provide two (2) transit shelters with all required transit support facilities.

5. Transit facilities shall be sited in accordance with the requirements of Pierce Transit and this title. Transit shelters and related facilities shall be provided for transit stops that are located adjacent to or within six hundred (600) feet of the development site on each side of the street that has a transit route. This requirement may be waived when Pierce Transit has determined that current and projected ridership do not warrant the installation of a shelter within the six hundred (600) foot distance.

6. When a transit shelter is required to be installed, a concrete pad, seating, garbage receptacles, and lighting shall also be provided. When a transit shelter is not required to be installed, transit stops shall include design features or changes in materials that demarcate the stop.

7. Transit pullouts shall be provided as an element of street improvements if Pierce Transit and the City determine that a pullout is necessary to provide a safe refuge for transit vehicles or to minimize conflicts with other vehicles.

B. Mixed Occupancies. In the case of two (2) or more uses in the same building or on the same site, the total requirements for off-street parking facilities shall be the sum of the requirements for all of the uses calculated separately. Off-street parking facilities for one use shall not be considered as providing the required parking facilities for any other use, except as provided in LMC 18A.50.540.E and F.

C. Parking Incentives.

1. When residential uses are combined with commercial or industrial uses in the same building, parking requirements may be reduced by twenty (20) percent, except when located within the CBD or TOC zoning districts for which parking requirements are reduced by thirty five (35) percent.

2. A structured parking space shall count as one and one-fourth (1.25) parking spaces towards the required number of parking spaces.

3. When affordable housing is constructed pursuant to LMC 18A.50.700, Housing Incentives Program, the parking space requirements shall be calculated employing any available modifications based upon LMC 18A.50.750(B).

D. Shared Use Parking. Joint use of required parking spaces may be permitted where two (2) or more uses on the same site or separate sites in close proximity to one another are able to share the same parking spaces because their parking usage does not materially overlap (e.g. uses primarily of a daytime vs. nighttime, or weekday vs. weekend nature). Shared parking shall be legally encumbered and shall meet all of the applicable standards of this section pursuant to LMC 18A.50.550.F, Off-Site Parking.

E. Off-Site Parking. Joint use of required parking spaces may be authorized by the Community Development Director if the following documentation is submitted in writing to the Community Development Department:

1. The names and addresses of the owners and/or tenants that are sharing the parking.
2. The uses that are involved in the shared parking.
3. The location and number of parking spaces that are being shared.
4. An analysis showing that the peak parking times of the uses occur at different times and/or that the parking area will be large enough for the anticipated demands of both uses.
5. A legal instrument such as an easement or deed restriction that guarantees continuing access to the parking for both uses which shall be subject to review and approval by the Community Development Director and the City Attorney.

F. Satellite Parking Lots. Satellite parking lots may be allowed upon approval of an administrative use permit by the Community Development Director. Satellite lots may operate for a total of six (6) months during any calendar year and shall only be located in commercial and AC2 zones within one-half (1/2) mile of the sending site. Satellite parking lots may be permitted for a maximum of five (5) years from initiation of the parking site. The design and layout of satellite parking lots shall comply with the following standards:

1. Paving of satellite parking lots shall be two (2) inches of asphalt over compacted soil, or other surface as approved by the City Engineer.
2. Satellite parking lots shall be improved with curbs, gutters, sidewalks, street trees, and stormwater drainage systems.
3. Access to such lots shall be secured by chain or cable, with posts a minimum of three (3) feet in height, solidly built. At a minimum, posts shall consist of four (4) inch by four (4) inch wood or equivalent metal posts a minimum of one and one-half (1-1/2) inches in diameter securely set in the ground and placed no more than four (4) feet apart. The posts shall be connected with at least one (1) strand of one-half (1/2) inch cable or chain securely fastened to each post. An opening shall be provided to accommodate vehicle access during business hours. Satellite lots shall be secured to prevent overnight parking between the closing hour on one business day and the opening hour the following business day.
4. Satellite parking lots shall have Type I, Perimeter Landscaping along all property lines, and Type II, Streetscape Landscaping along the public rights-of-way. Landscaping shall be protected from vehicle and pedestrian damage by concrete curbs. Wheel stops may be required as specified in 18A.50.530.F, as determined by the Community Development Director.

5. Directional and informational signs shall be displayed on-site to identify the entrance(s), fees, and hours of operation. Such signs shall be located at the entrance of the parking lot and shall not exceed twelve (12) square feet and six (6) feet in height. Signs shall be removed from the site after each seasonal usage period.

6. Automatic entry devices or fee collection points shall be set back a minimum of sixty (60) feet from the public right-of-way, or shall provide for queuing lanes at a distance recommended by the City Engineer and approved by the Community Development Director.

7. An attendant shall be on duty at all times during business hours of seasonal parking lots.

8. An approved fire extinguisher shall be provided on the premises during business hours.

9. The site shall be maintained in a clean condition, free from trash and debris. Trash containers shall be placed on the site to accommodate and store all trash that accumulates on the lot.

10. Prior to approval of an application for any satellite parking lot, a certificate of insurance for combined single limit bodily injury and/or property damage including products liability in the amount of one million (1,000,000) dollars per occurrence shall be filed with the City. A hold harmless agreement holding the City harmless shall also be filed with the City Attorney.

11. Subsequent to approval of an application for any satellite parking lot, the applicant shall meet all standards and requirements and install all improvements. The parking lot shall be inspected and approved by the Community Development Director prior to issuance of an Authorization to Operate.

Section 2: Severability. If any section, sentence, clause, or phrase of this ordinance should be held to be invalid or unconstitutional by a court of competent jurisdiction, such invalidity or unconstitutionality shall not affect the validity of any other section, sentence, clause, or phrase of this ordinance.

///

///

///

///

///

///

///

///

Section 3: Effective Date. This ordinance shall take place thirty (30) days after its publication or publication of a summary of its intent and contents.

ADOPTED by the City Council this 15<sup>th</sup> day of December, 2014.

CITY OF LAKEWOOD

---

Don Anderson, Mayor

Attest:

---

Alice M. Bush, MMC, City Clerk

Approved as to Form:

---

Heidi A. Wachter City Attorney

**Appendix B:**  
**Sample Development Regulations**

**Development Regulations Gap Analysis Matrix**

The following table presents a high-level analysis of the existing development regulations of partner cities and counties. The purpose is to identify whether existing regulations address the compatibility issues identified in the ILUS and to serve as a guide for the applicability of the sample development regulations contained in this appendix.

	Military Influence Overlay Area	Urban Growth	CZ/APZ regs				Noise Attenuation	Light pollution	Endangered Species
			McChord NCZ	McChord APZ I	McChord APZ II	Imaginary Surfaces			
Pierce County					*				
Thurston County			N/A	N/A	N/A	N/A			
DuPont			N/A	N/A	N/A	N/A			
Lacey		NA	N/A	N/A	N/A	N/A		N/A	
Lakewood		*		*	*			N/A	
Roy			N/A	N/A	N/A	N/A		N/A	
Steilacoom			N/A	N/A	N/A	N/A		N/A	
Tacoma			N/A	N/A	N/A	N/A		N/A	
Yelm			N/A	N/A	N/A	N/A			
Nisqually Indian Reservation			N/A	N/A	N/A	N/A			

**Key:**

Fully Addressed	
Fully Addressed with minor revisions	*
Partially Addressed	
Not Addressed	
Not Applicable in Jurisdiction	N/A

# Detailed Land Use Compatibility Guidelines

## APPENDIX B: DETAILED COMPATIBILITY GUIDELINES

### DoD COMPATIBLE LAND USE GUIDELINES FOR CLEAR ZONES AND ACCIDENT POTENTIAL ZONES (APZ). (U.S. Army 1981)

LAND USE	CLEAR ZONE	APZ I	APZ II
<b>A. RESIDENTIAL</b>			
Single Family Unit	No	No	Yes <sup>2</sup>
2-4 Family Units	No	No	No
Multifamily Dwellings (Apartments)	No	No	No
Group Quarters	No	No	No
Residential Hotels	No	No	No
Mobile Home Parks or Courts	No	No	No
Other Residential	No	No	No
<b>B. INDUSTRIAL &amp; MANUFACTURING<sup>3</sup></b>			
Food and Kindred Products	No	No	Yes
Apparel	No	No	No
Lumber and Wood Products	No	Yes	Yes
Furniture and Fixtures	No	Yes	Yes
Printing, Publishing	No	Yes	Yes
Miscellaneous Manufacturing	No	Yes	Yes
<b>C. TRANSPORTATION, COMMUNICATIONS &amp; UTILITIES<sup>4</sup></b>			
Railroad, Rapid Rail Transit (on-grade)	No	Yes <sup>4</sup>	Yes
Highway and Street Rights-of-Way	Yes <sup>5</sup>	Yes	Yes
Auto Parking	No	Yes	Yes
Communications	Yes <sup>5</sup>	Yes	Yes
Utilities	Yes <sup>5</sup>	Yes <sup>4</sup>	Yes
Other Transportation, Communications and Utilities	Yes <sup>5</sup>	Yes	Yes
<b>D. COMMERCIAL &amp; RETAIL TRADE</b>			
Wholesale Trade	No	Yes	Yes
Building Materials (Retail)	No	Yes	Yes
General Merchandise (Retail)	No	No	Yes
Food (Retail)	No	No	Yes
Automotive, Marine, and Aviation	No	Yes	Yes
Apparel and Accessories (Retail)	No	No	Yes
Furniture, Home Furnishings (Retail)	No	No	Yes
Eating and Drinking Facilities	No	No	No
Other Retail Trade	No	No	Yes
<b>E. PERSONAL &amp; BUSINESS SERVICES<sup>6</sup></b>			
Finance, Insurance, and Real Estate	No	No	Yes
Personal Services	No	No	Yes
Business Services	No	No	Yes
Repair Services	No	Yes	Yes
Professional Services	No	No	Yes
Contract Construction Services	No	Yes	Yes
Indoor Recreation Services	No	No	Yes
Other Services	No	No	Yes

F. PUBLIC AND QUASI-PUBLIC SERVICES			
Government Services	No	No	Yes <sup>6</sup>
Educational Services	No	No	No
Cultural Activities	No	No	No
Medical and Other Health Services	No	No	No
Cemeteries	No	Yes <sup>7</sup>	Yes <sup>7</sup>
Non-profit Organizations including Churches	No	No	No
Other Public and Quasi-Public Services	No	No	Yes
G. OUTDOOR RECREATION			
Playgrounds and Neighborhood Parks	No	No	Yes
Community and Regional Parks	No	Yes <sup>8</sup>	Yes <sup>8</sup>
Nature Exhibits	No	Yes	Yes
Spectator Sports Including Arenas	No	No	No
Golf Courses <sup>9</sup> , Riding Stables <sup>10</sup>	No	Yes	Yes
Water Based Recreational Areas	No	Yes	Yes
Resort and Group Camps	No	No	No
Entertainment Assembly Areas	No	No	No
Other Outdoor Recreation	No	Yes <sup>8</sup>	Yes
H. RESOURCE PRODUCTION & EXTRACTION & OPEN LAND			
Agriculture <sup>11</sup>	Yes	Yes	Yes
Livestock Farming, Animal Breeding <sup>12</sup>	No	Yes	Yes
Forestry Activities	No	Yes	Yes
Fishing Activities and Related Services <sup>13</sup>	No <sup>14</sup>	Yes <sup>13</sup>	Yes
Mining Activities	No	Yes	Yes
Permanent Open Space	Yes	Yes	Yes
Water Areas <sup>13</sup>	Yes	Yes	Yes

**Footnotes:**

- 1 A "Yes" or "No" designation for compatible land use is to be used only for gross comparison. Within each, uses exist where further definition may be needed as to whether it is clear or usually acceptable/unacceptable owing to variations in densities of people and structures. For heliports and stagefields, the takeoff safety zone is equivalent to the clear zone and the approach-departure zone is equivalent to APZ I for these land use guidelines.
- 2 Suggested maximum density 1-2 dwelling units per acre, possibly increased under a Planned Unit Development where maximum lot coverage is less than 20 percent.
- 3 Factors to be considered: Labor intensity, structural coverage, explosive characteristics, and air pollution.
- 4 No passenger terminals and no major above ground transmission lines in APZ I.
- 5 Not permitted in graded area.
- 6 Low intensity office uses only. Meeting places, auditoriums, etc., not recommended.
- 7 Excludes chapels.
- 8 Facilities must be low intensity.
- 9 Clubhouse not recommended.
- 10 Concentrated rings with large classes not recommended.
- 11 Includes livestock grazing but excludes feedlots and intensive animal husbandry.
- 12 Includes feedlots and intensive animal husbandry.
- 13 Includes hunting and fishing.
- 14 Controlled hunting and fishing may be permitted for the purpose of wildlife control.

**GUIDELINES FOR CONSIDERING NOISE IN LAND USE PLANNING AND CONTROL. (FICUN 1980)**

	NZ I		NZ II		NZ III		
	0-55	55-65	65-70	70-75	75-80	80-85	85+
<b>RESIDENTIAL</b>							
Household Units	Yes	Yes <sup>1</sup>	25 <sup>1</sup>	30 <sup>1</sup>	No	No	No
Group Quarters	Yes	Yes <sup>1</sup>	25 <sup>1</sup>	30 <sup>1</sup>	No	No	No
Residential Hotels	Yes	Yes <sup>1</sup>	25 <sup>1</sup>	30 <sup>1</sup>	No	No	No
Manufactured Housing	Yes	Yes <sup>1</sup>	No	No	No	No	No
Other Residential	Yes	Yes <sup>1</sup>	25 <sup>1</sup>	30 <sup>1</sup>	No	No	No
<b>MANUFACTURING</b>							
Food Products	Yes	Yes	Yes	Yes <sup>2</sup>	Yes <sup>3</sup>	Yes <sup>4</sup>	No
Textile Mill Products	Yes	Yes	Yes	Yes <sup>2</sup>	Yes <sup>3</sup>	Yes <sup>4</sup>	No
Apparel	Yes	Yes	Yes	Yes <sup>2</sup>	Yes <sup>3</sup>	Yes <sup>4</sup>	No
Wood Products	Yes	Yes	Yes	Yes <sup>2</sup>	Yes <sup>3</sup>	Yes <sup>4</sup>	No
Furniture	Yes	Yes	Yes	Yes <sup>2</sup>	Yes <sup>3</sup>	Yes <sup>4</sup>	No
Paper	Yes	Yes	Yes	Yes <sup>2</sup>	Yes <sup>3</sup>	Yes <sup>4</sup>	No
Printing	Yes	Yes	Yes	Yes <sup>2</sup>	Yes <sup>3</sup>	Yes <sup>4</sup>	No
Manufacturing	Yes	Yes	Yes	Yes <sup>2</sup>	Yes <sup>3</sup>	Yes <sup>4</sup>	No
<b>TRANSPORT, COMMS &amp; UTIL</b>							
Railroad	Yes	Yes	Yes	Yes <sup>2</sup>	Yes <sup>3</sup>	Yes <sup>4</sup>	Yes <sup>4</sup>
Motor Vehicle	Yes	Yes	Yes	Yes <sup>2</sup>	Yes <sup>3</sup>	Yes <sup>4</sup>	Yes <sup>4</sup>
Aircraft	Yes	Yes	Yes	Yes <sup>2</sup>	Yes <sup>3</sup>	Yes <sup>4</sup>	Yes <sup>4</sup>
Marine Craft	Yes	Yes	Yes	Yes <sup>2</sup>	Yes <sup>3</sup>	Yes <sup>4</sup>	Yes <sup>4</sup>
Highway & Street	Yes	Yes	Yes	Yes <sup>2</sup>	Yes <sup>3</sup>	Yes <sup>4</sup>	Yes <sup>4</sup>
Parking	Yes	Yes	Yes	Yes <sup>2</sup>	Yes <sup>3</sup>	Yes <sup>4</sup>	No
Communications	Yes	Yes	Yes	25 <sup>5</sup>	30 <sup>5</sup>	No	No
Utilities	Yes	Yes	Yes	Yes <sup>2</sup>	Yes <sup>3</sup>	Yes <sup>4</sup>	Yes <sup>4</sup>
Other T, C & U	Yes	Yes	Yes	25 <sup>5</sup>	30 <sup>5</sup>	No	No
<b>TRADE</b>							
Wholesale Trade	Yes	Yes	Yes	Yes <sup>2</sup>	Yes <sup>3</sup>	Yes <sup>4</sup>	No
Retail - Building	Yes	Yes	Yes	Yes <sup>2</sup>	Yes <sup>3</sup>	Yes <sup>4</sup>	No
Retail - General	Yes	Yes	Yes	25	30	No	No
Retail - Food	Yes	Yes	Yes	25	30	No	No
Retail - Auto	Yes	Yes	Yes	25	30	No	No
Retail - Apparel	Yes	Yes	Yes	25	30	No	No
Retail - Furniture	Yes	Yes	Yes	25	30	No	No
Retail - Eating	Yes	Yes	Yes	25	30	No	No
Other Retail Trade	Yes	Yes	Yes	25	30	No	No
<b>SERVICES</b>							
Finance, Insurance	Yes	Yes	Yes	25	30	No	No
Personal Services	Yes	Yes	Yes	25	30	No	No
Cemeteries <sup>11</sup>	Yes	Yes	Yes	Yes <sup>2</sup>	Yes <sup>3</sup>	Yes <sup>4</sup>	Yes <sup>6</sup>
Repair Services	Yes	Yes	Yes	Yes <sup>2</sup>	Yes <sup>3</sup>	Yes <sup>4</sup>	No
Profess Services	Yes	Yes	Yes	25	30	No	No
Hospitals, Nursing	Yes	Yes <sup>1</sup>	25 <sup>1</sup>	30 <sup>1</sup>	No	No	No
Other Medical Facilities	Yes	Yes	Yes	25	30	No	No

Contract Construction	Yes	Yes	Yes	25	30	No	No
Government Services	Yes	Yes	Yes	25	30	No	No
Educational Services	Yes	Yes	25	30	No	No	No
Misc Services	Yes	Yes	Yes	25	30	No	No
<b>CULTURAL, ENTERTAINMENT &amp; REC</b>							
Churches	Yes	Yes	25	30	No	No	No
Nature Exhibits	Yes	Yes	Yes	No	No	No	No
Public Assembly	Yes	Yes	Yes	No	No	No	No
Auditoriums	Yes	Yes	25	30	No	No	No
Amphitheaters	Yes	Yes	No	No	No	No	No
Outdoor Sports	Yes	Yes	Yes	Yes	No	No	No
Amusements	Yes	Yes	Yes	Yes	No	No	No
Recreational	Yes	Yes	Yes	25	30	No	No
Resorts	Yes	Yes	Yes	Yes	No	No	No
Parks	Yes	Yes	Yes	Yes	No	No	No
Other	Yes	Yes	Yes	Yes	No	No	No
<b>RESOURCE PRODUCT</b>							
Agriculture	Yes	Yes	Yes <sup>8</sup>	Yes <sup>9</sup>	Yes <sup>10</sup>	Yes <sup>10</sup>	Yes <sup>10</sup>
Livestock	Yes	Yes	Yes <sup>8</sup>	Yes <sup>9</sup>	No	No	No
Forestry	Yes	Yes	Yes <sup>8</sup>	Yes <sup>9</sup>	Yes <sup>10</sup>	Yes <sup>10</sup>	Yes <sup>10</sup>
Fishing	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Mining	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Other Resource	Yes	Yes	Yes	Yes	Yes	Yes	Yes

**Legend:**

Yes	Land use and related structures compatible without restrictions.
No	Land use and related structures are not compatible and should be prohibited.
ADNL	A-weighted day-night sound level
NZ	Noise Zone
Yes <sup>x</sup>	(Yes with restrictions) Land use and related structures generally compatible; see footnotes.
25, 30, 35	Land use and related structures generally compatible; measures to achieve noise level reduction (NLR) of 25, 30 or 35 must be incorporated into design and construction of structure.
25 <sup>*</sup> , 30 <sup>*</sup> , 35 <sup>*</sup>	Land use generally compatible with NLR; however, measures to achieve an overall NLR do not necessarily solve noise difficulties; additional evaluation is warranted.
NLR	Noise level reduction (outdoor to indoor) to be achieved through incorporation of noise attenuation into the design and construction of the structure.

**Footnotes:**

\* The designation of these uses as "compatible" in this zone reflects individual Federal agencies' consideration of general cost and feasibility factors as well as past community experiences and program objectives. Localities, when evaluating the application of these guidelines to specific situations, may have different concerns or goals to consider.

<sup>1</sup> (a) Although local conditions may require residential use, it is discouraged in 65-70 ADNL and strongly discouraged in 70-75 ADNL. The absence of viable alternative

development options should be determined and an evaluation indicating that a demonstrated community need for residential use would not be met if development were prohibited in these zones should be conducted prior to approvals.

(b) Where the community determines that residential uses must be allowed, measures to achieve outdoor to indoor NLR of at least 25 dB (65-70 ADNL) and 30 dB (70-75 ADNL) should be incorporated into building codes and be considered in individual approvals. Normal construction can be expected to provide a NLR of 20 dB, thus the reduction requirements are often stated as 5, 10, or 15 dB over standard construction and normally assume mechanical ventilation and closed windows year round. Additional consideration should be given to modifying NLR levels based on peak noise levels.

(c) NLR criteria will not eliminate outdoor noise problems. However, building location and site planning, design, and use of berms and barriers can help mitigate outdoor noise exposure particularly from ground level transportation sources. Measures that reduce noise at a site should be used wherever practical in preference to measures that only protect interior spaces.

2 Measures to achieve NLR of 25 must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise-sensitive areas, or where the normal noise level is low.

3 Measures to achieve NLR of 30 must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise-sensitive areas, or where the normal noise level is low.

4 Measures to achieve NLR of 35 must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise-sensitive areas, or where the normal noise level is low.

5 If noise-sensitive, use indicated NLR; if not, use is compatible.

6 No buildings.

7 Land use compatible provided special sound reinforcement systems are installed.

8 Residential buildings require a NLR of 25.

9 Residential buildings require a NLR of 30.

10 Residential buildings not permitted.

11 In areas with ADNL greater than 80, land use not recommended, but if community decides use is necessary, hearing protection devices should be worn by personnel.

## **Sample Military Influence Area Overlay**

## **Joint Base Lewis-McChord Military Influence Area Overlay District**

### **Summary**

The Joint Base Lewis-McChord (JBLM) Military Influence Area Overlay District provides for uses and design requirements for lands adjacent to and within runway protection zones, airspace zones, military training routes, and aircraft and range noise zones of JBLM. Site design and other requirements related to land use, height, and lighting are necessary to maintain the safety of range and aircraft training operations and protect public health and safety. The JBLM Military Influence Area Overlay (MIAO) establishes six Military Areas of Influence:

- North Clear Zone (CZ) and Accident Potential Zones (APZs) for McChord Field
- Imaginary surfaces for McChord Field
- Military training routes (MTRs)
- Noise zones for McChord Field
- Noise zones for large weapons firing activities at JBLM ranges
- Noise zones for large weapons "single-event" firing activities at JBLM ranges

The official zoning map delineates the boundaries of the JBLM Military Areas of Influence districts, based upon the air safety, flight corridor, and noise zones.

**{Note: Jurisdictions will select appropriate provisions based on the operational impacts and associated Military Areas of Influence within or near their jurisdictional boundaries}**

### **JBLM Military Influence Area Overlay District**

- A. The purpose of the JBLM Military Influence Area Overlay District (MIAO) is to:
  1. Ensure safety to people and property within the MIAO;
  2. Prohibit incompatible uses and structures within the designated Military Areas of Influence;

3. Protect the airspace, approach zones, and airfield imaginary surfaces from structures or placement of objects that interfere with the safe operation of aircraft;
  4. Limit land uses within the MIAO to those uses that are compatible with military operations; and
  5. Protect people and property from the potential adverse effects of aircraft and range noise and operations
- B. The following documents are hereby adopted by reference as is fully set forth within this Ordinance:
1. Joint Base Lewis-McChord Joint Land Use Study (JLUS) Report
  2. JLUS Maps
- C. Location of districts within the JBLM MIAO:
1. North Clear Zone (CZ) and Accident Potential Zones (APZs) for McChord Field
  2. Imaginary surfaces for McChord Field
  3. Military training routes (MTRs)
  4. Noise zones for McChord Field
  5. Noise zones for large weapons firing activities at JBLM ranges
  6. Noise zones for large weapons "single-event" firing activities at JBLM ranges
- D. Development standards within the MIAO Zoning Districts
1. Within the CZ and APZs, the following uses are prohibited:
    - a. Any structures in the Clear Zone
    - b. Any residential uses in APZ 1
    - c. Any uses that concentrates, within a structure on a regular basis, more than 25 people per acre. This limitation applies to sports stadiums, amphitheaters, auditoriums, clubhouses, churches, schools, hospitals, assisted living and other medical facilities, hotels and motels, restaurants and other eating and drinking establishments built to such a scale that gatherings of more than 25 people per acre would occur on a regular basis.
    - d. Within the APZ 2, the following uses are prohibited: multi-family residential development; and single-family residential with a density of more than one (1) unit per five (5) acres

2. Within all MIAO areas, buildings, structures, and objects with a height of ninety (90) feet or more are prohibited, except where a representative from JBLM specifically certifies that the proposed height is not a hazard to aircraft take-offs, landings, or flight operations.
3. Within all MIAO areas, all lights used in conjunction with streets, parking, signs, and uses of land shall be arranged and operated in such a manner that they do not interfere with pilot vision during take-off, landing, or flight operations (See proposed lighting ordinance).
4. Within all MIAO areas, no uses or operations of any type shall produce smoke, glare, birds or other visual interference that will present a hazard to aircraft during take-off, landing, or flight operations. Agricultural uses are exempt.
5. Within all MIAO areas, no uses or operations of any type shall produce electronic interference with navigation signals or radio communication between aircraft, the airport, or the air traffic controller.
6. Within all MIAO areas, approval for a permit for residential development shall require a perpetual nonexclusive easement acknowledging that the property is situated in an area that may be subjected to conditions resulting from military training at JBLM.
7. Within all MIAO areas, all real estate transactions shall include a form disclosing proximity of the site to the military installation. The form shall be affixed to all listing agreements, sales and rental contracts, subdivision plats, and any individual marketing materials, such as brochures, etc. Disclosure is required as soon as practicable, but must be before the execution of a contract, i.e., before the making or acceptance of an offer.
8. The following standards apply to development within the McChord Field noise zones that are 60 dB plus:
  - a. All work and operations shall be conducted within buildings or enclosed structures.
  - b. All new development, redevelopment, and building alterations or additions permitted within the noise impact area shall be

required to meet the noise attenuation requirements of JLUS Report.

- c. Applications for the approval of development within the noise impact area shall include certification from a qualified acoustical expert that the proposed construction complies with the standards of JLUS Report
2. All applications for rezoning and development approval, including site plans, building permits, subdivision plats, sign permits, temporary use permits, and other permits and plans in the JLUS MIAO shall be subject to advisory review by a representative at JBLM. Such review shall be limited to issues of compatibility with JBLM and issues affecting the safety of persons and property related to aircraft take-offs, landings, and flight and range operations.

## **Sample Sound Attenuation Measures**

**Selected Building Element Measures to  
Increase Sound Attenuation above the 2012 IRC and IECC**

Residences in proximity to military air installations may experience adverse effects that interrupt daily activities. Certain construction techniques can mitigate these effects by insulating building interiors from noise associated with military flight. Many techniques to mitigate noise overlap with measures that increase the energy efficiency of a building, which can reduce electricity costs and increase the value of one's home. The purpose of this ordinance review is to document measures that increase sound attenuation and energy efficiency that the local governments can adopt to amend their existing residential codes.

In order to measure the noise impacts surrounding military airfields, the Department of Defense (DOD) conducts an Air Installation Compatible Use Zones (AICUZ) study.

Every three years the International Code Council releases standards for buildings, residences, energy efficiency, plumbing, and many other standards. The International Residential Code (IRC) establishes minimum regulations for one and two-family dwellings, as well as townhouses. The International Energy Conservation Code (IECC) establishes minimum regulations for energy efficient performance-related provisions for residential buildings three stories or less in height. The most recent code versions for both the IRC and the IECC are from 2012.

**Review Process**

According to the JLUS recommendations, permanent residential uses are incompatible in any noise contour greater than 75 DNL. Additionally, the target indoor noise level for residences is 45 dB. Generally, up to 30 dB of noise mitigation techniques are feasible for residences. Therefore, techniques for residences in noise contours above 75 DNL noise contour are not included in the recommendations since the techniques cannot make the homes reach the 45 dB target indoor noise level. The recommended noise level reduction for each noise contour is depicted below.

### Recommended Noise Level Reduction by Noise Contour

Noise Contour	Recommended Noise Level Reduction (NLR)	Target dB level
65-70 DNL	25 dB	45 dB
70-75 DNL	30 dB	45 dB
75+ DNL	Residences not recommended	N/A

*Building Elements:* The residential code comparison focuses on the following building elements:

- Exterior Walls
- Windows
- Doors
- Roof-Ceiling Assembly
- Floor, Foundation, and Basements
- Ventilation and Wall Penetrations

*Code Comparison:* This analysis compares existing standards and codes and identifies supplementary attenuation provisions developed by the North Central Texas Council of Governments as part of a study conducted around NAS Fort Worth JRB.

**Navy Model Ordinance:** In 2005, the Department of the Navy published guidelines for incorporating sound insulation techniques for new and existing residences located near military air installations. These guidelines include a model building code that incorporates noise level reduction design requirements. Many of the sound insulation construction techniques also improve energy efficiency.

**International Energy Conservation Code (IECC):** The International Code Council produces building standards to increase energy efficiency. The standards outlined in the IECC meet the

requirements of the International Residential Code (IRC) and the International Building Code (IBC).

**NCTCOG Regional Amendments:** The Regional Codes Coordinating Committee of the North Central Texas Council of Governments (NCTCOG) develops regional amendments to the International Code Council's code versions in an effort to simplify the construction process, reduce training costs, and enhance the safety of building systems in the region. This ordinance review focuses on the NCTCOG regional amendments for the 2012 IRC and IECC.

*Code Comparison Major Findings:*

- The Navy Model Ordinance represents more basic requirements, while Ordinance 17681 expands on these requirements.
- Many of the requirements to increase energy efficiency outlined in the 2012 IECC align with sound attenuation requirements.
- When conflicting requirements exist, staff recommendation would be to follow the stricter guidelines.
- The NCTCOG amendments to the 2012 IECC and IRC is intended to be discretionary and each city is to determine which amendments to include.
- The NCTCOG amendments to the 2012 IECC related to sound attenuation include changes to alternative compliance measures, glazing area, and wall insulation.
- The NCTCOG amendments to the 2012 IRC related to sound attenuation include changes to opening requirements between garages and residences and enclosures for water heaters.
- Noise transmission enters a residence through gaps and cracks, windows and doors, and walls and roof, in that order<sup>1</sup>. Therefore, a generalized approach for acoustic treatment would be to:
  - Eliminate all openings and flanking

---

<sup>1</sup> Transportation Research Board, ACRP Report 15, p. 107

- Improve all windows and doors
- Improve walls and ceilings
- Add mechanical ventilation or central air conditioning
- Treat attic spaces and/or roof structures

Selected building element techniques from the code comparison are summarized in the table below. These measures represent only the most basic requirements that would increase sound attenuation and energy efficiency.

**Selected Building Element Measures to  
Increase Sound Attenuation above the 2012 IRC and IECC**

Building Element	65 dB	70 dB	75 dB
<b>Exterior Walls</b>	Interior walls should be at least ½" thick.	Interior walls should be at least 5/8" thick.	
	Insulation batts should be totally secured by an enclosure on all sides.		
<b>Windows</b>	All operable windows in exterior walls should be at least STC 30 dB.	All operable windows in exterior walls should be at least STC 35 dB.	All operable windows in exterior walls should be at least STC 40 dB.
<b>Doors</b>	Exterior, sliding glass, or doors to the garage should have a rating of at least STC 30 dB.	Exterior and sliding glass doors should have a rating of at least STC 35 dB, while access doors to the garage should have a rating of at least STC 30 dB.	Exterior and sliding glass doors should have a rating of at least STC 40 dB, while access doors to the garage should have a rating of at least STC 30 dB.
<b>Roof-Ceiling Assembly</b>	Ceilings should be finished with gypsum board at least 5/8" thick.  Attic insulation should be batt or blown-in glass fiber or mineral wool		

	with a minimum R-30 rating applied between the ceiling joints.
<b>Floors and Foundations</b>	Air barrier should be installed at any exposed edge of the insulation.
<b>Ventilation and Wall and Roof Penetrations</b>	Window and/or through-the-wall ventilation or AC units should not be used.

## **Sample Light Pollution Reduction Ordinance**

## ***Light Pollution Reduction Ordinance***

### LIGHTING STANDARDS.

**Purpose.** The purpose of this ordinance is to protect the health, safety and welfare of the public by encouraging lighting practices and systems that will minimize glare, light trespass, and light pollution, while maintaining nighttime safety, utility, security and productivity, curtailing the degradation of the nighttime visual environment, and minimizing the impact of lighting on training operations at Joint Base Lewis-McChord.

### **Applicability.**

**New Uses, Buildings and Major Additions or Modifications.** For all proposed new land uses, developments, buildings, and structures that require a building permit or other authorization from the City/County, all outdoor lighting fixtures shall meet the requirements of this Ordinance. All building additions or modifications of twenty (25) percent or more in terms of additional dwelling units, gross floor area, or parking spaces, either with a single addition or with cumulative additions subsequent to the effective date of this provision, shall be subject to the requirements of this Ordinance for the entire property, including previously installed and any new outdoor lighting.

**Existing Uses.** Existing uses shall be exempted from the provisions of this Ordinance. Existing uses and lighting which substantially deviate from the Purpose and Intent set forth above, and which are brought to the attention of the City/County Council/Commission by an aggrieved party, may constitute a public nuisance under Sec. X-X, and subject to abatement or other relief.

**Resumption of Use after Abandonment.** If a property or use with non-conforming lighting is abandoned as defined below, then all outdoor lighting shall be reviewed and brought into compliance with this Ordinance before any use is resumed.

**Roadways.** Lighting for public roadways is exempt from the provisions of this Ordinance.

**Definitions.**

As used in this Ordinance unless the context clearly indicates otherwise, certain words and phrases shall mean the following:

(1) Development project. Any residential, commercial, industrial or mixed use subdivision plan of development plan which is submitted to the City/County for approval.

(2) Diffuse. To spread or scatter widely, or thinly.

(3) Direct illumination. Illumination resulting from light emitted directly from a lamp or luminaire, not light diffused through translucent signs or reflected from other surfaces such as the ground or building surfaces.

(4) Fully Shielded Light Fixture. A lighting fixture constructed in such a manner that all light emitted by the fixture, either directly from the lamp or a diffusing element, or indirectly by reflection or refraction from any part of the luminaire, is projected below the horizontal as determined by a photometric test or certified by the manufacturer. Any structural part of the light fixture providing this shielding must be permanently affixed.

(5) Glare. The sensation produced by a bright source within the visual field that is sufficiently brighter than the level to which the eyes have adapted to cause annoyance, discomfort, or loss in visual performance and visibility. The magnitude of glare depends on such factors as the size, position, brightness of the source, and on the brightness level to which the eyes have become adapted.

(6) Installed. The attachment, or assembly fixed in place, whether or not connected to a power source, of any outdoor light fixture.

(7) Light Pollution. Any adverse effect of manmade light.

(8) Light Trespass. Light from an outdoor luminaire falling on an adjacent property as observed at four feet above ground at the property line.

(9) Lumen per Acre Cap. The upper limit, or most light allowed. Lower lighting levels are encouraged.

(10) Luminaire. The complete lighting assembly, less the support assembly.

(11) Outdoor Light Fixture. An outdoor illuminating device, outdoor lighting or reflective surface, lamp or similar device, permanently installed or portable, used for illumination or advertisement. Such devices shall include, but are not limited to lights used for:

- Parking lot lighting;
- Buildings and structures;
- Recreational areas;
- Landscape lighting;
- Billboards and other signs (advertising or other);
- Product display area lighting;
- Illuminating building overhangs and open canopies.

(12) Outdoor Recreation Facility. An area designed for active recreation, whether publicly or privately owned, including, but not limited to, baseball diamonds, soccer and football fields, golf courses, tennis courts and swimming pools.

(13) Person. Any individual, tenant, lessee, owner, or any commercial entity including but not limited to firm, business, partnership, joint venture, corporation, or limited liability company.

(14) Sign, Externally Illuminated. A sign illuminated by light sources from outside the sign surface.

(15) Sign, Internally Illuminated. A sign illuminated by light sources enclosed entirely within the sign cabinet and not directly visible from outside the sign.

(16) Sign, LED. A sign that uses light-emitting diodes that emit light when an electrical current is applied in the forward direction of the device

(17) Sign, Neon. A sign including luminous gas-filled tubes formed into text, symbols or decorative elements and directly visible from the outside of the sign cabinet.

(18) Sky Glow. The brightening of the night sky that results from the scattering of artificial visible radiation by the constituents of the atmosphere.

(19) Temporary Lighting. Lighting which does not conform to the provisions of this Ordinance and which will not be used for more than one consecutive thirty day period within a calendar year, with one consecutive thirty-day extension. Temporary lighting is intended for uses which by their nature are of a limited duration; for example holiday lighting decorations, civic events, or construction projects.

(20) Translucent. Permitting light to pass through but diffusing it so that persons, objects, etc., on the opposite side are not clearly visible.

(21) Use, Abandonment of. The relinquishment of a property, or the cessation of a use or activity by the owner or tenant for a continuous period of twelve months, excluding temporary or short term interruptions for the purpose of remodeling, maintaining or rearranging a facility. A use shall be deemed abandoned when such use is suspended as evidenced by the cessation of activities or conditions which constitute the principal use of the property.

#### Shielding and Outdoor Lighting Standards.

The following lighting standards are hereby imposed:

(1) All nonexempt outdoor lighting fixtures shall be fully shielded.

(2) All nonexempt outdoor lighting fixtures shall be placed so as to not cause light trespass, or light glare.

(3) All nonexempt outdoor lighting fixtures shall be of a type and placed so as to not allow any light above the horizontal, as measured at the luminaire.

(4) All light fixtures that are required to be shielded shall be installed and maintained in such a manner that the shielding is effective.

(5) Residential uses shall not exceed 5500 lumens per acre. Commercial or business zoned uses shall not exceed 70,000 lumens per property.

(f) Outdoor Advertising Signs.

External illumination for signs shall conform to all provisions of this Ordinance. All upward directed lighting is prohibited.

#### **Exemptions.**

1. Single-family and two-family dwelling uses
2. Agricultural uses
3. State and Federal Facilities
4. Emergency Lighting
5. Swimming Pool and Fountain Lighting
6. Flags, Lighted
7. Holiday lighting

#### **Appeals.**

Any person substantially aggrieved by any decision of the designated official made in administration of this Ordinance has the right and responsibilities of appeal to the City/County.

#### **Law Governing Conflicts.**

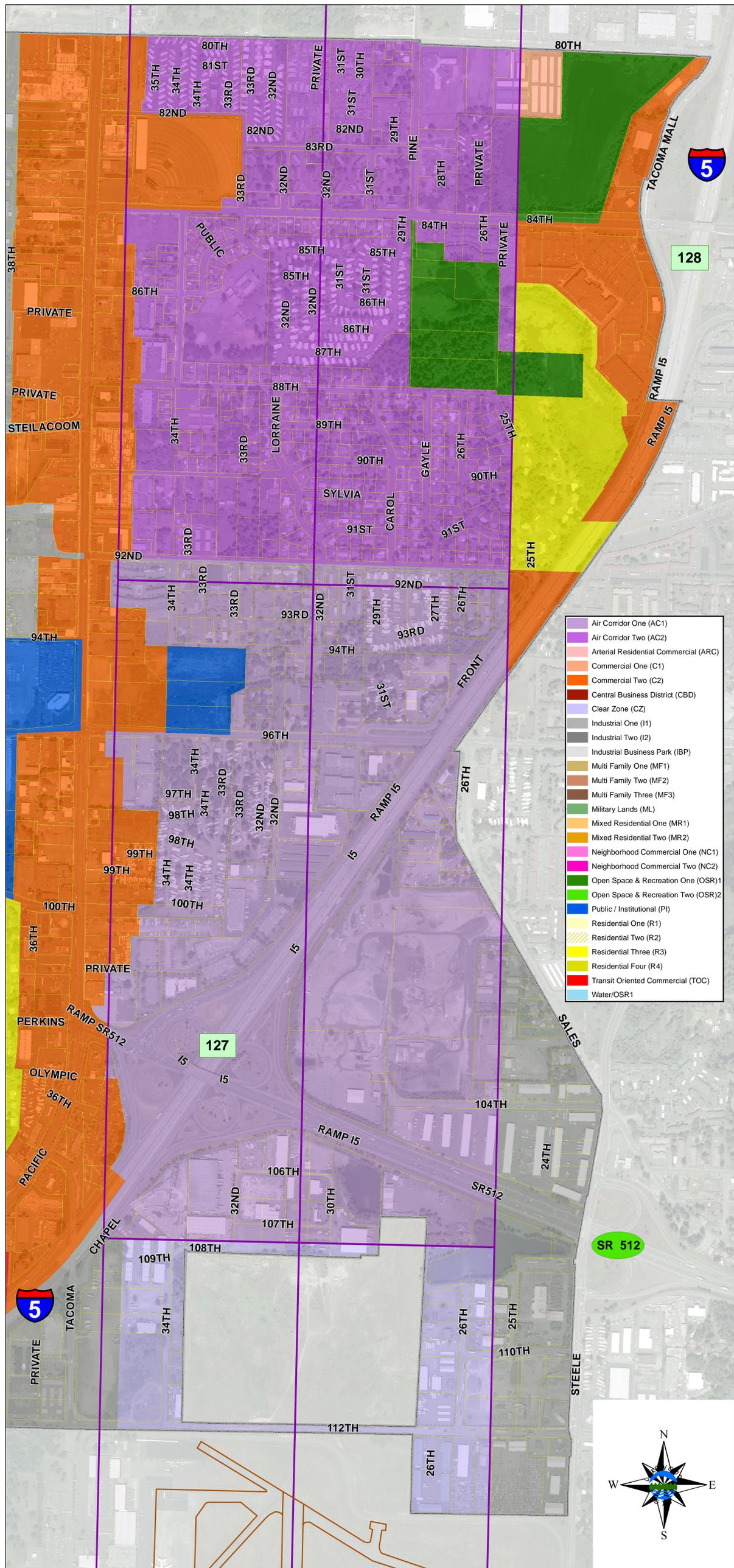
Where any provision of federal, state, county, township, or city statutes, codes, or laws conflict with any provision of this Ordinance, the more restrictive shall govern unless otherwise regulated by law.

**Violation and Penalty.**

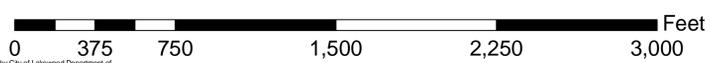
It shall be a civil infraction for any person to violate any of the provisions of this Ordinance. Each and every day or night during which the violation continues shall constitute a separate offense. A fine shall be imposed of not less than fifty dollars nor more than seven hundred dollars for any individual or not less than 100 dollars nor more than ten thousand dollars for any corporation, association, or other legal entity for each offense. The imposition of a fine under this Ordinance shall not be suspended.

**Severability.**

If any of the provisions of this Ordinance or the application thereof are held invalid, such invalidity shall not affect other provisions or applications of this Ordinance, which can be given effect, and to this end, the provisions of this Ordinance are declared to be severable.



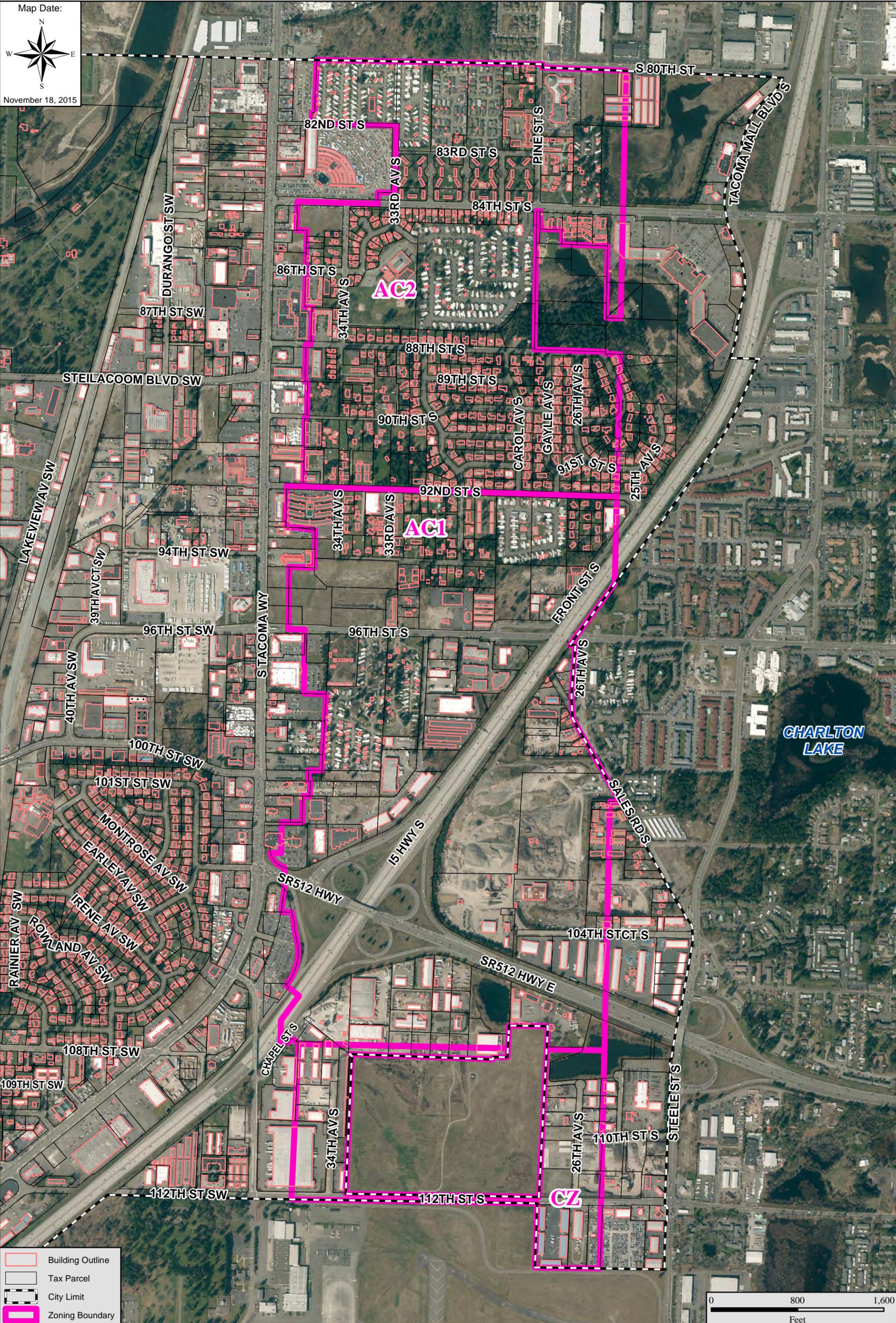
- Air Corridor One (AC1)
- Air Corridor Two (AC2)
- Arterial Residential Commercial (ARC)
- Commercial One (C1)
- Commercial Two (C2)
- Central Business District (CBD)
- Clear Zone (CZ)
- Industrial One (I1)
- Industrial Two (I2)
- Industrial Business Park (IBP)
- Multi Family One (MF1)
- Multi Family Two (MF2)
- Multi Family Three (MF3)
- Military Lands (ML)
- Mixed Residential One (MR1)
- Mixed Residential Two (MR2)
- Mixed Residential Three (MR3)
- Neighborhood Commercial One (NC1)
- Neighborhood Commercial Two (NC2)
- Open Space & Recreation One (OSR)1
- Open Space & Recreation Two (OSR)2
- Public / Institutional (PI)
- Residential One (R1)
- Residential Two (R2)
- Residential Three (R3)
- Residential Four (R4)
- Transit Oriented Commercial (TOC)
- Water/OSR1



- McChord AFB Runways
- Extended Centerline and 3000' Corridor
- Lakewood City Limits
- Parcel Boundaries

# McChord AFB Air Corridor

This product was prepared with care by City of Lakewood Department of Finance and Information Systems GIS. City of Lakewood expressly disclaims any liability for any inaccuracies which may exist hereon. This is not a survey. Datasets were collected at different accuracy levels by various sources. Call 253-512-2260 for further information.



# Lakewood's Air Corridor

This product was prepared with care by City of Lakewood GIS. City of Lakewood expressly disclaims any liability for any inaccuracies which may yet be present. This is not a survey. Datasets were collected at different accuracy levels by various sources. Data on this map may be shown at scales larger than its original compilation. Call 253-589-2489 for further information.

\*2012 USGS Aerial Photography  
 :projects\cd\Maps\LAC.mxd