



High-Cube Warehouse Truck Study

AQMD Mobile Source Committee

March 16, 2012

CEQA Air Quality Analysis

AQMD's Commenting Role

- AQMD staff recommends new warehouse projects evaluate potential air quality impacts for:
 - Regional impacts
 - Localized and Health Risk impacts
- AQMD staff recommends peak daily, voluntary default assumptions for analyzing air quality impacts for CEQA purposes
- Goal is to encourage full disclosure and implementation of mitigation where applicable and feasible

Background

- First AQMD warehouse study in 2002 investigated proliferation of warehouses in Mira Loma and Fontana
- Air quality and health impacts from warehouses due to diesel trucks (>90% of emissions)
- Warehouse projects continue to increase in numbers and size (≥ 1 million ft²)
 - 412 million ft² of new warehousing projected in SCAG in next 25 years
 - Ports of Los Angeles and Long Beach forecast tripling of containers in next 25 years
 - New projects being developed now, including 40 million ft² in Moreno Valley 

Exhibit A
Project Description Summary

for

World Logistics Center
Specific Plan

Prepared for

City of Moreno Valley
14177 Frederick Street
Moreno Valley, CA 92553

Prepared by

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February 21, 2012

High-Cube Warehouse

- Used for the storage of manufactured goods prior to their distribution locally or regionally.
- Typically 24-30 feet tall
- Contain many dock doors for loading/unloading trucks
- Can facilitate many different types of operations

High Cube Warehouse



Estimating Truck Trips

- Overall Warehouse Trip Rate vs. Truck Trip Rate

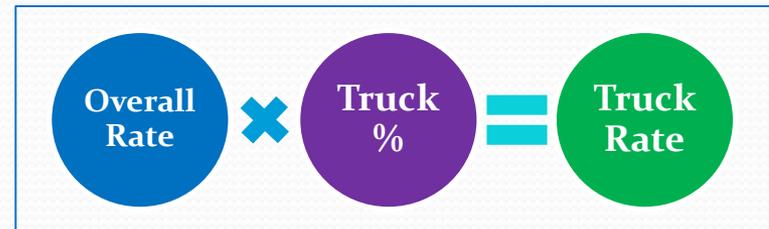


*Overall warehouse trip rate includes truck and passenger car trip rate

Institute of Traffic Engineers (ITE)

- ITE is an international educational and scientific association of transportation professionals
- ITE Trip Generation Manual most commonly cited reference to determine trip rates for most land uses
- High Cube Warehouse Overall Trip Rates
 - 7th edition: 4.96/tsf
 - No truck % provided
 - 8th edition: 1.44/tsf
 - Truck rate = 44% or 0.64 /tsf
 - 9th edition: fall 2012

Assumptions Used by CEQA Projects

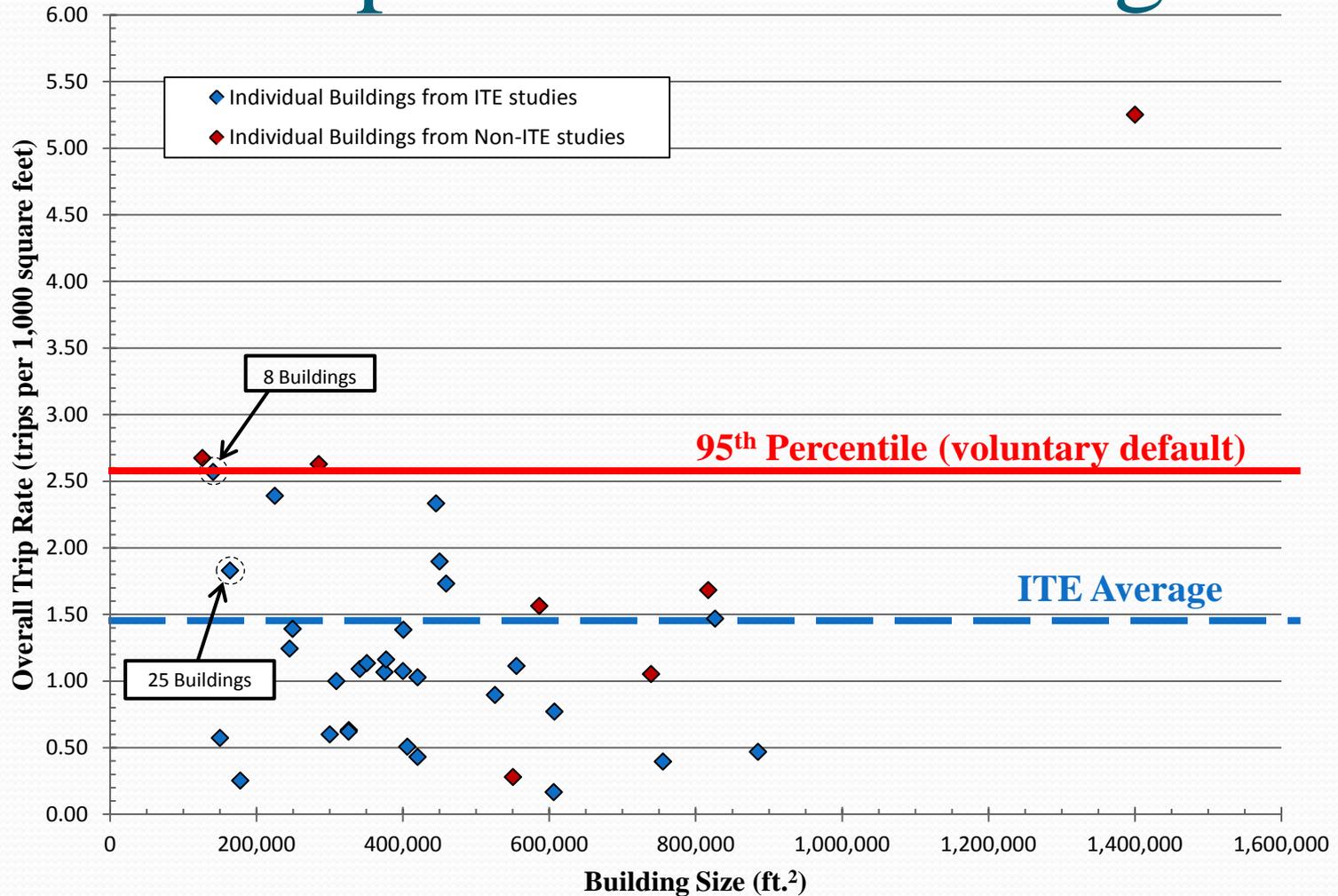


Recent Projects with CEQA Approval	Development Size (ft. ²)	Overall Trip Rate	Truck %	Truck Trip Rate
Banning Business Gateway ¹	787,000	1.44	20%	0.29
South Perris Industrial	7,400,000	1.61	20%	0.33
Rialto Commerce Center	3,475,000	1.44	29%	0.41
Rados Distribution Center	1,191,000	1.1	53%	0.59
Palm Industrial ²	678,275	1.91	47%	0.90
West Ridge Commerce Center	937,260	1.69	54%	0.91
Mira Loma Commerce Center ³	782,398	4.96	20%	1.01

Project-specific Conditions:

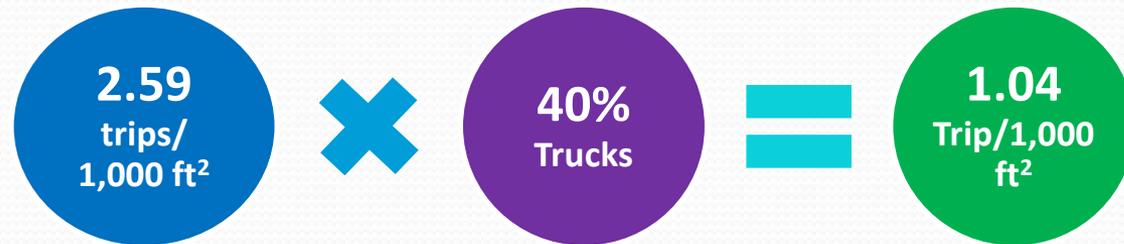
- 1 Limit number of trucks/day, and only 2010+ trucks
- 2 Menu of potential measures to limit AQ impacts to what was disclosed in EIR
- 3 Only 2007+ trucks

Overall Trip Rate vs. Building Size



AQMD Staff Current Recommendation

- AQMD Staff current recommendation as voluntary default calculation:



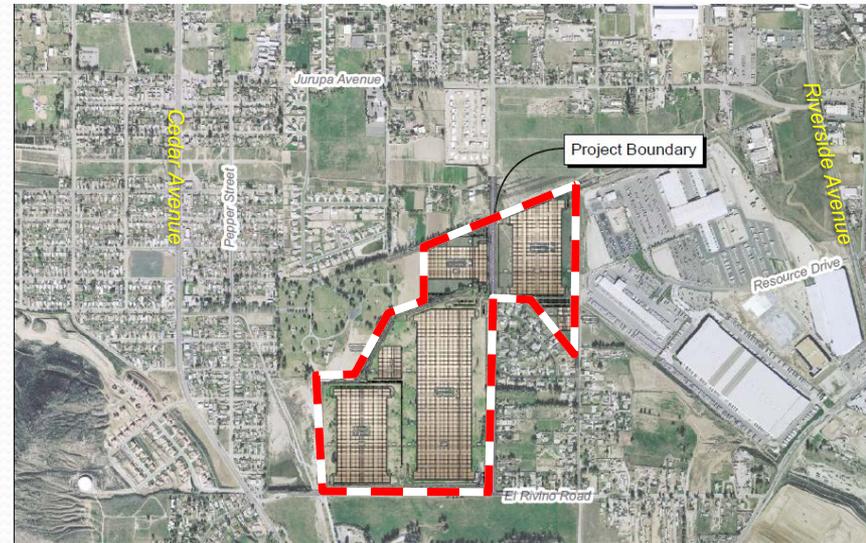
- Preferably use *project specific* data with substantial evidence

AQMD Staff Rationale and Basis

- Overall default trip rate of 2.59 trips/1,000 ft² provides:
 - Reasonable worst-case assumption sufficient for CEQA
 - Consistency with AQMD regional and localized thresholds based on peak daily activity
 - Default that can be replaced with project-specific data or an enforceable throughput limit
- Truck trip percentage of 40% represents:
 - Average percentage from all available studies (2)
- Peer reviewed and response to comments documented
 - Statistical methods

CEQA Legal Challenge

- 3.6 million ft² warehouse project in southern Rialto adjacent to homes
- Project approved in 2011
- Project used ITE overall trip rate of 1.44
- City and County of Riverside brought CEQA lawsuit over concerns about underestimation of truck traffic
- Lawsuit recently settled with Rialto agreeing to pay City and County of Riverside *\$3.5 million*



Key Comments on Staff Approach

COMMENTS

- A. 95% too conservative
- B. Local trip rates lower than national average
- C. Staff analysis ‘cherry picked’ data
- D. Staff analysis assumed vacancy caused low rates
- E. Further study not necessary; staff should accept ITE

RESPONSES

- A. Use in conjunction with peak daily thresholds, and as voluntary default
- B. Average rates lower, but 95th % approach with local data yields similar results
- C. Staff used all available data and disclosed data development
- D. ‘Vacancy’ has little impact on 95th % (2.57 vs. 2.59);
- E. More robust data needed for CEQA air quality analysis

Current Efforts

- Convened two working groups to discuss study design
 - Stakeholder working group
 - warehouse developers,
 - local government technical staff,
 - environmental groups
 - Technical working group
 - Researchers, ITE representative, SCAG staff
- Engaged consultant to gather more robust data set for voluntary default factor
- Update CalEEMod upon completion of study (~6 months)

Proposed AQMD Warehouse Trip Study Design

Phase I (6 months, \$58,000)

1. Collect information about existing population of warehouses in AQMD region
2. Send out approximately 500 short business surveys
 - Follow up phone call to approximately 250 businesses
3. Classify 5 to 10 different types of high-cube warehouses based on surveys
4. Conduct on the ground trip counts
5. Determine trip rates for each warehouse classification

Phase II (2 months, \$10-15,000)

1. Develop model using results from Phase I

Next Steps

- Continue working group meetings
- Periodic reports to MSC