

11-0509-4-01
January 9, 2017

Mr. David Genovese
Baywater Properties
1019 Boston Post Road
Darien, CT 06820

Re: **Proposed Amendments to Darien Zoning Regulations
Corbin Subarea Parking Related Issue
Darien, Connecticut**

Dear David:

We have developed this response to questions from Chairman Sini's Email dated 1/4/17. In particular question No 6 below.

Question 6. *Page A-100 Parking Design Standards: By reducing width and length of stalls and lot width standards, how many additional parking spaces are gained. Please compare these proposed metrics to the size of a Chevy Suburban and plan to offer expert testimony that the proposed metrics are consistent with industry standard.*

RESPONSE:

The parking space dimensions in the proposed Text Change are based on existing and current reliable research and guidelines developed and published by nationally recognized professional organizations used in our profession, as well as Parking-related Studies conducted for the Town in 2007 and 2015; and parking stall dimensions recognized in the DARIEN 2016 Plan of Conservation and Development. The proposal is not changing the stall width of 9 feet, only the stall length from 20 feet to 18 feet.

The Proposed Parking Design Standards table in the Text Amendment is based on the following:

- DARIEN 2016 Plan of Conservation and Development, in which it recognizes a parking stall width of 9 feet and length of 18 feet has been adopted in most communities; and the current parking design standard in Darien should be re-evaluated.
- Recommended Zoning Ordinance Provisions (Your Guide to Planning, Designing, Constructing and Managing Facilities, Including Off-Street Parking Spaces), dated 2012 and researched and published by the National Parking Association and its Parking Consultants Council, which is recognized as the parking industry standard. This document recommends a parking stall width of 9 feet wide by 18 feet long with a 24- foot aisle; and a parking bay width of 60 feet with 90-degree parking and a two-lane/two-way aisle for traffic flow. Attached is Figure 1: Required Parking Dimensions (page 42) and Table 1: Required Parking Dimensions (page 43) of this document.

- The Urban Land Institute and International Parking Institute also reference acceptable parking stall dimensions of 9 feet in width and 18 feet in length.

The following is a summary of parking design standards in other Connecticut Towns.

| Town | Angle | Stall Depth | Stall Width | Aisle Width | Bay Width |
|-----------------|--------------|--------------------|--------------------|--------------------|------------------|
| Darien Existing | 90° | 20' | 9' | 24' | 64' |
| Darien Proposed | 90° | 18' | 9' | 24' | 60' |
| Greenwich | 90° | 18' | 9' | 23' | 59' |
| Danbury | 90° | 18' | 9' | 24' | 60' |
| Ridgefield | 90° | 18' | 9' | 24' | 60' |
| Stamford | 90° | 18' | 9' | 20' | 56' |
| Wilton | 90° | 18' | 9' | 22' | 58' |
| Hamden | 90° | 18' | 9' | 24' | 60' |
| West Haven | 90° | 18' | 9' | 22' | 58' |
| New Canaan | 90° | 20' | 9' | 24' | 64' |
| Bethel | 90° | 18' | 9' | 24' | 60' |

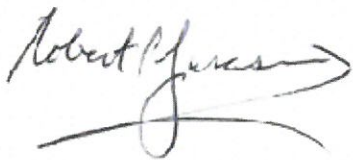
By reducing the bay width from 64 feet to 60 feet approximately 65 parking spaces are gained in the conceptual parking layout plan.

The Chevy Suburban is 18'-8" in length. These vehicles will slightly infringe into the 24-foot aisle but will have no problem in pulling into a 9-foot wide stall or backing out into the 24-foot aisle. A vehicle parked in a 90-degree parking stall requires a distance equal to its length, at a minimum, to back out of the space. The 22'-8" aisle width area [assuming a Chevy Suburban is also parked on the other side of the aisle], is of sufficient width to accommodate this backing out maneuver in a safe manner. In addition, the resultant 11'-4" travel lane is acceptable for vehicles traveling at low speeds to safely avoid this minor extension for this type of vehicle.

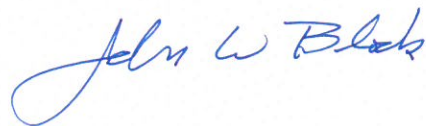
Please do not hesitate to contact us if you have any questions or concerns associated with the information in this letter and parking-related issues in the Proposed Darien Zoning Regulations Text Amendment.

Respectfully submitted,

TIGHE & BOND, INC.



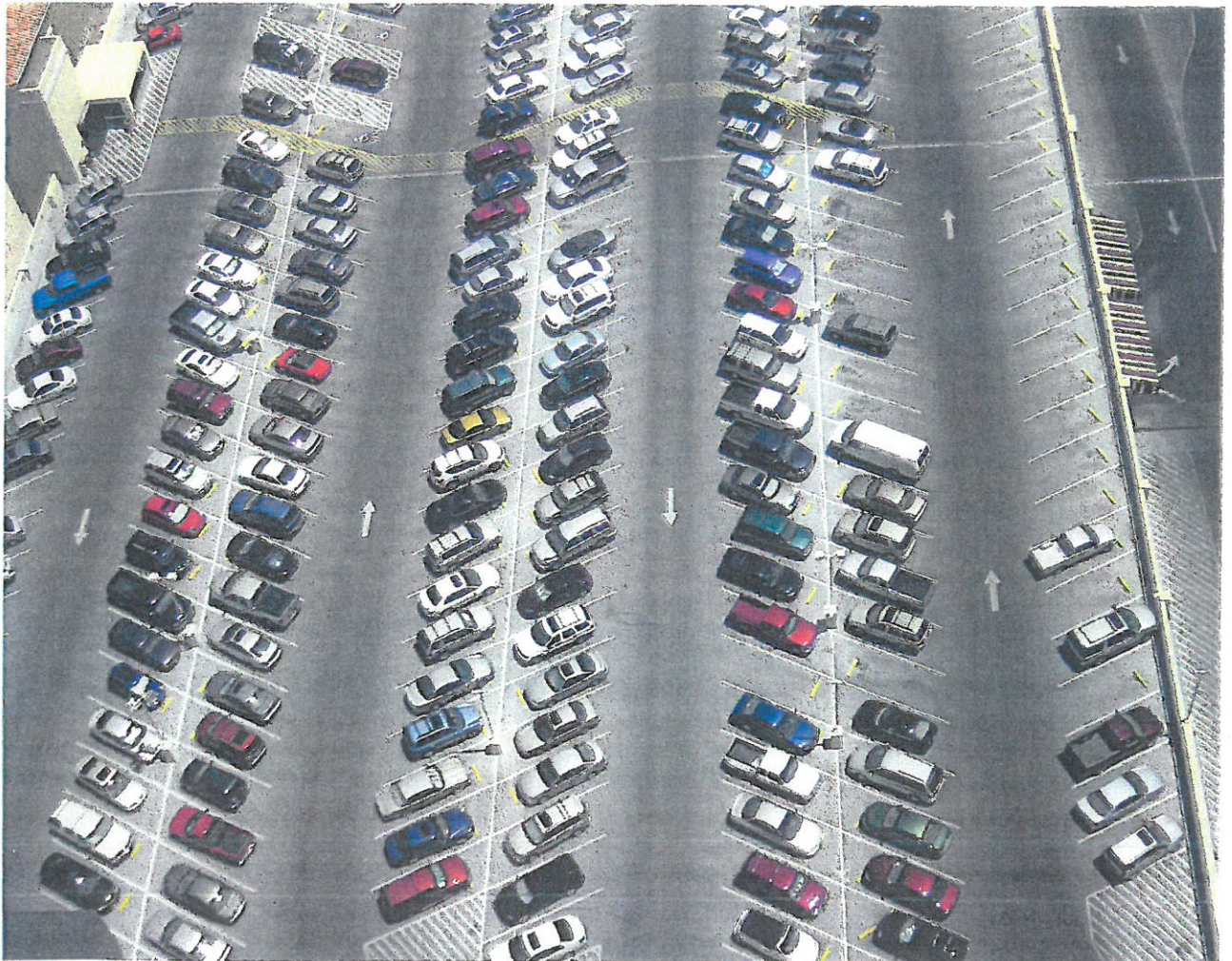
Robert P. Jurasin, P.E.
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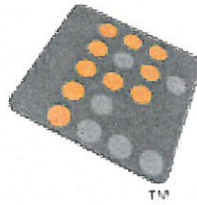
Recommended Zoning Ordinance Provisions

Your Guide to Planning, Designing Constructing and
Managing Facilities, Including Off-Street Parking Spaces





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Recommended Zoning Ordinance Provisions

*Your Guide to Planning, Designing Constructing and
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Recommended Zoning Ordinance Provisions Committee:

Mary S. Smith, Chair

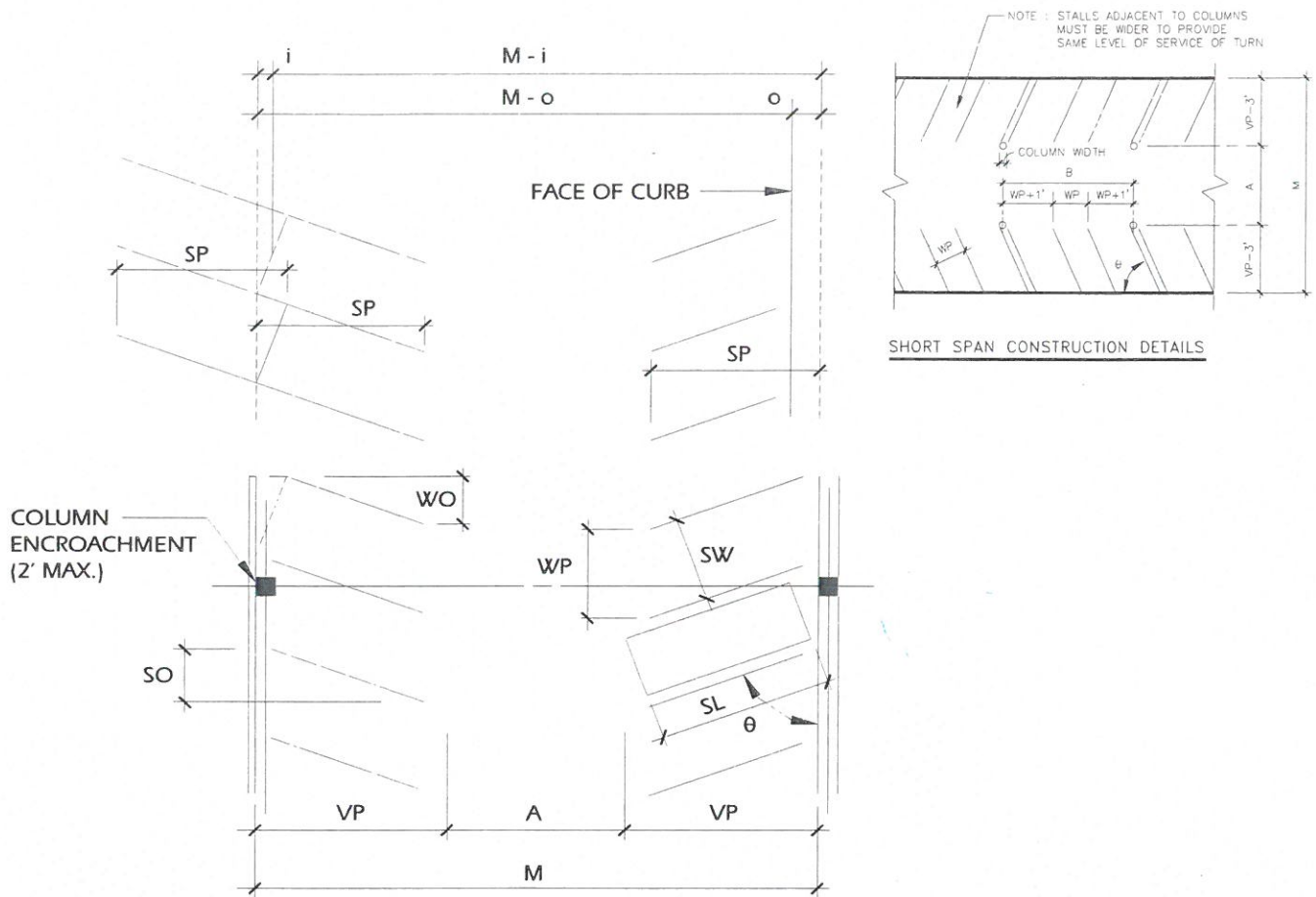
L. Dennis Burns

John G. Burgan

Gary Cudney

David N. LoCoco

Figure1: Required Parking Dimensions



DEFINITION OF BASIC LAYOUT DIMENSIONS

| | |
|-----------------------------------|---------------------------|
| θ = ANGLE OF PARK | VP = VEHICLE PROJECTION |
| M = MODULE | WP = WIDTH PROJECTION |
| A = AISLE WIDTH | SW = STALL WIDTH |
| i = INTERLOCK REDUCTION | SL = STALL LENGTH |
| o = OVERHANG | WO = WALL OFFSET |
| DESIGN VEHICLE = 6'-4" x 16'-9" | SO = STRIPE OFFSET |
| SP = STRIPE PROJECTION = 16'-0" | |
| PARALLEL STALL LENGTH = 20'-9" | |

Table 1: Required Parking Dimensions

| Angle of Parking | Stall Width | | Module | Vehicle Projection | Aisle | Interlock | Overhang | Wall Offset | Stripe Offset |
|------------------|-------------|-------|--------|--------------------|--------|-----------|----------|-------------|---------------|
| | 9'0" | 8'6" | | | | | | | |
| | WP | WP | M | VP | A | I | O | WO | SO |
| 0 | 9'0" | NA | 43'0" | NA | 24'0" | NA | NA | NA | NA |
| 45 | 12'9" | 12'0" | 48'0" | 17'8" | 12'8" | 3'2" | 1'9" | 10'8" | 16'6" |
| 50 | 11'9" | 11'1" | 49'9" | 18'3" | 13'3" | 2'11" | 1'11" | 9'5" | 13'10" |
| 55 | 11'0" | 10'5" | 51'0" | 18'8" | 13'8" | 2'7" | 2'1" | 8'3" | 11'7" |
| 60 | 10'5" | 9'10" | 52'6" | 19'0" | 14'6" | 2'3" | 2'2" | 7'2" | 9'6" |
| 65 | 9'11" | 9'5" | 53'9" | 19'2" | 15'5" | 1'11" | 2'3" | 6'1" | 7'8" |
| 70 | 9'7" | 9'1" | 55'0" | 19'3" | 16'6" | 1'6" | 2'4" | 5'0" | 6'0" |
| 75 | 9'4" | 8'10" | 56'0" | 19'1" | 17'10" | 1'2" | 2'5" | 3'10" | 4'5" |
| 90 | 9'0" | 8'6" | 60'0" | 18'0" | 24'0" | 0'0" | 2'6" | 1'0" | 0'0" |

Notes:

- 1 Add 1 ft to stall width where adjacent to walls, columns and other obstructions to door opening and turning movement into the stall.
- 2 9'0" stalls shall be used except that 8'6" stalls may be used for the following uses as defined herein: residential, general business offices, data processing/telemarketing/operations offices, industrial, storage/wholesale, utility, and educational (except for cultural/ recreational/ entertainment uses at educational use campuses)
- 3 Add 1 ft to stall width for stalls next to curbs and islands to reduce trip hazard.
- 4 Angles of parking between 76 and 89 degrees not permitted.
- 5 Dimensions may be interpolated for angles between 45 and 75
- 6 Deduct 1 ft from aisle, and corresponding module, for parking in structures or where guides (columns, guardrails, bumper walls) or curbs are provided at least 25% of the stalls.
- 7 All dimensions based on Design Vehicle of 6'7" by 17'1", parked 11" from front of stall
- 8 Light poles and columns may protrude into a parking module a maximum of 2 ft combined as long as they do not impact more than 25 % of the stalls. For example, either a one ft encroachment on both sides of the aisle, or a 2 ft encroachment on one side only, is acceptable.
- 9 Interlock reductions cannot be taken where there is encroachment by columns, light poles or other obstructions for more than 25% of the stalls in the bay.
- 10 All dimensions rounded to the nearest inch.
- 11 Aisles and corresponding modules are for two-way traffic flow for 90 degree parking and one-way traffic flow for angled parking between 45 and 75 degrees.
- 12 For two traffic flow and angled parking, a minimum 24 ft aisle is required. For parallel parking along a two-way drive, a minimum aisle of 24 ft. is required.
- 13 Parallel parking stall length is 21'0".

Commentary: Above dimensions are those necessary for less experienced designers to lay out parking. For assistance in determining design vehicle size and other dimensions appropriate to community, see Recommended Guidelines for Parking Geometrics, Parking Consultants Council.

Article VIII–Administration and Enforcement

This Ordinance shall be administered by the Zoning Administrator (or by the designated individual, group or agency empowered by law to act in the review and/or approval of requests and petitions for the granting of zoning) under the powers granted by statute to the (City) of _____. Approval of all such requests and petitions may be granted by the Zoning Administrator, or upon his recommendation, by the Zoning Board of Appeals for the Governing Body of the (City) of _____. Appeals may be taken under the terms of the Zoning Ordinance of the (City) of _____, fees, penalties and operations set forth in the Zoning Ordinance of the (City) of _____ shall apply except for those applicable provisions expressly relating to vehicular parking which become null and void upon the adoption of this Ordinance.