

May 14, 2021

Borough of Keyport
Planning Board
P.O. Box 60
Keyport, NJ 07735

**Re: Traffic Statement for
Brown's Point Marina
West Front Street
Keyport, NJ**

Dear Board Members:

Langan Engineering & Environmental Services prepared this traffic statement for the proposed Brown's Point Marina improvements. Specifically, we performed the following major tasks:

- reviewed existing conditions,
- reviewed the proposed improvements,
- estimated trip generation,
- evaluated parking, and
- reviewed the site plan for the adequacy of site access and circulation.

We have concluded the proposed marina improvements will not significantly change area traffic operations. Moreover, the site design is consistent with current standards and provides adequate access, circulation and parking.

EXISTING CONDITIONS

Figure 1 on the following page shows the site. The marina contains an office, restrooms, boat maintenance building, boat slip docks, two boat racks and pavement areas mostly used for boat and trailer storage. There are no readily identifiable car parking spaces. A full-movement stop-controlled driveway provides access to West Front Street.

The boat slips and boat racks usage breakdown is as follows:

- Boat Slips – 80
- Boat Racks (In-Water Use) – 64
- Boat Racks (Storage) – 0



Figure 1 – Site Location Map

PROPOSED IMPROVEMENTS

The applicant proposes to remove the three buildings and to construct a two-story building that will contain the office, restrooms and the boat maintenance operation. The applicant will also slightly shorten the north boat rack and remove the south boat rack. In place of the south boat rack, the applicant will construct two new 4-level boat racks. Eighty delineated car parking spaces will support the improved marina.

The marina improvements will result in the following boat slips and boat racks usage breakdown:

- Boat Slips – 115
- Boat Racks (In-Water Use) – 110
- Boat Racks (Storage) – 42

TRIP GENERATION

We used trip generation data contained in *Trip Generation*, 10th edition, published by the Institute of Transportation Engineers (ITE) to estimate the change in the marina's trip generation. We used ITE marina (land use code 420) trip rates to estimate trip generation. Table 1 on the following page shows the trip generation estimates for various hours and days.

Table 1 - Trip Generation Estimates

Time Period	Proposed Improved Marina 225 Slips/Racks	Existing Marina 144 Slips/Racks	Trips Difference
Weekday Morning Peak Hour			
Enter	5	3	2
Exit	<u>11</u>	<u>7</u>	<u>4</u>
Total	16	10	6
Weekday Evening Peak Hour			
Enter	28	18	10
Exit	<u>19</u>	<u>12</u>	<u>7</u>
Total	47	30	17
Weekday Daily (24-Hours)			
Enter	271	174	97
Exit	<u>271</u>	<u>174</u>	<u>97</u>
Total	542	348	194
Saturday Peak Hour			
Enter	22	14	8
Exit	<u>28</u>	<u>18</u>	<u>10</u>
Total	50	32	18
Saturday Daily (24 Hours)			
Enter	294	188	106
Exit	<u>294</u>	<u>188</u>	<u>106</u>
Total	588	376	212
Sunday Peak Hour			
Enter	47	30	17
Exit	<u>23</u>	<u>15</u>	<u>8</u>
Total	70	45	25
Sunday Daily (24-Hours)			
Enter	393	252	141
Exit	<u>393</u>	<u>252</u>	<u>141</u>
Total	786	504	282

As Table 1 shows, the estimated trip generation difference is 25 trips or less during any peak hour. Many entities, including the NJDOT, classify land uses generating less than 100 peak hour trips as having an insignificant traffic impact. Consequently, the proposed marina improvements will not have a significant impact along the adjacent roads and we expect any changes to area traffic operations to be imperceptible.

PARKING

We understand that at times marina patrons, particularly those for the jet ski rentals, have parked in the adjacent neighborhood. The applicant and the jet ski rental business owner have implemented operational changes to accommodate all marina patron vehicles on the site. Those operational changes are:

- Removed the Down Deep fishing boat from the marina. The Down Deep frequently ran 15-passenger open boat trips, which resulted in a high amount of parked cars at the marina attributed to one boat.
- Revamped the jet ski operation to stagger rental sessions to allow patrons from one rental session to leave the marina before patrons of the next rental session arrive to the marina.
- Implemented a proactive communication system (automated emails and texts) with jet ski patrons to inform them that they must park at the marina.
- Hired a parking attendant that actively manages marina parking during busy times. The parking attendant directs marina patrons where to park. Marina patrons also leave their keys with their vehicle so the parking attendant can move vehicles, if needed.

There is little published marina parking data. We reviewed the *Parking Generation Manual Generation*, 5th edition, published by the Institute of Transportation Engineers (ITE). That publication contains parking data for only one marina. That marina has 1,753 "berths" and likely has restaurant and retail space too. Using the ITE's marina parking data to estimate the parking demand for Brown's Point Marina will certainly result in estimated parking demands that are higher than Brown's Point Marina's actual parking demands. Brown's Point Marina does not have restaurant or retail space. Moreover, Brown's Point Marina is a small marina compared to the large marina the ITE parking data is based on. Large marinas tend to have larger boats and more patrons who live on their boats and park their vehicles at a marina all the time.

We also reviewed *Auto Parking In Marinas* authored by Neil W. Ross and published by the International Marina Institute (copy attached). This publication collected parking data from numerous marinas over a July 4th weekend (highest use time) an August weekday (low use time) and an August weekend (high use time). The following are some of the publication's findings:

- 142 public and private marinas in 24 states provided July and August parking data.
- The highest use day was July 3rd, which had 46% of boats in use on the water or occupied with people at a berth.
- The July 4th weekend produced the highest use parking demand ratio of 0.71 cars/berth, followed by the high use August weekend parking demand ratio of 0.51 cars/berth and the low use August weekday parking demand ratio of 0.21 cars/berth.

- The recorded parking demand ratios are high because they include parked cars for restaurants at 22 of the 142 marinas that provided parking data.
- Recommendation that marinas provide a parking supply of 0.5 parking spaces/berth.
- Recognition that marinas accommodate peak parking demands by using non-parking areas such as boat storage/repair areas for short times until the peak parking demand subsides.

Based on the limited published marina parking data, we prepared estimated peak parking demands for the improved marina. Please note as we previously discussed these estimates are conservative and we believe that actual parking demands will be lower. Table 2 shows the conservatively estimated parking demands for the improved marina.

Table 2 – Peak Parking Demand Estimates - 225 "Berths"

Data Source (Day - Peak Parking Demand Rates)	Parked Vehicles
ITE Parking Data	
Weekday – (0.27vehicles/berth)	61
Saturday – (0.35 vehicles/berth)	79
Sunday – (0.59 vehicles/berth)	133
International Marine Institute Data	
August Weekday – (0.21vehicles/berth)	48
August Weekend – (0.51vehicles/berth)	115
July 4 th – (0.71vehicles/berth)	160

The applicant has also indicated that he will rarely use the 110 boat racks slated for in-water use solely for in-water boats. The nature of the marina business will require the applicant to use a portion of those 110 boat racks (in-water use) for storage, service staging and foreclosure, which would not generate any parking demand and further reduce the numbers in Table 2.

The site plan shows the improved marina will provide 80 delineated parking spaces. We believe that parking supply will accommodate the improved marina's peak parking demands most of the time. During high use times like a holiday or a beautiful Sunday, the parking attendant will manage the increased parking demand by parking vehicles in surplus areas of the site, which is a common practice by marinas during high use times.

SITE PLAN REVIEW

We have reviewed the site plan for the improved marina. We focused our site plan review on access and circulation, which the following items address:

- The site plan shows the existing driveway along West Front Street will continue to provide site access. Sight distance is readily available looking in both directions from the site driveway. Accordingly, we expect the site driveway will continue to operate efficiently and facilitate turning into and out of the site.
- The proposed passenger car parking provides 9 feet wide and 18 feet deep perpendicular parking spaces served by aisles with a minimum width of 22 feet. These parking space dimensions are consistent with current parking design standards.
- The provision of delineated parking will organize traffic in an orderly fashion and clearly define the circulation patterns around the site.

Based on our review, we believe the site plan provides convenient access and efficient circulation for the improved marina.

CONCLUSION

We have concluded that the proposed marina improvements will not create any significant traffic impacts. In addition, the site design is consistent with current standards and provides adequate access, circulation and parking.

Should you have any questions or comments concerning this traffic statement, please do not hesitate to contact our office.

Very truly yours,

Langan Engineering and Environmental Services, Inc.



Daniel D. Disario, P.E., PTOE
Principal

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