



McMAHON ASSOCIATES, INC.
5500 Village Blvd | Suite 103 | West Palm Beach, FL 33407
p 561-840-8650 | f 561-840-8590
mcmahonassociates.com

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VIA E-MAIL

Mr. Jose N. Aguila, AIA, LEED AP
Principal/QA & Construction Administration Manager
Currie Sowards Aguila Architects
185 NE 4th Avenue, Suite 101
Delray Beach, FL 33483

PRINCIPALS
Joseph W. McMahon, P.E.
Joseph J. DeSantis, P.E., PTOE
John S. DePalma
William T. Steffens
Casey A. Moore, P.E.
Gary R. McNaughton, P.E., PTOE

ASSOCIATES
John J. Mitchell, P.E.
Christopher J. Williams, P.E.
R. Trent Ebersole, P.E.
Matthew M. Kozsuch, P.E.

**RE: Hallandale Fire Station 7 Traffic Statement
McMahon Project No. L14608.01**

Dear Jose:

McMahon Associates, Inc. (McMahon) has prepared a traffic statement for the proposed Hallandale Fire Station 7, located on the northwest corner of NW 4th Street and NW 1st Avenue, in the City of Hallandale Beach. The site, which encompasses several land parcels, is currently vacant. The previous land use on the site included three (3) single family homes. The proposed development will include a 25,147 square foot fire station building.

Trip Generation Analysis

Using information provided by the Hallandale Beach Fire Rescue, trip generation estimates were developed for the proposed Fire Station. No trip credit was taken for the previous land use. Trips for the fire station were estimated for the shift changes of the fire rescue team, administrative staff and actual fire truck dispatches.

- Fire station employees work 24-hour shifts. Shift changes occur daily at 7:30 AM. A maximum of 10 employees of the fire station are expected to be on shift at any one time. Therefore, 10 employees are expected to enter the site and 10 employees are expected to leave the site during the morning peak hour.
- Administration offices will also be provided in the proposed station. Twelve (12) administrative personnel are anticipated for the fire station, with a work shift from 8:00 AM to 5:00 PM. Therefore, 12 administrative employees are expected to enter the site during the morning peak and 12 are expected to exit the site during the afternoon peak.
- Fire truck dispatch will be on an as-needed basis. During the past 12 months, the station being replaced by Fire Station 7 received 4,679 calls. This equates to approximately 13 calls per day or one call every two (2) hours. To account for a worst case scenario, it was assumed that one (1) fire truck will be returning from a call, and one (1) fire truck will be leaving for a call during both the morning and afternoon peak periods.

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83.6

The trip generation for the site is summarized in **Table 1**.

Table 1: Hallandale Fire Station Trip Generation Analysis

LAND USE	ITE CODE	INTENSITY	TRIP GENERATION RATE	IN	OUT	TOTAL TRIPS ⁽¹⁾		
						IN	OUT	TOTAL
DAILY								
Fire Station	N/A	25,197 SF	N/A	50%	50%	35	35	70
AM PEAK HOUR								
Fire Station	N/A	25,197 SF	N/A	68%	32%	23	11	34
PM PEAK HOUR								
Fire Station	N/A	25,197 SF	N/A	7%	93%	1	13	14

(1) Source: Inbound and outbound trips based on information provided by the Hallandale Beach Fire Rescue.

Project Access

Access to the site is being proposed via the following access connections:

- One (1) full access driveway to NW 2nd Avenue: This driveway is expected to be used by administrative staff entering and leaving the site.
- One (1) full access driveway to Foster Road: This driveway is expected to be used by administrative staff entering and leaving the site.
- One (1) outbound only driveway connection to Foster Road: This driveway is expected to be used by fire trucks leaving the site.
- One (1) full access driveway to NW 1st Avenue: This driveway is expected to be used by fire trucks entering the site, as well as by fire rescue team employees entering and leaving the site.

Driveway Volumes

Traffic volumes were developed for the driveway connections based on the project access and trip generation analysis. **Figure 1** and **Figure 2** graphically show the anticipated driveway volumes during the AM and PM peak hours for the fire trucks and passenger cars, respectively.

Roadway Capacity Analysis

Roadway capacity analysis was provided for the major roadways within 1,000 feet of the site based on the City of Hallandale Beach Code of Ordinances. This included Dixie Highway/NE 1st Avenue. Based on information obtained from the Broward MPO *Roadways Capacity and Level of Service Analysis 2013 & 2035* tables, attached in **Appendix A**, the capacity for Dixie Highway/NE 1st Avenue in the vicinity of the project site is 34,992 vehicles per day and 3,154 vehicles per hour. Year 2013 traffic volumes for Dixie Highway/NE 1st Avenue, summarized in **Table 2**, were also obtained from the Broward MPO tables.

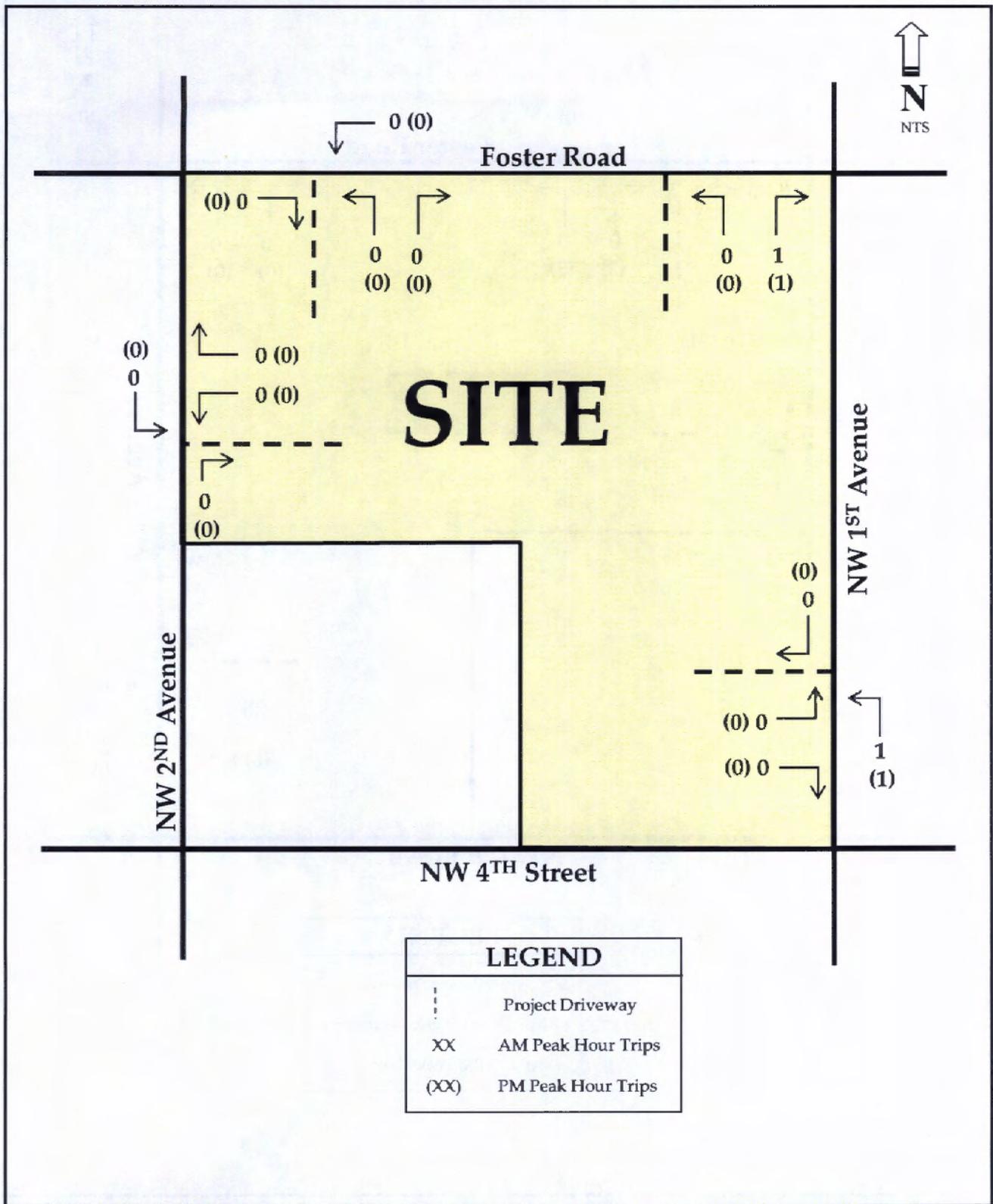


Figure 1
 Driveway Distribution and Traffic Volumes – Fire Trucks
Hallandale Fire Station 7 Traffic Statement
 Hallandale Beach, Florida

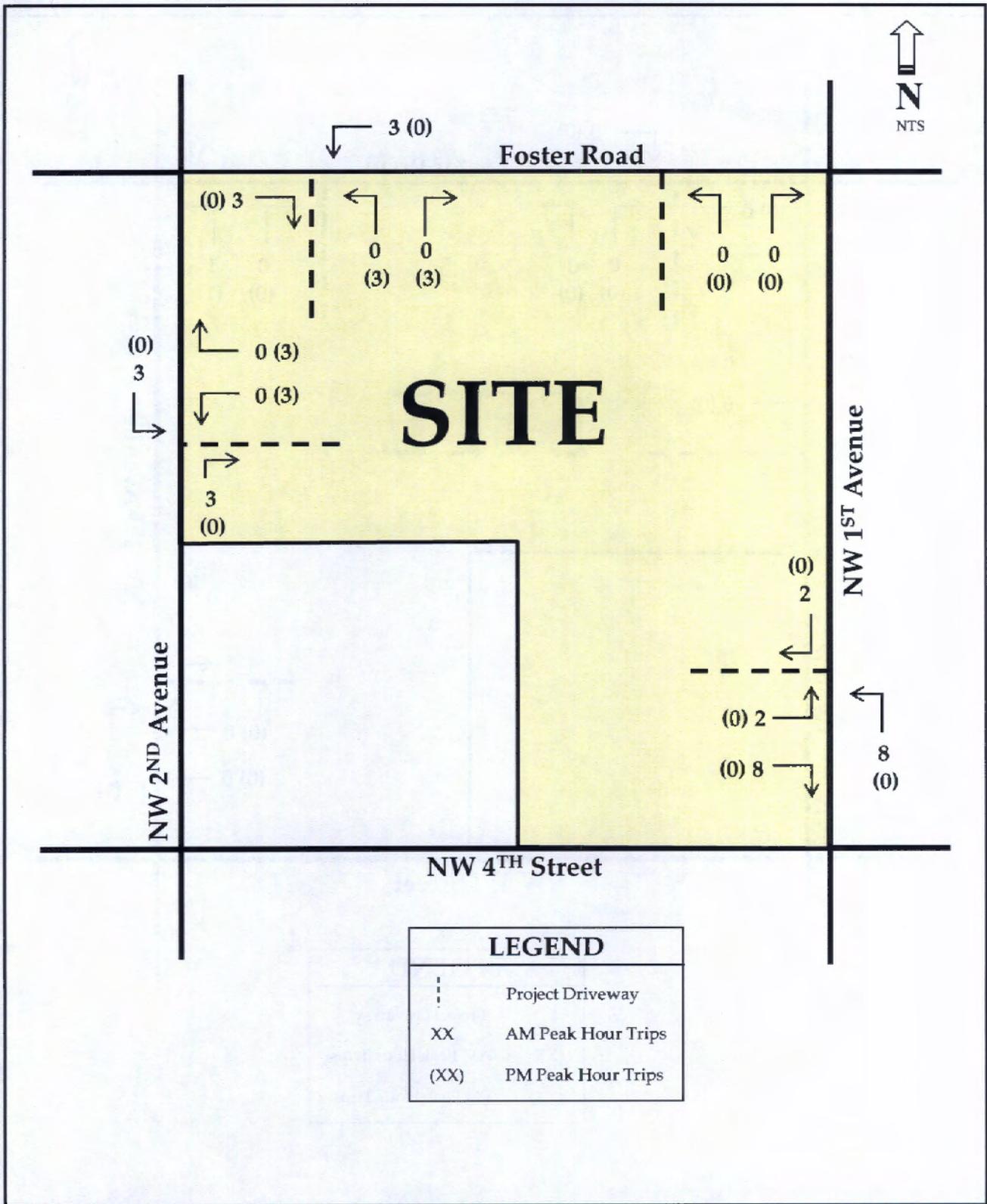


Figure 2
 Driveway Distribution and Traffic Volumes – Passenger Cars
 Hallandale Fire Station 7 Traffic Statement
 Hallandale Beach, Florida

Table 2: Hallandale Fire Station Link Capacity Analysis

ROADWAY	SEGMENT	FACILITY TYPE	CAPACITY ⁽¹⁾	2013 VOLUME ⁽¹⁾	CGR ⁽¹⁾	2016 BACK. VOLUME	PROJECT TRIPS ⁽²⁾	PROJECT SIG.	2016 TOTAL VOLUME	VOLUME TO CAPACITY RATIO	ROADWAY MEETS CAPACITY?
Daily											
Dixie Highway	N. of Hallandale Beach Blvd	4LD	34,992	9,700	2.5%	10,446	11	0.03%	10,457	0.30	Yes
AM Peak Hour											
Dixie Highway	N. of Hallandale Beach Blvd	4LD	3,154	922	2.5%	993	5	0.16%	998	0.32	Yes
PM Peak Hour											
Dixie Highway	N. of Hallandale Beach Blvd	4LD	3,154	922	2.5%	993	2	0.06%	995	0.32	Yes

(1) The capacity, 2013 volume and compound growth rate are based on the Broward County Roadways Capacity and Level of Service Analysis 2013 & 2035 tables.

(2) Approximately 15 percent of project traffic assumed to travel along Dixie Highway between Hallandale Beach Boulevard and Pembroke Road.

Background traffic volumes at the project buildout, anticipated to be 2016, were determined based on applying a compound growth rate (CGR) to year 2013 traffic volumes. Based on information obtained from the Broward MPO tables, a 2.5 percent CGR was used for the analysis. Project trips were then added to background traffic volumes to obtain total future traffic volumes at the project buildout. It was assumed that approximately 15 percent of the project traffic from the fire station would use Dixie Highway between Hallandale Beach Boulevard and Pembroke Road.

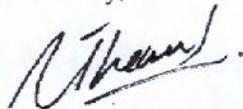
Results of the analysis, summarized in Table 2, indicate that Dixie Highway/NE 1st Avenue is anticipated to operate at an acceptable LOS at the project buildout with a volume to capacity (v/c) ratio of 0.30 during daily conditions, and a v/c of 0.32 during peak hour conditions. In addition, project traffic is expected to have a minimal impact along Dixie Highway/NE 1st Avenue, with project significance levels (project trips divided by roadway capacity) less than one-half (0.5) percent.

Conclusion

Based on the information contained herein, the proposed Fire Station is expected to have a minimal impact on the surrounding roadway network.

Should you have any questions or comments regarding these findings, please do not hesitate to call me.

Sincerely,



Natalia T. Lercari, P.E.
 Project Manager

NTL/hsv
 Attachment

APPENDIX A

BROWARD MPO DATA

Broward County
Roadway Capacity and Level of Service Analysis

ID	N/S Roadway	Segment	2013				2013				2035				2035					
			Design Code	Daily Conditions			Peak Hour Conditions				Design Code	Daily Conditions			Peak Hour Conditions					
				AAADT	Capacity	V/C	LOS	Volume	Capacity	V/C	LOS		Volume	Capacity	V/C	LOS	Volume	Capacity	V/C	LOS
813	Dixie Hwy/ 21 Ave	N of Hndle Bch Blvd	463	9700	34992	0.28	C	922	3154	0.29	C	463	16576	34992	0.47	D	1575	3154	0.50	D