

Technical Memorandum

TO: Malcolm Wentworth
FROM: Scott Booth, PE, PTOE
DATE: March 2, 2018
RE: Parking Demand Study for Texans Can Academies – Skillman Campus



Introduction

Halff Associates, Inc. (Halff) was retained by Texans Can Academies (Client) to prepare a Parking Justification Study supporting the parking request for the Texans Can Academies (TCA) - Skillman campus located in Dallas, Texas. The proposed school will be located in existing buildings that are part of an existing office/light industrial type area, located south of the intersection of Forest Lane and Skillman Street. The proposed school will have up to 350 students enrolled (split over morning and afternoon classes) with 35 staff members (many of which work both morning and afternoon classes). The TCA Skillman campus will have 134 parking spaces available, by plat (see attached), for operations.

City of Dallas Parking Requirements

City of Dallas parking requirements for the high school are based on the number of classrooms. For a high school, the required parking ratio is 9.5 parking spaces per classroom. The TCA Skillman campus is proposed to have 18 classrooms. Based on the ratio from the City of Dallas, the required parking is 171 spaces (18×9.5) for the high school. Assuming a maximum enrollment of 350 students, the overall parking ratio for the entire facility is (per City of Dallas requirements) 0.49 parking spaces per student ($171 \text{ spaces} / 350 \text{ students}$). See summary of parking requirements in Table 1 below.

Parking Demand/Requirements Based on Other Sources

From the *ITE Parking Generation Manual – 4th Edition*, the average peak parking demand for a suburban high school is 0.23 vehicles per student. For an urban high school, the average parking demand is 0.09 vehicles per student. Although the Skillman campus will likely function somewhere between the suburban and urban cases, as a worst-case scenario, the average parking demand for a suburban site (0.23 vehicles per student) was used. For the TCA Skillman campus, the parking demand (based on ITE) for the high school facility would be 81 spaces.

For comparison, the City of Houston parking requirements for a high school are 9.5 spaces per classroom assuming 30 students per classroom. With the charter school size being limited to 350 students, the class size will be approximately 20 students per class room (350 students/18 classrooms). Thus the parking requirement for a 20 student classroom is 6.5 spaces, which is a total 117 for the high school (6.5 spaces/classroom X 18 classrooms).

One final comparison is with the City of Plano parking requirements. For grades 9-10, the parking requirement is one (1) space per 6 students. For grades 11-12, the requirement is one (1) space per 1.5 students. With the Grant East campus serving grades 9-12, the parking requirement rates where averaged to one (1) space per 3.75 students. This translates to 93 required spaces for the high school. A summary of these three parking demand/requirement comparisons can be found in Table 1 below.

Parking Demand

Based on information supplied by the client, approximately 20 percent of the students at the Skillman campus charter school will drive their own vehicle and park at the school. With a maximum of 350 students, the projected parking demand related to students is 70 vehicles. The proposed number of staff members for the high school is 35. Assuming one vehicle per staff member yields an additional 35 vehicles for the high school and a projected parking demand total of 105 spaces for the high school facility. Exhibit 1 shows the proposed site parking.

To verify that the parking demand numbers for the Skillman campus as discussed above are adequate, a comparison to parking provided at the existing Ross Avenue campus, the existing Pleasant Grove campus, and the existing Grant East campus was prepared.

The Ross Avenue campus is located at 4601 Ross Avenue, Dallas, Texas. It is located on a DART bus route similarly to the Grant East campus (DART route 553) and the proposed Skillman campus (DART routes 488, 551, 560). The Ross Avenue campus has 350 students and 25 staff members at the high school and 90 children with 14 staff at the onsite daycare facility. Field observations of the provided parking show a total number of 113 available parking spaces, which includes 66 spaces for students, 34 spaces for staff, 8 spaces for the daycare facility, and 5 handicap spaces. The ratio of parking spaces to students is 0.32 spaces per student (113 spaces/350 students). Staff at the Ross Avenue campus has indicated there is sufficient parking for the current operations of that site.

As part of a previous parking study for another campus, a field observation was conducted at the Pleasant Grove campus, where there are approximately 309 students enrolled with 35 total staff. Based on that observation, the peak parking demand for the Pleasant Grove campus at 10:30 a.m. was 87 parked vehicles or 0.28 vehicles per student (87 vehicles/309 students). This is very similar to the parking demand ratio for the Grant East campus (0.29 vehicles per student), the ITE parking demand ratio (0.29 vehicles per student) and the City of Plano parking demand ratio (0.30 vehicles per student).

Scaling the parking demand ratio from the 309 students at the Pleasant Grove campus up to the 350 students projected for the Skillman campus, the parking demand at the proposed facility

(Skillman) would be 98 vehicles, which is within seven (7) vehicles of the projected parking demand (105 vehicles) as discussed above.

The last field observation is from the Grant East campus, located at 2901 Morgan Drive in Dallas, Texas. At the time of the observation, the campus had an enrollment of 360 students (spread out between morning and afternoon classes). From the data collected, there were 77 parked cars related to school operations. This corresponds to a parking ratio of 0.22 vehicles per student, which is similar to the 0.23 ratio from the *ITE Parking Generation Manual*.

Based on the comparison to the Ross Avenue, Pleasant Grove, and Grant East campuses, the projected parking demand of 105 vehicles for the proposed Skillman Campus is within the expected parameters. The projected parking demand rates are comparable to the parking demand rates from the *ITE Parking Generation Manual* and the City of Plano and, therefore, represent an accurate depiction of parking demand for the proposed facility.

Table 1 below summarizes the parking demand based on the different sources discussed above and also includes the observations from the Ross Avenue and Pleasant Grove campuses.

Table 1 – Parking Demand/Requirements and Observations Summary

Standard Source	Use	Variable	Parking Ratio per Variable	Spaces Required	Total Spaces Required	Surplus/Deficiency To	
						Provided Parking (134)	City of Dallas Standard (171)
City of Dallas	High School	Classrooms (18)	9.5	171	171	-37	n/a
ITE	High School	Students (350)	0.23	81	81	+53	-90
City of Houston	High School	Classrooms (18)	6.5	117	117	+17	-54
City of Plano	High School	Students (350)	0.267	93	93	+41	-78
Observations							
Pleasant Grove	309 students (40 staff)		0.28	87	98*	+36	-73
Ross Avenue	350 students (39 staff)		0.32	113	113	+21	-58
Grant East	360 students (33 staff)		0.22	77	77	+57	-94

* Projected for 350 students

Parking Reduction Request

The proposed plans for the Skillman campus show a total parking supply of 134 spaces (0.38 spaces per student), which includes at least 5 handicap spaces and another 129 remaining spaces surrounding the buildings. The provided parking of 134 spaces is 37 spaces less than the City of Dallas requirements (171 spaces), but is 29 more than the projected parking demand (105), which is based on operational information and observations from the other similar TCA facilities. The

provided number of parking spaces also exceeds the parking demand projections based on ITE Parking Generation data (81 total vehicles), City of Plano requirements (93 spaces), and the City of Houston parking requirements (117 spaces). Table 2 below summarizes the provided parking in relation to the City of Dallas requirements and the attached Exhibit 1 shows the proposed parking for the campus.

Table 2 – Summary of Parking Supply versus Requirements

School Site	Use	Variable	Parking Ratio per Variable	Spaces Required Per COD	Total Spaces Provided	Surplus/Deficiency to COD Standard
Skillman Campus	High School	Classrooms (18)	9.5	171	134	-37

Summary

Based on the discussion presented above, it is Halff Associates, Inc. opinion that the provided parking total of 134 spaces will meet the projected parking demands of the Skillman campus. A very large percentage of students that attend Texans Can Academies rely heavily upon public transportation to get to and from school. As with the Ross Avenue campus (350 students) and the Grant East campus (360 student), the Skillman campus is near a DART route, which makes it very convenient for students to access the school. It should be noted, that TCA provides DART passes to enrolled students to encourage use of the transit services.

