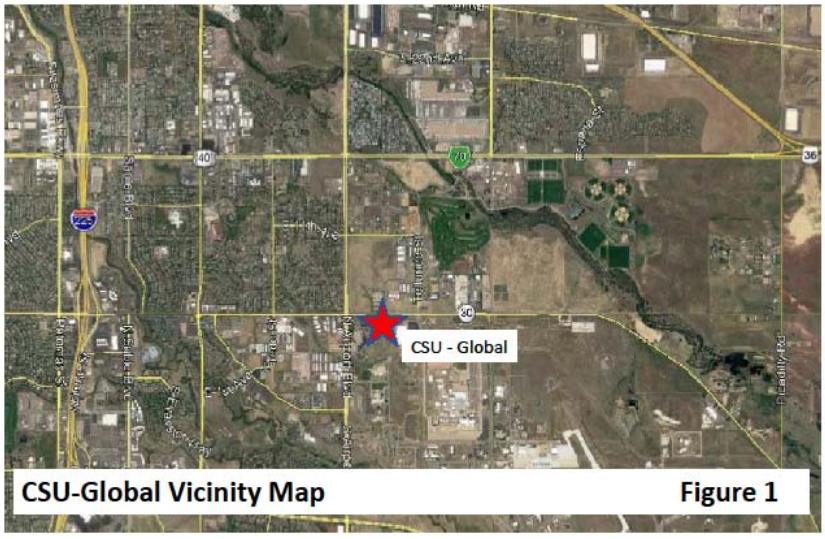
March 26, 2018

Ms. Cindy Sauls
Architect
Aurora Public Schools
Construction Management and Support
Aurora, Colorado

Re: **CSU Global – Trip Generation, Site Access, and Parking Evaluation in Aurora, CO**

Dear Cindy:

At your request, the Fox Tuttle Hernandez Transportation Group has completed a transportation evaluation of the proposed CSU Global facility to be located south of East 6th Avenue and west of Salida Way on the Aurora Public Schools campus in Aurora, CO. It is our understanding that the CSU Global facility will basically be a 25,900 sq. ft. two story office building with an adjacent parking lot. It is also our understanding that CSU Global will provide an on-line learning environment, and this building will serve office workers who are administering the CU Global activities, but there will be no student activity at this site.



CSU-Global Vicinity Map Figure 1

A **site plan** for the project is attached for reference, and the vicinity is illustrated in **Figure 1**.

This evaluation has focused on the following key items to address questions that have been raised:

- Trip generation – near and long term
- Site access and circulation
- Opening day v. long term use of the facility
- Parking supply and demand.

Each of these topics is discussed in detail below:

Trip Generation – Near and Long Terms

For the trip generation analysis, the CSU Global facility has been treated as a typical office building, and trip rates from the Institute of Transportation Engineers (ITE) Trip Generation Manual (10th Edition) have been utilized. Actual trip rate equations have been used for the ITE Land Use Type "General Office Building" (land use code 710) as they provide slightly higher (more conservative) Daily, AM, and PM peak hour trip projections than the average trip rates. It can be seen in **Table 1** that the CSU Global facility, when constructed and occupied, is projected to generate approximately 290 one-way trips per day, with approximately 35 trips occurring in both the AM and PM peak hours of a typical weekday. It is anticipated that this level of daily and hourly traffic can be easily accommodated by the roadway network that serves the Aurora Public School Campus.

In the long term, if CSU Global is no longer housed in this facility, but the building is used to provide office space for the Aurora School District, then it is expected that the trip generation at this site will be approximately the same. If the projected use of this site is significantly changed in the long term, then a revised transportation analysis would be needed.

Site Access and Circulation (see Figure 2)

Access to CSU Global on the Aurora School District Campus will be provided as follows:

- All site access directly onto Salida Way on the eastern edge of the site (see **Figure 3**).
- Access to Salida Way is provided by:
  - A ¾ access (right in, right out, and left in) onto E. 6th Avenue
  - Full turning access at the signalized intersection of E. 2nd Avenue and S. Airport Blvd.
  - Full turning access at the signalized intersection of Centretech Parkway and S. Airport Blvd.

This set of accesses choices will provide good connectivity to the surrounding roadway network, with access route choices depending on directional distribution of traffic and the time of day. It

is anticipated that there will be adequate sight distance available at the CSU Global driveway access onto Salida Way.

Opening Day v. Long Term Use of the Facility

As noted above in the discussion of trip generation, it is anticipated that the traffic accessing this new facility will remain approximately the same as long as the building is used as office space. It shouldn't change significantly if the site is used as CU Global, or as additional administration space for the Aurora Public School District. Major changes, beyond the reuse of this office building, would require additional study.

Parking Supply and Demand

It is our understanding the plan is to provide 100 parking spaces (including 4 ADA accessible spaces) on the CU Global site. These spaces are illustrated on the attached site plan. This level of parking supply was compared to parking supply and utilization rates contained in ITE's Parking Generation for typical office buildings. The ITE parking rate information indicates that:

- Suburban office buildings generally provide parking supply at a rate of 4.0 spaces per 1,000 sq. ft. of floor area
- Suburban office buildings generally have a peak period parking demand rate of 2.84 spaces per 1,000 sq. ft. of floor area (see attached ITE parking data).

The plan for the CSU Global facility currently provides the 100 spaces to serve the 25,900 sq. ft. building. On this basis, the current parking supply proposal is 3.86 spaces per 1,000 sq. ft. of floor area. Using the ITE average parking demand rate for a building of this size suggests that 75 parking spaces may be adequate to accommodate the parking needs of CSU Global. Given the multiple downsides of constructing more pavement than is needed, it may be appropriate for the parking lot at CSU Global to be constructed in 2 phases, with the first phase providing 70 to 75 spaces, with the potential to efficiently add an additional 25 to 30 spaces in a second phase only if needed.

I hope this information addresses the transportation access questions that have been raised, and is helpful as you move forward with the CSU Global project. Please let me know if you have any questions.

Sincerely,
Fox Tuttle Hernandez Transportation Group, LLC

William C. Fox, P.E.
Principal

Attachments: Table 1 – Trip Generation Summary
Site Plan
ITE Parking information

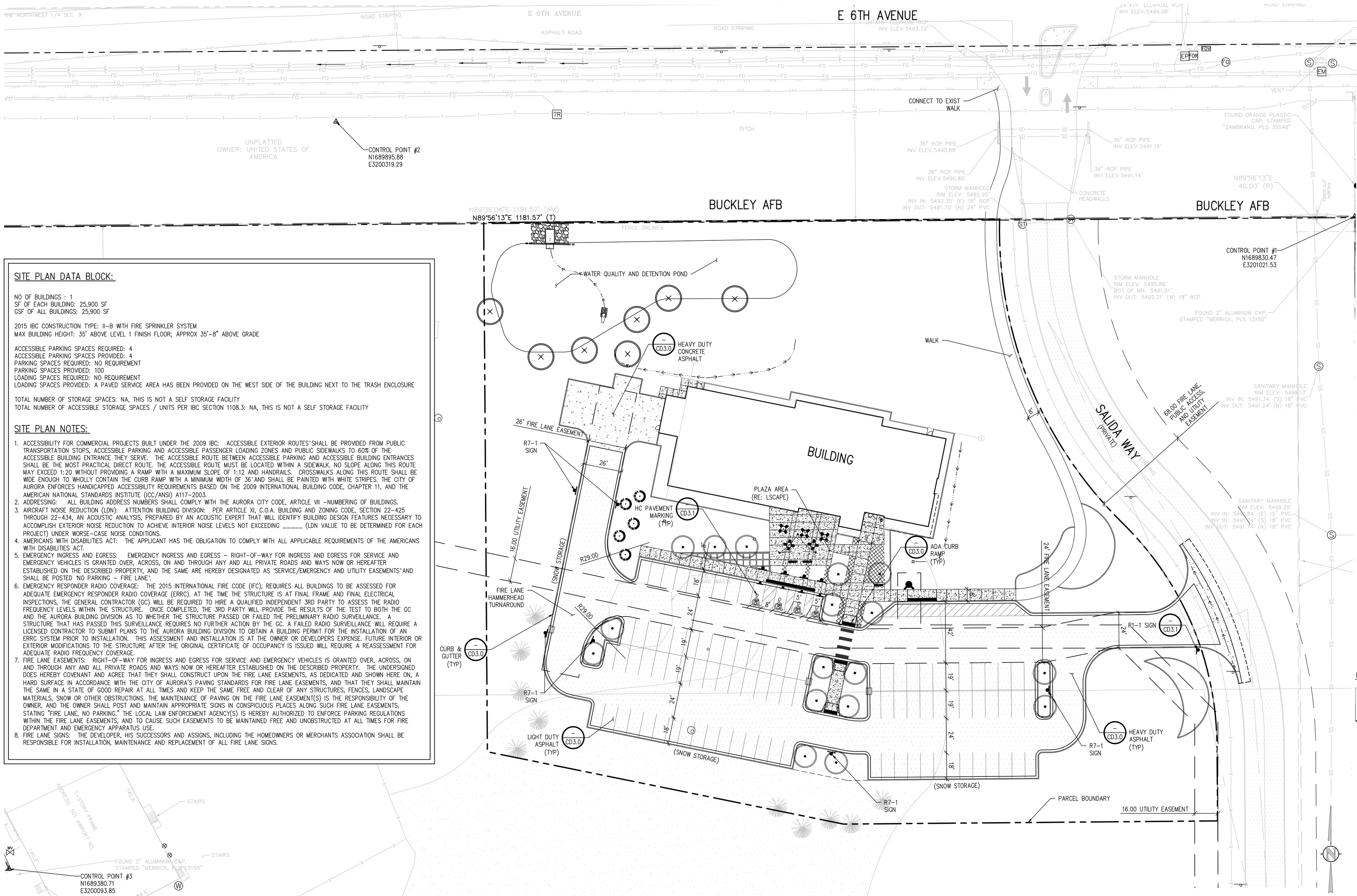
CSU Global Campus - Aurora, CO
Trip Generation Study

FOX TUTTLE HERNANDEZ
TRANSPORTATION GROUP

Table 1 - Trip Generation Summary

Land Use Type	Land Use Code	Size	Unit	Average Daily Trips				AM Peak Hour				PM Peak Hour			
				Rate	Total	In	Out	Rate	Total	In	Out	Rate	Total	In	Out
General Office Building	710	29.5	ksf	9.74	287	144	143	1.16	34	29	5	1.15	34	5	29
Non-Auto Mode Choice:				*10%*	*(29)*	*(14)*	*(15)*		*(3)*	*(3)*	-		*(3)*	*(1)*	*(2)*
Total New Auto Trips for Site:					**258**	**130**	**128**		**31**	**26**	**5**		**31**	**4**	**27**

Source: ITE Trip Generation 10th Edition, 2017.



SITE PLAN DATA BLOCK:

NO OF BUILDINGS : 1
SF OF EACH BUILDING: 25,900 SF
GSF OF ALL BUILDINGS: 25,900 SF

2015 IBC CONSTRUCTION TYPE: II–B WITH FIRE SPRINKLER SYSTEM
MAX BUILDING HEIGHT: 35' ABOVE LEVEL 1 FINISH FLOOR; APPROX 35'–8" ABOVE GRADE

ACCESSIBLE PARKING SPACES REQUIRED: 4
ACCESSIBLE PARKING SPACES PROVIDED: 4
PARKING SPACES REQUIRED: NO REQUIREMENT
PARKING SPACES PROVIDED: 100
LOADING SPACES REQUIRED: NO REQUIREMENT
LOADING SPACES PROVIDED: A PAVED SERVICE AREA HAS BEEN PROVIDED ON THE WEST SIDE OF THE BUILDING NEXT TO THE TRASH ENCLOSURE

TOTAL NUMBER OF STORAGE SPACES: NA, THIS IS NOT A SELF STORAGE FACILITY
TOTAL NUMBER OF ACCESSIBLE STORAGE SPACES / UNITS PER IBC SECTION 1108.3: NA, THIS IS NOT A SELF STORAGE FACILITY

SITE PLAN NOTES:

1. ACCESSIBILITY FOR COMMERCIAL PROJECTS BUILT UNDER THE 2009 IBC: ACCESSIBLE EXTERIOR ROUTES SHALL BE PROVIDED FROM PUBLIC TRANSPORTATION STOPS, ACCESSIBLE PARKING AND ACCESSIBLE PASSENGER LOADING ZONES AND PUBLIC SIDEWALKS TO 60% OF THE ACCESSIBLE BUILDING ENTRANCE THEY SERVE. THE ACCESSIBLE ROUTE BETWEEN ACCESSIBLE PARKING AND ACCESSIBLE BUILDING ENTRANCES SHALL BE THE MOST PRACTICAL DIRECT ROUTE. THE ACCESSIBLE ROUTE MUST BE LOCATED WITHIN A SIDEWALK. NO SLOPE ALONG THIS ROUTE MAY EXCEED 1:20 WITHOUT PROVIDING A RAMP WITH A MAXIMUM SLOPE OF 1:12 AND HANDRAILS. CROSSWALKS ALONG THIS ROUTE SHALL BE WIDE ENOUGH TO WHOLLY CONTAIN THE CURB RAMP WITH A MINIMUM WIDTH OF 36" AND SHALL BE PAINTED WITH WHITE STRIPES. THE CITY OF AURORA ENFORCES HANDICAPPED ACCESSIBILITY REQUIREMENTS BASED ON THE 2009 INTERNATIONAL BUILDING CODE, CHAPTER 11, AND THE AMERICAN NATIONAL STANDARDS INSTITUTE (ICC/ANSI) A117–2003.
2. ADDRESSING: ALL BUILDING ADDRESS NUMBERS SHALL COMPLY WITH THE AURORA CITY CODE, ARTICLE VII –NUMBERING OF BUILDINGS.
3. AIRCRAFT NOISE REDUCTION (LDN): ATTENTION BUILDING DIVISION: PER ARTICLE XI, C.O.A. BUILDING AND ZONING CODE, SECTION 22–425 THROUGH 22–434, AN ACOUSTIC ANALYSIS, PREPARED BY AN ACOUSTIC EXPERT THAT WILL IDENTIFY BUILDING DESIGN FEATURES NECESSARY TO ACCOMPLISH EXTERIOR NOISE REDUCTION TO ACHIEVE INTERIOR NOISE LEVELS NOT EXCEEDING _____ (LDN VALUE TO BE DETERMINED FOR EACH PROJECT) UNDER WORSE–CASE NOISE CONDITIONS.
4. AMERICANS WITH DISABILITIES ACT: THE APPLICANT HAS THE OBLIGATION TO COMPLY WITH ALL APPLICABLE REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT.
5. EMERGENCY INGRESS AND EGRESS: EMERGENCY INGRESS AND EGRESS – RIGHT–OF–WAY FOR INGRESS AND EGRESS FOR SERVICE AND EMERGENCY VEHICLES IS GRANTED OVER, ACROSS, ON AND THROUGH ANY AND ALL PRIVATE ROADS AND WAYS NOW OR HEREAFTER ESTABLISHED ON THE DESCRIBED PROPERTY, AND THE SAME ARE HEREBY DESIGNATED AS "SERVICE/EMERGENCY AND UTILITY EASEMENTS" AND SHALL BE POSTED "NO PARKING – FIRE LANE".
6. EMERGENCY RESPONDER RADIO COVERAGE: THE 2015 INTERNATIONAL FIRE CODE (IFC), REQUIRES ALL BUILDINGS TO BE ASSESSED FOR ADEQUATE EMERGENCY RESPONDER RADIO COVERAGE (ERRC). AT THE TIME THE STRUCTURE IS AT FINAL FRAME AND FINAL ELECTRICAL INSPECTIONS, THE GENERAL CONTRACTOR (GC) WILL BE REQUIRED TO HIRE A QUALIFIED INDEPENDENT 3RD PARTY TO ASSESS THE RADIO FREQUENCY LEVELS WITHIN THE STRUCTURE. ONCE COMPLETED, THE 3RD PARTY WILL PROVIDE THE RESULTS OF THE TEST TO BOTH THE GC AND THE AURORA BUILDING DIVISION AS TO WHETHER THE STRUCTURE PASSED OR FAILED THE PRELIMINARY RADIO SURVEILLANCE. A STRUCTURE THAT HAS PASSED THIS SURVEILLANCE REQUIRES NO FURTHER ACTION BY THE GC. A FAILED RADIO SURVEILLANCE WILL REQUIRE A LICENSED CONTRACTOR TO SUBMIT PLANS TO THE AURORA BUILDING DIVISION TO OBTAIN A BUILDING PERMIT FOR THE INSTALLATION OF AN ERRC SYSTEM PRIOR TO INSTALLATION. THIS ASSESSMENT AND INSTALLATION IS AT THE OWNER OR DEVELOPERS EXPENSE. FUTURE INTERIOR OR EXTERIOR MODIFICATIONS TO THE STRUCTURE AFTER THE ORIGINAL CERTIFICATE OF OCCUPANCY IS ISSUED WILL REQUIRE A REASSESSMENT FOR ADEQUATE RADIO FREQUENCY COVERAGE.
7. FIRE LANE EASEMENTS: RIGHT–OF–WAY FOR INGRESS AND EGRESS FOR SERVICE AND EMERGENCY VEHICLES IS GRANTED OVER, ACROSS, ON AND THROUGH ANY AND ALL PRIVATE ROADS AND WAYS NOW OR HEREAFTER ESTABLISHED ON THE DESCRIBED PROPERTY. THE UNDERSIGNED DOES HEREBY COVENANT AND AGREE THAT THEY SHALL CONSTRUCT UPON THE FIRE LANE EASEMENTS, AS DEDICATED AND SHOWN HERE ON, A HARD SURFACE IN ACCORDANCE WITH THE CITY OF AURORA'S PAVING STANDARDS FOR FIRE LANE EASEMENTS, AND THAT THEY SHALL MAINTAIN THE SAME IN A STATE OF GOOD REPAIR AT ALL TIMES AND KEEP THE SAME FREE AND CLEAR OF ANY STRUCTURES, FENCES, LANDSCAPE MATERIALS, SNOW OR OTHER OBSTRUCTIONS. THE MAINTENANCE OF PAVING ON THE FIRE LANE EASEMENT(S) IS THE RESPONSIBILITY OF THE OWNER, AND THE OWNER SHALL POST AND MAINTAIN APPROPRIATE SIGNS IN CONSPICUOUS PLACES ALONG SUCH FIRE LANE EASEMENTS, STATING "FIRE LANE, NO PARKING." THE LOCAL LAW ENFORCEMENT AGENCY(S) IS HEREBY AUTHORIZED TO ENFORCE PARKING REGULATIONS WITHIN THE FIRE LANE EASEMENTS, AND TO CAUSE SUCH EASEMENTS TO BE MAINTAINED FREE AND UNOBSTRUCTED AT ALL TIMES FOR FIRE DEPARTMENT AND EMERGENCY APPARATUS USE.
8. FIRE LANE SIGNS: THE DEVELOPER, HIS SUCCESSORS AND ASSIGNS, INCLUDING THE HOMEOWNERS OR MERCHANTS ASSOCIATION SHALL BE RESPONSIBLE FOR INSTALLATION, MAINTENANCE AND REPLACEMENT OF ALL FIRE LANE SIGNS.

HORIZONTAL CONTROL NOTES:

1. ALL DIMENSIONS AND RADII ARE TO FACE OF CURB, FACE OF BUILDING AND EDGE OF WALK UNLESS OTHERWISE NOTED.
2. CONTRACTOR TO REPAIR/REPLACE ALL DAMAGE TO EXISTING FLATWORK OR SITE FEATURES NOT INTENDED FOR DEMOLITION.
3. REFER TO GRADING AND DRAINAGE PLAN FOR FURTHER INFORMATION PERTAINING TO CURB & GUTTER, CHASES, AND DRAINAGE PANS.

30 0 30 60
SCALE IN FEET

BENNETT WAGNER GRODY ARCHITECTS

1301 Wazee . Suite 100
Denver . Colorado . 80204
303 . 623 . 7323
303 . 623 . 2836 Fax

OWNER
Aurora Public Schools
1369 Airport Blvd.
Aurora, CO 80011
303.344.8060

CIVIL ENGINEER
JVA Consulting Engineers
1512 Larimer Street, Suite 710
Denver, Colorado 80202
303.444.1951

LANDSCAPE ARCHITECT
Lime Green Design INC.
900 E.Louisiana Avenue, Suite 289
Denver, Colorado 80210
302.733.7558

STRUCTURAL ENGINEER
JVA Consulting Engineers
1319 Spruce Street
Boulder, Colorado 80302
303.444.1951

MECHANICAL / ELECTRICAL / PLUMBING ENGINEERING
Maxson Engineering
8307 Shaffer Pkwy., Suite 710
Littleton, Colorado 80127
303.933.2700

ACOUSTICS
K2 Audio
4900 East Pearl Circle
Boulder, Colorado 80301
303.865.5500

COST ESTIMATES
Kluesner Consulting
12560 West Cedar Drive
Lakewood, Colorado 80228
303.813.9393

SPECIFICATIONS
ARCHISPEX
6071 S Aberdeen Street
Littleton, Colorado 80120
303.927.8362

NOT FOR CONSTRUCTION

AURORA PUBLIC SCHOOLS
COMMUNITY CAMPUS
POST-SECONDARY BUILDING

1369 Airport Blvd.
Aurora, Colorado 80011

Date 2018-02-02
Issue CITY OF AURORA FIRST SUBMITTAL
Drawn By -
Checked By -
Project No. CITY OF AURORA # 1249894 / BWG # 16073.00
Revisions

Sheet ____ of XXX

NAME OF SHEET
HORIZOINTAL CONTROL PLAN

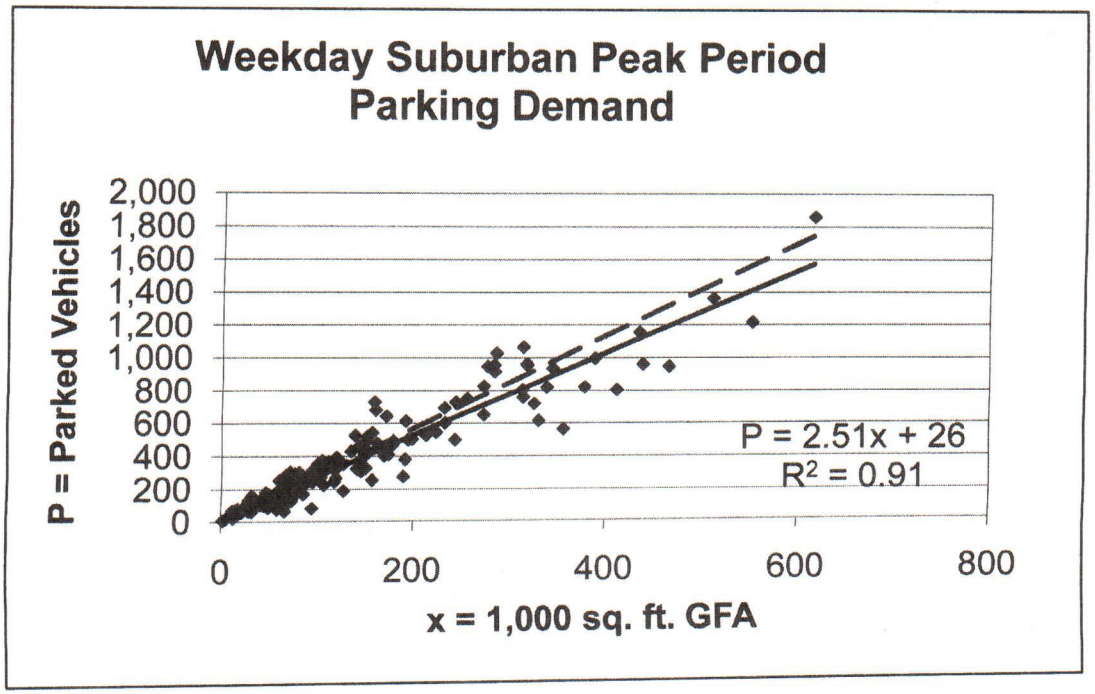
C3.0

1/24/2018 5:26:10 PM

Land Use: 701
Office Building

Average Peak Period Parking Demand vs. 1,000 sq. ft. GFA
On a: Weekday
Location: Suburban

Statistic	Peak Period Demand
Peak Period	9:00 a.m.–4:00 p.m.
Number of Study Sites	176
Average Size of Study Sites	136,000 sq. ft. GFA
Average Peak Period Parking Demand	2.84 vehicles per 1,000 sq. ft. GFA
Standard Deviation	0.73
Coefficient of Variation	26%
95% Confidence Interval	2.73–2.94 vehicles per 1,000 sq. ft. GFA
Range	0.86–5.58 vehicles per 1,000 sq. ft. GFA
85th Percentile	3.45 vehicles per 1,000 sq. ft. GFA
33rd Percentile	2.56 vehicles per 1,000 sq. ft. GFA



◆ Actual Data Points ——— Fitted Curve - - - - Average Rate