



SM ROCHA, LLC

TRAFFIC AND TRANSPORTATION CONSULTANTS

April 13, 2022

Chad Ballard
Paradigm Systems, Inc.
2513 Elmira Street
Aurora, Colorado 80010

**RE: Ballard Development / Traffic Generation Analysis
Aurora, Colorado**

Dear Mr. Ballard,

SM ROCHA, LLC is pleased to provide traffic generation information for the development entitled Ballard Development. This development is located at 2513 Elmira Street in Aurora, Colorado.

The intent of this analysis is to present traffic volumes likely generated by the proposed development, provide a traffic volume comparison to the previous land use shown within the approved Site Plan¹ for the overall development area, and consider potential impacts to the adjacent roadway network.

The following is a summary of analysis results.

Site Description and Access

Land for the development is currently vacant and surrounded by a mix of recreational, residential, and commercial land uses. The proposed development is understood to entail the new construction of an approximate 6,000 square foot office space attached to one residential unit.

Access to the development is provided at the existing curb cut currently serving the office building from Phase 1 of the previously approved Site Plan.

General site and access locations are shown on Figure 1.

A site plan amendment, as prepared by Brightlighter Engineering LLC, is shown on Figure 2. This plan is provided for illustrative purposes only.

¹ 25th and Elmira Street Development: Site Plan, Baseline Engineering Corporation, March 7, 2018.

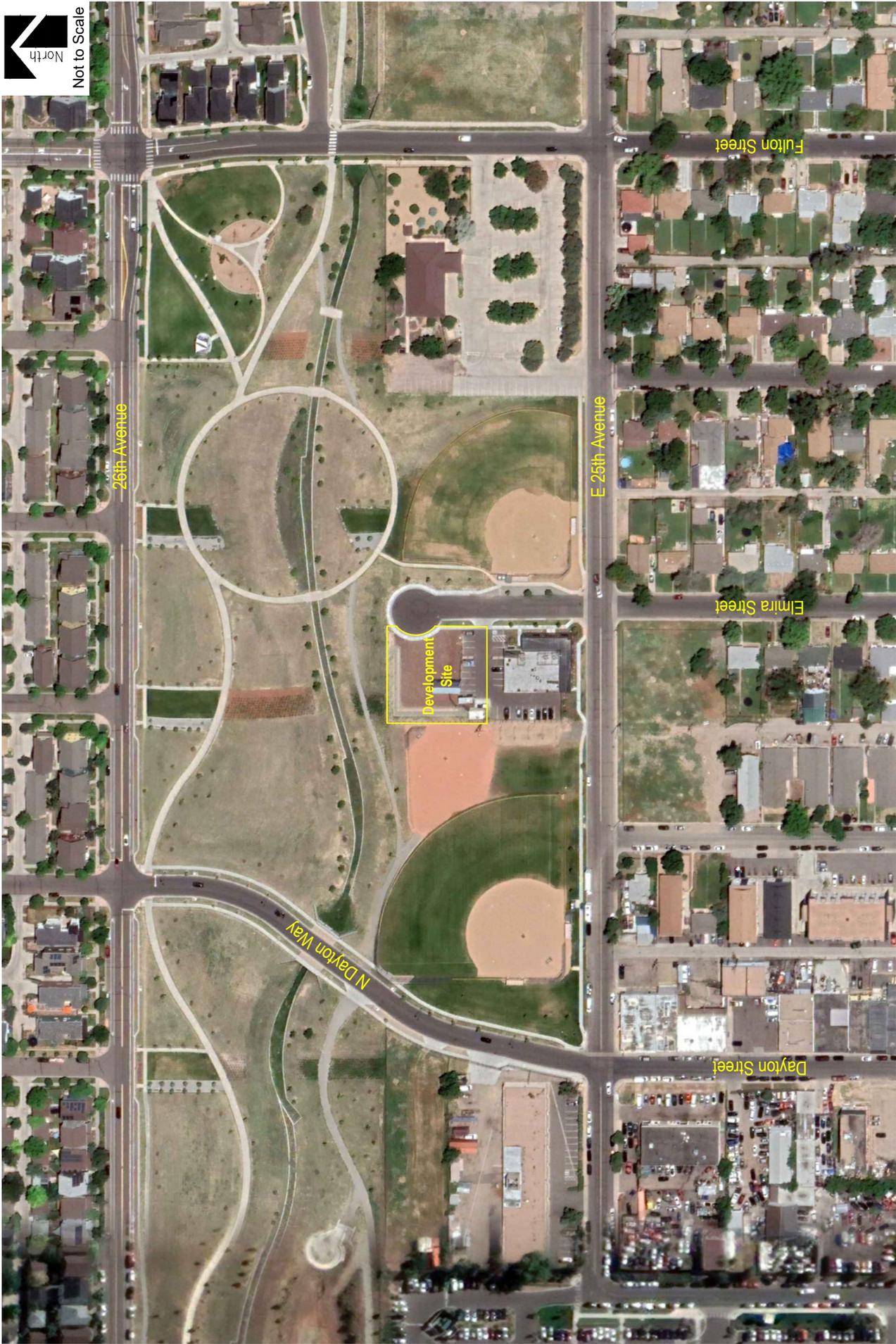


Figure 1
SITE LOCATION

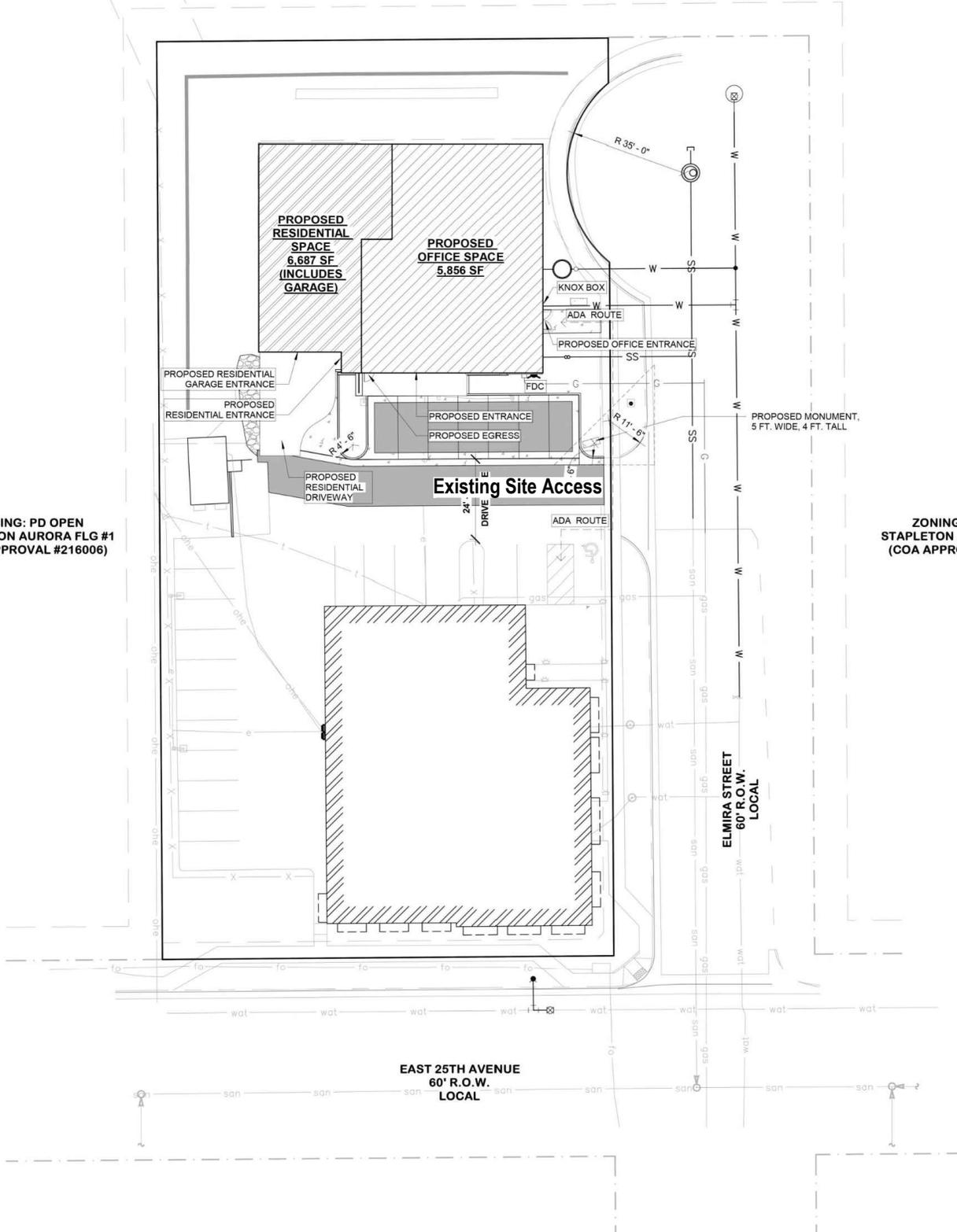


ZONING: PD OPEN
STAPLETON AURORA FLG #1
(COA APPROVAL #216006)



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BALLARD DEVELOPMENT
Traffic Generation Analysis

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Figure 2
SITE PLAN AMENDMENT

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Vehicle Trip Generation

Standard traffic generation characteristics compiled by the Institute of Transportation Engineers (ITE) in their report entitled Trip Generation Manual, 11th Edition, were applied to the previously approved and proposed land uses in order to estimate the average daily traffic (ADT) and peak hour vehicle trips. A vehicle trip is defined as a one-way vehicle movement from point of origin to point of destination.

Table 1 presents average trip generation rates for previously approved land use and for the development area proposed. Use of average trip generation rates presents a conservative analysis. ITE land use codes 215 (Single-Family Attached Housing), 710 (General Office Building), and 712 (Small Office Building) were used for analysis because of their best fit to the previously approved and proposed land uses.

Table 1 – Trip Generation Rates

| ITE CODE | LAND USE | UNIT | TRIP GENERATION RATES | | | | | | |
|-------------|--------------------------------|------|-----------------------|--------------|------|-------|--------------|------|-------|
| | | | 24 HOUR | AM PEAK HOUR | | | PM PEAK HOUR | | |
| | | | | ENTER | EXIT | TOTAL | ENTER | EXIT | TOTAL |
| 215 | Single-Family Attached Housing | DU | 7.20 | 0.15 | 0.33 | 0.48 | 0.32 | 0.25 | 0.57 |
| 710 | General Office Building | KSF | 10.84 | 1.34 | 0.18 | 1.52 | 0.24 | 1.20 | 1.44 |
| 712 | Small Office Building | KSF | 14.39 | 1.37 | 0.30 | 1.67 | 0.73 | 1.43 | 2.16 |

Key: DU = Dwelling Units. KSF = Thousand Square Feet Gross Floor Area.

Note: All data and calculations above are subject to being rounded to nearest value.

Table 2 summarizes the projected ADT and peak hour traffic volumes likely generated by the land use area proposed and provides comparison to traffic volume estimates the previously approved land use.

Table 2 – Trip Generation Summary

| ITE CODE | LAND USE | SIZE | TOTAL TRIPS GENERATED | | | | | | |
|---|--------------------------------|----------|-----------------------|-------------------|------------------|-------------------|-----------------|-------------------|-------------------|
| | | | 24 HOUR | AM PEAK HOUR | | | PM PEAK HOUR | | |
| | | | | ENTER | EXIT | TOTAL | ENTER | EXIT | TOTAL |
| <u>Site Development - Previously Approved</u> | | | | | | | | | |
| 710 | General Office Building | 16.2 KSF | 176 | 22 | 3 | 25 | 4 | 19 | 23 |
| <i>Previously Approved Total:</i> | | | <i>176</i> | <i>22</i> | <i>3</i> | <i>25</i> | <i>4</i> | <i>19</i> | <i>23</i> |
| <u>Site Development - Proposed</u> | | | | | | | | | |
| 215 | Single-Family Attached Housing | 1 DU | 7 | 0 | 0 | 0 | 0 | 0 | 1 |
| 712 | Small Office Building | 5.9 KSF | 84 | 8 | 2 | 10 | 4 | 8 | 13 |
| <i>Proposed Total:</i> | | | <i>91</i> | <i>8</i> | <i>2</i> | <i>10</i> | <i>5</i> | <i>9</i> | <i>13</i> |
| <i>Difference Total:</i> | | | <i>-84</i> | <i>-13</i> | <i>-1</i> | <i>-14</i> | <i>1</i> | <i>-11</i> | <i>-10</i> |

Note: All data and calculations above are subject to being rounded to nearest value.

As Table 2 shows, the proposed development area has the potential to generate approximately 91 daily trips with 10 of those occurring during the morning peak hour and 13 during the afternoon peak hour. Table 2 further shows how proposed development traffic volumes do not exceed those previously approved.

Adjustments to Trip Generation Rates

While a mixed-use development of this type is likely to attract trips from within area land uses, no trip reduction was taken in this analysis. This assumption provides for a conservative analysis.

Vehicle Trip Generation Comparison & Development Impacts

As Table 2 shows, the proposed development does not exceed traffic volumes approved for the area. These volumes are not likely to negatively impact operations of Cottonwood Drive nor other adjacent roadways or intersections.

Conclusion

This analysis assessed traffic generation for the Ballard Development, provided a traffic volume comparison to the previously approved land use, and considered potential impacts to the adjacent roadway network.

It is our professional opinion that the proposed site-generated traffic resulting from the new land use is expected to create no negative impact to traffic operations for the surrounding roadway network and existing site access, nor at the Elmira Street intersection with E 25th Avenue, and is in compliance with the 25th and Elmira Street Development Site Plan.

We trust that our findings will assist in the planning and approval of the Ballard Development. Please contact us should further assistance be needed.

Sincerely,

SM ROCHA, LLC
Traffic and Transportation Consultants



Brandon Wilson, EIT
Traffic Engineer



Fred Lantz, PE
Traffic Engineer