CITY OF FORT COLLINS
TYPE 1 ADMINISTRATIVE HEARING
FINDINGS AND DECISION

HEARING DATE: March 18, 2014

PROJECT NAME: The Learning Experience at Miramont Office Park Project

CASE NUMBER: PDP130023

APPLICANT: Adam Rubenstein
Fort Collins Development Co., LLC
5150 East Yale Circle, Suite 400
Denver, CO 80222

OWNER: Miramont Office Park, LLC
4901 Hogan Drive
Fort Collins, CO 80525

HEARING OFFICER: Kendra L. Carberry

PROJECT DESCRIPTION: This is a request for approval of a Project Development Plan (PDP) for the Learning Experience at Miramont Office Park, with one modification of standard to reduce the size of the outdoor play area. The project is located at 4775 Boardwalk Drive and encompasses two parcels, totaling 70,289 square feet or 1.61 acres. The PDP proposes a 10,000 square feet building and 4,524 square feet of outdoor play area to be used as a Child Care Center.

SUMMARY OF DECISION: Approved

ZONE DISTRICT: Harmony Corridor District (H-C)

HEARING: The Hearing Officer opened the hearing at approximately 5:30 p.m. on March 18, 2014, in Conference Room A, 281 North College Avenue, Fort Collins, Colorado.

EVIDENCE: During the hearing, the Hearing Officer accepted the following evidence: (1) Planning Department Staff Report; (2) application, plans, maps and other supporting documents submitted by the applicant (the Land Use Code (the "Code"), the Comprehensive Plan and the formally promulgated polices of the City are all considered part of the record considered by the Hearing Officer).

TESTIMONY: The following persons testified at the hearing:

From the City: Noah Beals

From the Applicant: Adam Rubenstein

From the Public: N/A

FINDINGS

1. Evidence presented to the Hearing Officer established the fact that the hearing was properly posted, legal notices mailed and notice published.

2. The PDP complies with the applicable General Development Standards contained in Article 3 of the Code.

a. The PDP complies with Section 3.2.1, Landscaping and Tree Protection, because: the tree mitigation plan was approved by the City Forester; existing street trees will be preserved; and three trees on the property will be relocated.

b. The PDP complies with Section 3.2.2, Access, Circulation and Parking, because: the PDP includes sidewalk connections extending to Boardwalk Drive, to the adjacent office building, and to a pedestrian path connecting with the neighborhood to the west; bicycle parking is provided near the building's main entrance, but separated from the motor vehicle parking; the parking and circulation was already established, with the only improvements being new crosswalk striping in the drive aisle, which will alleviate potential vehicle and pedestrian conflicts; and the requirements for parking spaces and dimensions are satisfied.

c. The PDP complies with Section 3.2.4, Site Lighting, because: the photometric plan complies with the average minimum foot-candles for parking areas and building surrounds; and the one type of light fixture being added to the site includes a light source that is down directional and fully shielded.

d. The PDP complies with Section 3.4.1, Natural Habitats and Features, because the property does not include any natural areas, habitats, or features within, or 500' outside of its boundaries.

e. The PDP complies with Section 3.5.3, Institutional and Commercial Buildings, because: the building provides a play yard, an increase in the number of trees and variety in landscaping, all compensating for the lack of compliance with the 15' of the right-of-way build-to-line requirement; the building elevations provide a recognizable base and top treatment; and the overall design provides variation in massing.

f. The PDP complies with Section 3.6.3, Street Pattern and Connectivity Standards, because the PDP maintains the two vehicle access points to Boardwalk Drive and the drive aisle internal to the site.

g. The PDP complies with Section 3.6.4, Transportation Level of Service Requirements, because the vehicular, pedestrian and bicycle facilities are consistent with the standards contained in Part II of the City's Multimodal Transportation Level of Service Manual.

3. The PDP complies with the applicable standards contained in Article 4 of the Code for the H-C zone district.

a. The PDP complies with Section 4.26(B), Permitted Uses, because a child care center is a permitted use in the H-C zone district.

b. The PDP complies with Section 4.26(D)(3)(a), Land Use Standards, because the proposed building is 1 story in height, below the 6-story maximum.

c. The PDP complies with Section 4.26(E)(1)(b), Development Standards, because the PDP complies with the H-C District Plan and the H-C Design Standards.

4. The Modification of Standard meets the applicable requirements of Section 2.8.2(H) of the Code.

a. The Modification would not be detrimental to the public good.

b. The PDP will promote the general purpose of Section 3.8.4(A) equally well or better than a plan which complies with Section 3.8.4(A), because the proposed outdoor play area provides enough square footage for those children using the area at one time.

c. The standard is intended to provide enough outdoor play area for the children who are using the area at one time. Although the center will have a capacity of 170 children, the applicant has stated that at most only 56 children would be using the outdoor play area at one time, which is equal to the 33% of the total capacity of the center. The applicant's proposal to provide 75 square feet of outdoor play area for 33% of the total child capacity is sufficient outdoor play space tailored to the applicant's specific operations.

DECISION

Based on the foregoing findings, the Hearing Officer hereby enters the following rulings:

1. The PDP and Modification of Standard are approved as submitted.

DATED this 26th day of March, 2014.

Kendra L. Carberry
Hearing Officer

ITEM NO PDP130023
MEETING DATE March 18th, 2014
STAFF Noah Beals

ADMINISTRATIVE HEARING OFFICER

STAFF REPORT

PROJECT: The Learning Experience at Miramont Office Park Project Development Plan, PDP130023,

APPLICANT: Adam Rubenstein, Fort Collins Development CO. LLC
5150 East Yale Circle, Suite 400
Denver, CO 80222

OWNER: Miramont Office Park LLC
4901 Hogan Drive
Fort Collins, CO 80525

PROJECT DESCRIPTION:

This is a request for approval of a Project Development Plan (PDP) for The Learning Experience at Miramont Office Park. The project is located at 4775 Boardwalk Drive and encompasses two parcels. Together the two parcels are 70,289 square feet or 1.61 acres.

The project proposes to erect a 10,000 square feet building and landscape 4,524 square feet of outdoor play area to be used as a Child Care Center. The property is zoned Harmony Corridor District (H-C). The Child Care Center will be able to accommodate 170 kids and 30-35 employees. A previously installed parking lot contains 73 spaces and the project will provide an additional 4 bike parking spaces. Direct connections to the established sidewalks both in the public right-of-way and on the adjacent lot will be installed. The proposed use is permitted in this zone district. In addition the proposal includes a modification request to allow a reduction of outdoor play area.

RECOMMENDATION: Staff recommends approval of The Learning Experience at Miramont Office Park Project Development Plan, PDP130023, and Modification of Standard to Section 3.8.4(A).

EXECUTIVE SUMMARY:

The approval of The Learning Experience at Miramont Office Park Project Development Plan complies with the applicable requirements of the City of Fort Collins Land Use Code (LUC), more specifically:

- The Learning Experience at Miramont Office Park PDP complies with process located in Division 2.2 – Common Development Review Procedures for Development Applications of Article 2 – Administration.

- The Learning Experience at Miramont Office Park PDP is in conformance with Oak/Cottonwood Amended Overall Development Plan approved by the Planning and Zoning Board in March 1997.

- The Learning Experience at Miramont Office Park PDP complies with relevant standards located in Article 3 – General Development Standards, provided that the Modification of Standard to section 3.8.4(A) that is proposed with this project is approved.

- The Learning Experience at Miramont Office Park PDP complies with relevant standards located in Division 4.26, Harmony Corridor District (H-C) of Article 4 – Districts.

COMMENTS:

1. Background:

Historically the following approvals have been granted to the property:

- Keenland Annexation , City Council August 1980
- Oak/Cottonwood ODP, Planning and Zoning Board – October 1988
- Amendment to Oak/Cottonwood ODP – June 1992
- Amendment to Oak/Cottonwood ODP – March 1997
- Miramont Office Park, Planning and Zoning Board – September 1997
- Miramont Office Park, Final Plan recorded – February 1998

Today the property is partially developed. The parking lot has already been installed and public right of way improvements were constructed. The building area is vacant land vegetated with natural grass.

Zoning History (most recent to past):

- The property is currently located in the Harmony Corridor District (H-C). The current H-C District was adopted in 1997 at the time the Land Use Code was adopted and the entire City was rezoned. It should be noted that the Harmony Corridor Plan and the Harmony Corridor Design Standards and Guidelines were adopted in March of 1991.

- Prior to the adoption of the Land Use Code and the rezoning to the H-C District, the property was zoned Residential Planned (rp) conditional zoning. The rp zone district was adopted at the time of the Keenland Annexation in 1980. This zone district was in accordance with the adopted Zoning Code at the time.

The current surrounding zoning and land uses are as follows:

Direction	Zone District	Existing Land Use
North	Harmony Corridor (H-C)	Commercial: Business Offices
South	Harmony Corridor (H-C)	Vacant parcel: Part of the Miramont Self Storage PUD approved for offices
East	Harmony Corridor (H-C)	Commercial and Public Right-of-Way: Boardwalk Drive and Sam's Club
West	Harmony Corridor (H-C)	Place of Worship: Front Range Baptist Church and the church's open space

2. Compliance with Article 4 of the Land Use Code – Harmony Corridor (H-C):

The project complies with all applicable Article 4 standards as follows:

A. Section 4.26(A) and (B) – Permitted Uses

- The project's proposed Child Care Center use is aligned with the purpose of the Harmony Corridor District to create a complete mixed-use area with a strong employment base. The Child Care Center is a permitted use in Harmony Corridor district.

B. Section 4.26(D) – Land Use Standards

- Section 4.26(D)(3)(a) establishes a maximum height of six (6) stories the proposed building complies with this standard at height of one (1) story.

C. Section 4.26(E) – Development Standards

- Section 4.26(E)(1)(b) requires that compliance with the adopted Harmony Corridor District Plan and the Harmony Corridor Design Standards. The proposed development is in compliance with both documents.

- Section 4.26(E)(2)(a) promotes, in cases of multiple parcel ownership, that development plans establish integrated building styles and land uses. The design proposal of the new building is in sync with the other buildings in the office park that are 1 to 2 story, hipped and gable roofs, and consist of stucco with a stone wainscot.

3. Compliance with Article 3 of the Land Use Code – General Development Standards

The project complies with all applicable General Development Standards; with the following relevant comments.

A. Division 3.2 – Site Planning and Design Standards

1) 3.2.1 Landscaping and Tree Protection:

- A detailed tree mitigation plan is provided with this PDP. This plan was designed with the coordination and has received approval by the City Forester. In effort to not lose any of the existing tree canopy the existing street trees will be preserved and 3 trees within the site will be relocated.

- "Full Tree Stocking" is provided along all four sides of the building.

2) 3.2.2 Access, Circulation and Parking:

By design the Land Use Code encourages patrons of the site to explore other modes of transportation than the vehicle. This is accomplished by requiring sidewalk connections, bicycle accommodations, and limiting the number of off-street vehicle parking spaces for a non-residential use. The proposed project is in compliance of these standards through the following:

- Sidewalk connections are proposed to extend to Boardwalk Drive, to the adjacent office building, and to a pedestrian path that connects to the neighborhood to the West. As required, the sidewalk system provided contributes to the attractiveness of the development.

- Bicycle parking is provided on site near the building's main entrance and is separated from the vehicle parking. These bike spaces can be accessed through the sidewalk connections or the driveways that lead into the site.

- The parking and circulation was already established. Only improvements proposed are two crosswalk striping's in the drive aisle to help alleviate any impacts from vehicle and pedestrian conflicts. Parking requirements in regards to the maximum numbers of spaces and dimensions of stalls are being met.

3) 3.2.4 Site Lighting:

- A photometric plan was submitted for the project. As proposed, the project complies with the average minimum foot-candles for parking areas and building surrounds.

- Only one type of Light fixture is being added to the site on the outside of the building. This fixture meets the code standards with a light source that is down directional and fully shielded.

B. Division 3.4 – Environmental, Natural Area, Recreational and Cultural Resource Protection Standards

1) 3.4.1 Natural Habitats and Features:

- The Learning Experience at Miramont site does not include any natural areas, habitats, and features within and 500 feet outside of its boundaries.

C. Division 3.5 – Building Standards

1) 3.5.3 Institutional and Commercial Buildings

- Although the proposed building does not meet the required build-to-line to be within 15 feet of the right-of-way it complies with the exception to the standard allowed by this section. By providing a play-yard, an increase of trees, and variety in landscaping in-between the building and the right-of-way it provides interest and comfort for pedestrians.

- The proposed building elevations provide a recognizable base and top treatment in accordance with Section 3.5.3(D)(6).

- The overall design satisfies the institutional building requirements of Section 3.5.3. "Variation in massing". This is satisfied through the use of building projections over the primary entrances and with sloping roofs that provide a variation in height.

D. Division 3.6 – Transportation and Circulation

1) 3.6.3 Street Pattern and Connectivity Standards:

- The project continues to comply with the general framework established with the Overall Development Plan. The project maintains the two vehicle access points to Boardwalk Drive and the drive aisle internal to the site.

2) 3.6.4 Transportation Level of Service Requirements:

- Traffic Operations have reviewed the Transportation Impact Study that was submitted to the City and have determined that the vehicular, pedestrian and bicycle facilities proposed with this PDP are consistent with the standards contained in Part II of the City of Fort Collins Multi-modal Transportation Level of Service Manual.

4. Modification of Standards – Division 2.8

There is one request of modification with this project.

A. Modifcation Request

The applicant requests a modification of standard to Sections 3.8.4(A) to allow a decrease in the amount of square footage required for a Child Care Center. The request is to provide 4,524 square feet. This is 3,226 square feet less than the standard.

1) The Standard

- 3.8.4(A) A minimum of two thousand five hundred (2,500) square feet of outdoor play area shall be provided for fifteen (15) children or fewer, with seventy-five (75) additional square feet being required for each additional child, except that the size of the total play area need only accommodate at least fifty (50) percent of the capacity of the center, and that such outdoor play area shall not be required for drop-in child care centers...

- The following table illustrates the required square footage for the outdoor play area for The Learning Center at Miramont Office Park.

Calculation of Required Square Footage Per Land Use Code	
The minimum square footage for outdoor Play Area for 15 children or fewer.	2,500 Sq. Ft.
The Learning Center at Miramont Office Park Capacity	170 Children
50% of the Capacity of Center	170/2=85 Children
An additional 75 sq. ft. For every additional child above the initial 15 of half the Capacity	85-15=70 Children 70x75=5,250 Sq. ft.
Total square footage required	2,500+5,250=7,750 Sq. Ft.

2) Section 2.8 Code Criteria

The request of approval for this modification is based on the Review Criteria for Modification of Standards found in Section 2.8.2(H) and 2.8.2(H)(1) as follows:

- The granting of the modification would not be detrimental to the public good.

- The plan as submitted will promote the general purpose of the standard for which the modification is requested equally well or better than a plan which complies with the standard for which a modification is requested.

3) Applicant's Justification

The applicant has provided the following justification for the modification request:

- *The reduced playground size, 4,524 sf complies with both Federal and Colorado State licensing codes.*

    - *According to Colorado State regulations, 12 CCR 2509-8 Program Area 7-Child Care Center/less than 24 Hour Care, section 7.702-7.702.104 goes over space requirements. Specifically, for outdoor play area requirements, the State requires us to have a minimum of 75 square feet of space per child for a group of children using the total play area at any one time. The total square footage must accommodate*

at least 33% of the licensed capacity of the center or a minimum of 1,500 sf, whichever is greater.

- *We are anticipating a capacity of 170 children. Based on the above requirements, we will have a maximum of 56 children outside at one time. Based on the State requirements, we will need to have 4,200 sf of space for our children. As we want to build as much outdoor space as possible, we are building an additional 324 sf of playground space; thus a 4,524 sf playground.*

- *Further, the way The Learning Experience operates their outside areas (and per Colorado State Code and Regulations) is play time is determined by age groups. We do not have 1-2 year old children outside with 4-5 year old children. The reduced playground size helps our staff and educators supervise the children outside to ensure everyone's safety. We do not feel a 7,750 sf playground is necessary with the limited amount of children that will be outside at any given time as we limit the play time per the age groups. With a larger playground and less children, there is more room for errors and mistakes to be made as there are not enough sets of eyes supervising the children; a larger space increases the likely hood of injury and/or mischief.*

- *Another factor in asking for a modification request is the land limitations. We are taking the fifth and last parcel of a planned development. Per the site plan, we only have so much land we can build on without effecting the entire development. To the north and west of the site, parking fields have already been created. We cannot take away parking spaces for the four other buildings, and our use, and still meet code.*

  - *To the south and east of the site, there is a detention pond. We are able to encroach to the east of the detention pond, by drudging out the pond to the south to make up for lost capacity. However, we still need enough capacity for not only our building and the four other buildings in the office park, but also the church that is to the northeast of our property. We physically cannot get a 7,750 sf playground on this location; however, based on a 4,524 sf playground, we still meet Colorado State regulations for playground size without being detrimental to our neighboring buildings.*

4) Staff Finding for the Modification

Staff finds that the request for Modification of Standard to Section 3.8.4(A) is justified by the applicable standards in 2.8.2(H). The granting of the Modifications would not be detrimental to the public good and:

- The request satisfies Criteria 2.8.2(H)(1) because the plan as submitted will promote the general purpose of the standard equally well or better than a plan which complies with the standard based on the justification statement provided by the applicant and in addition:

    - The standard is intended to provide enough outdoor play area for the children who are using this area at one time. Although the center has a capacity of 170 children, the applicant has stated that at most only 56 children would be using the outdoor play area at one time, which is equal to the 33% of the total capacity of the center. The applicant's proposal to provide 75 square feet of outdoor play area for 33% of the total child capacity is sufficient outdoor play space tailored to their specific operations.

5. Findings of Fact/Conclusion

In evaluating the request for The Learning Experience at Miramont Office Park Project Development Plan, Staff makes the following findings of fact:

A. The Modification of Standard to Section 3.8.4(A) regarding the decrease in required outdoor play area that is proposed with this PDP would not be detrimental to the public good and the modification meets the applicable requirements of Section 2.8.2(H)(1). The proposed plan will promote the general purpose of the standard equally well or better than a plan which complies with the standard due to the proposed outdoor play area provides enough square footage for those children using the area at one time.

B. The Learning Experience at Miramont Office Park PDP complies with process located in Division 2.2 – Common Development Review Procedures for Development Applications of Article 2 – Administration.

C. The Learning Experience at Miramont Office Park PDP is in conformance with Oak/Cottonwood Amended Overall Development Plan approved by the Planning and Zoning Board in March 1997.

D. The Learning Experience at Miramont Office Park PDP complies with relevant standards located in Article 3 – General Development Standards, provided that the Modification of Standard to Section 3.5. is approved.

E. The Learning Experience at Miramont Office Park PDP complies with relevant standards located in Division 4.28, Harmony Corridor District (H-C) of Article 4.

RECOMMENDATION:

Staff recommends approval of The Learning Experience at Miramont Office Park Project Development Plan, PDP1300023.

ATTACHMENTS:

1. Statement of Planning Objectives
2. Oak/Cottonwood Farm Amended Overall Development Plan
3. Site Plan
4. Landscape Plans
5. Building Elevations
6. Lighting Plan
7. Traffic Impact Statement

Dear City of Fort Collins,

Rubenstein Real Estate, Co., LC, on behalf of **Fort Collins Development Co., LLC**, has contracted to buy **0.237 acres** of land at **The Miramont Office Park**, Lot 3, Pad E; Larimer County; to build a **10,000 SF** "Child Development Facility" with a contiguous **5,000 SF** playground for The Learning Experience "TLE".

TLE is a privately held company headquartered in **Boca Raton, Florida**. TLE focuses on early childhood development for children aging from **6 weeks to 6 six years old**, and after school care for children up to 9 years old.

TLE currently has **120** operating facilities and **60** facilities under development in **22** states. This facility will be the **fifth** in Colorado.

Please visit TLE at their website: www.thelearningexperience.com

The development of **Pad E in Lot 3** includes constructing a **10,000 SF building**, a contiguous **5,000 SF playground**, and **fully landscaping** the pad.

TLE will be an outstanding addition to the Miramont Office Park, and the surrounding neighborhoods. The facility will allow enrollment up to **170 children** and will have a staff of approximately 30. TLE provides the tools and environment that gives children every opportunity to develop to their greatest potential. TLE has a cutting edge proprietary curriculum; over **88% of TLE's 4-year old children** are reading. TLE builds a strong foundation for each child to grow emotionally, socially, and cognitively at his/her own pace.

Adam Rubenstein represents the applicant and is the "Single Point of Contact" for the application; his information is below:

Adam Rubenstein
5150 East Yale Circle, Suite 400
Denver, CO 80222

Office: 720-529-2881
Cell: 303-257-1481
arubenstein@legendretailgroup.com

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Statement of Planning Objectives (D)

(i) This project is an infill commercial development, which the City of Fort Collins supports.

(ii) The Learning Experience will be taking the last pad in the already existing Miramont Office Park. We will have a 10,000 sf building with a contiguous 5,000 sf playground. The playground will be encompassed by an opaque fence that has landscaping surrounding the exterior. There is an onsite detention pond.

(iii) The Miramont Office Park consists of five pads and five buildings. Each building has a separate owner. The owners are all a part of the Declaration of Covenants, Conditions, and Restrictions for the Miramont Office Park dated October 11, 2000 reception # 2000070367 to govern and maintain the office park and common areas. Pad E will be owned by the Fort Collins Development Co, LLC which is controlled and Managed by John and Adam Rubenstein. Pad E will be a part of the CCR's mentioned above.

(iv) The Learning Experience will be licensed for roughly 170 children. The Learning Experience will employ an estimated 30-35 employees.

(v) The Learning Experience chose the Miramont Office Park for its Ft. Collins home because of its location off of Harmony Rd and Boardwalk. It is next to several businesses and located in an established, yet growing community. The Learning Experience building has been designed to match the rest of the office park. We will have a 5,000 sf playground, with an opaque fence. We are using an opaque fence for security reasons. We will have landscaping surrounding the fence to help camouflage the fence.

(vi) Child Care is a permitted use under the current zoning restrictions.

(vii) We are the fifth and last piece to an already existing office park. The City supports infill projects.

(viii) No neighborhood meeting has taken place.

(ix) The Learning Experience at Miramont Office Park

(E) Attached hereto

(F) No new street names are being proposed

(G) Attached hereto

(H) **Gene Vaughan** 970.226.3990 work
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Adam Rubenstein
5150 East Yale Circle, suite 400
Denver, CO 80222
303.257.1481

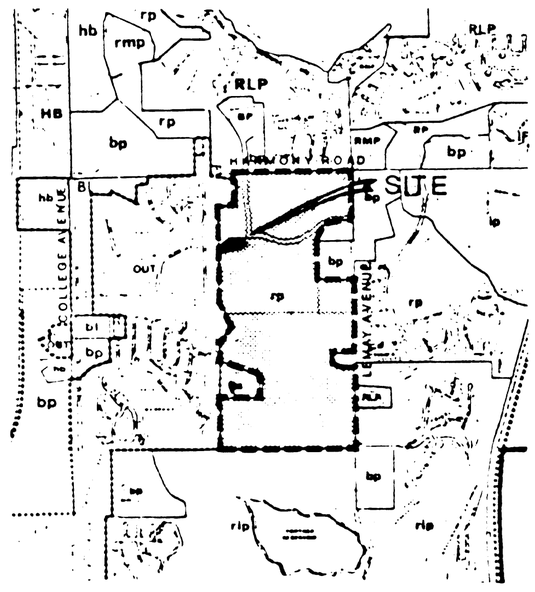
(J) **Construction schedule**
Break ground January/February 2014
Site/utility work 30-45 days
4 months to build the building and furnish the interior
Anticipate an August 2014 opening to the public.

13-16 Not applicable for this project.

40-M

EXISTING CONVENIENCE STORE ZONED RLP
VACANT ZONED BP
THE LANDINGS ZONED RLP
COURTNEY PARK APTS ZONED RMP
ZONED rh
HARMONY ROAD
OAKRIDGE BUSINESS PARK ZONED bp
ZONED RP
PARCEL S
2.9 GROSS ACRES± RETAIL OFFICE
FAIRWAY ESTATES ZONED FA LARIMER COUNTY
PARCEL U
4.8 GROSS ACRES± USES ALLOWED IN THE RL ZONING DISTRICT
PARCEL T
3.8 GROSS ACRES± USES ALLOWED IN THE RLM ZONING DISTRICT ALTERNATIVE RESIDENTIAL SCALE OFFICE OR DAYCARE
PARCEL R
50.8 GROSS ACRES± COMMUNITY-REGIONAL SHOPPING CENTER & BUSINESS SERVICES
FAITH EVANGELICAL CHURCH
PED. ACCESS & 10' ESMT. ON PR w/ T,U,V,& W
VACATED R.O.W.
PARCEL W
0.54 ACRE OFFICE
20' PEDESTRIAN ACCESS
PARCEL V
4.73 ACRES
SELF STORAGE & RESIDENTIAL
OAKRIDGE DRIVE
OAKRIDGE WEST (PROPOSED BUSINESS SERVICES)
RULE PROPERTY ZONED bp
LEMAY AVENUE
RULE DRIVE
PARCEL Q
30.7 GROSS ACRES± BUSINESS SERVICES AND/OR MULTI-FAMILY RESIDENTIAL AND/OR DETACHED PATIO HOMES
BOARDWALK DRIVE
APPROVED BY P+Z BOARD ON 4-26, 1994
HEALTHCARE INTERNATIONAL ZONED bp
PARCEL G
20.9 GROSS ACRES± LOW DENSITY RESIDENTIAL
VACATED R.O.W.
ZONED FA1 LARIMER COUNTY
PARCEL F
11.2 GROSS ACRES± LOW DENSITY RESIDENTIAL
PARCEL P
13.0 GROSS ACRES± POSSIBLE CITY PARK ALTERNATIVE: MULTI-FAMILY OR BUSINESS SERVICES
PARCEL N
9.7 GROSS ACRES± MULTI-FAMILY AND/OR BUSINESS SERVICES
OAKRIDGE VILLAGE SINGLE FAMILY AND LOW DENSITY MULTI-FAMILY ZONED rlp
PARCEL H
14.0 GROSS ACRES± LOW DENSITY RESIDENTIAL
PARCEL E
12.4 GROSS ACRES± LOW AND/OR MEDIUM DENSITY RESIDENTIAL
FOSSIL CREEK MEADOWS SINGLE FAMILY ZONED R LARIMER COUNTY
WERNER ELEMENTARY SCHOOL
POTENTIAL MID-BLOCK PEDESTRIAN WALK
PARCEL I
.8 GROSS ACRES± -SCHOOL DROP OFF-
MAIL CREEK LANE
PARCEL D
18.6 GROSS ACRES± LOW DENSITY RESIDENTIAL
PARCEL C
8.4 GROSS ACRES± LOW DENSITY RESIDENTIAL
SOUTHRIDGE GREENS GOLF COURSE ZONED rlp
PARCEL J
13.8 GROSS ACRES± LOW DENSITY RESIDENTIAL
PARCEL K
13.9 GROSS ACRES± LOW AND/OR MEDIUM DENSITY RESIDENTIAL
PARCEL B
16.0 GROSS ACRES± LOW DENSITY RESIDENTIAL
OAKRIDGE ESTATES SINGLE FAMILY ZONED RLP
PARCEL A
10.3 GROSS ACRES± MULTI-FAMILY ALTERNATIVE USE: LOW DENSITY RESIDENTIAL
LEMAY AVENUE
ST. ELIZABETH SETON CHURCH ZONED RLP
PARCEL L
9.5 GROSS ACRES± ~~LOW DENSITY~~ MULTI-FAMILY ~~RESIDENTIAL~~
PARCEL M
1.1 GROSS ACRES±
* FOR STREET CONNECTION PLEASE SEE NOTE 11
FOSSIL CREEK COMMUNITY PARK ZONED rlp
HUNTINGTON HILLS ZONED rlp

VICINITY MAP



LEGAL DESCRIPTION

A part of the Northwest 1/4 of Section 1, Township 6 North, Range 69 West of the Sixth P.M., City of Fort Collins, County of Larimer, State of Colorado, which corresponding the east line of said Northwest 1/4 as bearing S 00°10'W, and with all bearings contained herein relative thereto: beginning at a point on said east line which bears S 00°10'W 81.00 feet from the Northeast corner of said Section 1; and runs thence along said east line S 00°10'W 1345.41 feet to the south line of said Northwest 1/4; to a point which bears N 89°58'50" W 700 feet from the East 1/4 corner of said Section 1; thence along the south line of said Northwest 1/4 N 89°58'50" W 1800.96 feet; thence N 32°13'45" W 284.41 feet to the westerly line of said Northwest 1/4; thence along said west line N 00°11'06" E 1739.51 feet; thence S 89°48'55" E 400.00 feet; thence N 00°11'06" E 696.00 feet to the southerly line of Colorado State Highway No. 68; thence along said southerly line S 89°18'(60.93 feet; and again along said southerly line N 83°38'(803.80 feet; and again along said southerly line N 89°45'15" E 821.30 feet; and again along said southerly line S 48°21'3 E 70.00 feet; and again along said southerly line N 89°58'30" E 30.00 feet to the point of beginning; containing 124.717 acres, and being subject to all easements and rights of way which are existing or are of record.

AND

A part of the Southwest 1/4 of Section 1, Township 6 North, Range 69 West of the Sixth P.M., City of Fort Collins, County of Larimer, State of Colorado, which corresponding the east line of said Southwest 1/4 as bearing S 00°03'20" W and [illegible] as shown hereon; beginning at the East 1/4 corner of said Section 1; and runs thence S 00°03'20" W 89°58'40" W 50.00 feet; thence N 89°13'06" W 376.87 feet; thence S 00°03'20" W 241.64 feet; thence N 89°46'40" E 201.00 feet to the east line of said Southwest 1/4; thence S 00°03'20" W 158.42 feet to the [illegible] of said Section 1; thence along the south line of said Southwest 1/4 N 89°00'18" W 2683.8 feet to the South 1/4 corner of said Section 1; thence along the west line of said Southwest 1/4 N 00°43'06" E 2768.50 feet; thence S 70°37' E 126.42 feet; thence N 16°10' W 70.50 feet; thence N 18°07' E 32.16 feet; thence N 47°47' E 112.02 feet; thence N 16°06'30" E 73.67 feet; thence N 21°18' W 128.80 feet; thence N 13°26' W 114.43 feet to the north line of said Southwest 1/4; thence along said north line S 89°58'50" E 2617.84 feet to the point of beginning; containing 156.288 acres, and being subject to all easements and rights of way which are existing or are of record.

AND

A tract of land located in the NE 1/4 of Section 1, Township 6 North, Range 69 West of the 6th P.M., Larimer County, Colorado, being more particularly described as follows:

Considering the North line of the NE 1/4 of Section 1 as bearing N 89°58'54" East and with all bearings contained herein relative thereto;

Commencing at the North Quarter corner of said Section 1; thence S 89°11'06" W, 72.70 feet to the South right-of-way line of Colorado State Highway No. 68;
thence along said South right-of-way line S 89°18'06" E, 348.40 feet to the Point of Beginning;

thence continuing along the South right-of-way line S 89°18'06" E, 51.80 feet to the Northeast corner of a tract of land described in Book 2062 at Page 507, recorded in Larimer County records; thence along the East line of said Book 2062 at Page 507 S 00°11'06" W, 846.86 feet; thence S 00°25'11" W, 845.85 feet; thence along the South line of said Book 2062 at Page 507 N 89°18'06" W, 51.80 feet; thence N 89°02'00" West; thence N 00°11'06" E, 846.86 feet to the Point of Beginning.

EXCEPT

A tract of land situate in the Southwest 1/4 of Section 1, Township 6 North, Range 69 West of the 6th P.M., City of Fort Collins, County of Larimer, State of Colorado, which corresponding the West line of the said Southwest 1/4 as bearing N 00°43'06" E and with all bearings contained herein relative thereto as contained within the boundary lines which begin at a [illegible] on the said West line which bears N 00°43'06" E 1067.31 feet from the South 1/4 corner of said Section 1; and run thence N 00°43'06" E 710.00 feet along the said West line; thence S 66°17' E 880.00 feet; thence S 41°39'30" E 196.27 feet; thence S 00°43'06" W 386.00 feet; thence N 89°18'54" W 760.00 feet to the point of beginning; containing 8.7702 acres more or less; and excluding all water rights appertaining thereto.

GENERAL NOTES

1. THE OAK/COTTONWOOD FARM IS PROPOSED TO BE A MIXED USE DEVELOPMENT PROVIDING COMMUNITY/REGIONAL RETAIL/BUSINESS SERVICE USES, OFFICE, RESEARCH AND DEVELOPMENT, HEALTH CARE, RESIDENTIAL, HUMAN SERVICE AND RECREATIONAL USES. THE LAND USE MIX REPRESENTED ON THIS MASTER PLAN IS A BEST ESTIMATE OF DEVELOPMENT POTENTIAL AT THIS TIME. AS CHANGES OCCUR IN THE MARKET PLACE, AS REQUIRED PUBLIC IMPROVEMENTS ARE DEFINED AND AS DEVELOPMENT OF THE PROJECT CONTINUES, ADDITIONAL CHANGES TO THE LAND USE PROGRAM MAY BE REQUESTED.
2. All public streets shall be designed to meet or exceed City standards, unless variances are granted to allow a reduction in City standards.
3. Common open space areas are to be maintained by owners associations, or other appropriate methods determined at the time of approval of subsequent developments.
4. Drainage improvements to be designed at the time of development are to be consistent with the adopted basin studies affecting the subject properties.
5. Non-residential land use categories indicated may include, but are not limited to the following uses:
   - Business Services/Community Regional Shopping
     - Community Shopping Centers including:
   - General Merchandise
   - Apparel
   - Home Furnishings
     - Drugstore/Sundries
     - Drug Stores
     - Retail Shops
     - Offices
     - Indoor Theaters
     - Restaurants
     - Health Clubs
     - Hotels
     - Medical Clinics
     - Similar Uses
   - Medical Offices
     - Hospitals and Clinics
     - Other Healthcare Facilities
     - Professional Offices
     - Restaurants
     - Support Retail
     - Health Clubs
     - Similar Uses
   - Auto Related and Residential Commercial Uses
     - To be considered in Parcels R and S only.
6. Residential Uses, Churches, Schools, and Public or Private Community Services, including Day Care Centers, are to be allowed as alternative land uses in all parcels.
7. Parcels T, U, V and a portion of G are intended to form buffers between the existing residential neighborhood to the west of the subject property and the non-residential uses planned for Parcels R and S. Allowed land use considerations for these Parcels are as follows:

   Uses to be considered on Parcels U and a portion of G are limited to those uses allowed by right in the RL, Low Density Residential District, Sec. 29-132.1 through Sec. 29-132.7 of the Code of the City of Fort Collins as of the date of approval of this Master Plan.

   Uses to be considered on Parcel T are limited to:
   - Uses allowed by right in the RLM, Low Density Multi-family District, Sec. 29-182.1 through Sec. 29-182.7 of the Code of the City of Fort Collins as of the date of approval of this Master Plan;
   - Child care centers or small office buildings, residential in design, not to exceed 28' in height, with height moderate comparable to the neighborhood (i.e. small, mixed, or structural mix) may be considered subject to approval of this Amended Overall Development Plan by the City of Fort Collins Planning and Zoning Board.
   - No buildings constructed on Parcel S and to exceed within 30' of the perimeter of the Front Range Baptist Church existing as of October 26, 1993.
8. The proposed land uses and densities shown on this plan are estimates of development potential. Except uses by right or the RP zone, approval of this Master Plan by the City does not constitute final approval of these land uses, density or densities. Rather, any further land uses must be approved according to the procedures, processes and ordinances of the planned unit development regulations, rezoning, or other relevant City policies and ordinances. Uses by right within RP zone may be developed as an eight subdivision, or under the PUD requirements of the Land Development Guidance System. All other uses to be developed as PUD's or per the LDGS.
9. A street connection is planned to cross Mail Creek to provide vehicular access to the residential uses on Parcel L, Huntington Hills P.U.D., and Fossil Creek Community Park. This street is planned to interconnect with the extension of Fossil Creek Parkway. It is desirable to cross Mail Creek in an ecologically sensitive manner as possible. The future Fossil Creek Trail may pass under the street connection. Since the exact alignment of Fossil Creek Parkway and Fossil Creek Trail are not known at this time, the exact location of this street connection will be determined at a future date.
10. Residential Use on Parcel V shall consist of one(1) dwelling unit for occupancy by the manager of the self-storage facility.

LAND USE BREAKDOWN

PARCEL	LAND USE	GROSS AREA	DWELLING UNITS	DENSITY	FLOOR AREA
A	Multi-Family	10.3 ac.	66 units	7.77 du/ac	ac. ±
B	Low Density Residential	16.0 ac.	56 units	3.19 du/ac	ac. ±
C	Low Density Residential	8.4 ac.	20 units	2.38 du/ac	ac. ±
D	Low Density Residential	18.6 ac.	44 units	2.37 du/ac	ac. ±
E	Low and/or Medium Density Residential	12.4 ac.	86 units	6.94 du/ac	ac. ±
F	Low Density Residential	11.2 ac.	38 units	3.38 du/ac	ac. ±
G	Low Density Residential	20.9 ac.	62 units	2.97 du/ac	ac. ±
H	Low Density Residential	14.0 ac.	36 units	2.57 du/ac	ac. ±
I	School Dropoff	0.8 ac.	0 units	0	ac. ±
J	Low Density Residential	13.8 ac.	86 units	3.82 du/ac	ac. ±
K	Low and/or Medium Density Residential	13.9 ac.	80 units (24 units)	6.32 du/ac	ac. ±
L	Low Density Residential	9.5 ac.	10 units	1.05 du/ac	ac. ±
M	Open Space/Drainage	1.1 ac.	0 units	0 du/ac	ac. ±
N	Multi-Family and/or Business Services	9.7 ac.	146 units	14.43 du/ac	5.000 ac. ±
P	Possible City Park	13.0 ac.	units	0 du/ac	ac. ±
R	Business Services and/or Multi-Family	30.7 ac.	180 units	4.98 du/ac	250.000 ac. ±
S	Community Regional Shopping Center & Business Services	50.3 ac.	0 units	0 du/ac	460.000 ac. ±
T	Retail Office	2.9 ac.	0 units	0 du/ac	30.000 ac. ±
U	Commercial Uses Allowed in the RLM Zoning District	3.8 ac.	36 units	9.47 du/ac	15.000 ac. ±
V	Uses Allowed in the RL Zoning District	4.8 ac.	0 units	0 du/ac	25.000 ac. ±
V	Self Storage	4.73ac.	1 unit	0.21 du/ac.	71,975 sq. ft.±
W	Office	0.54 ac.	0 units	0 du/ac.	10,000 sq. ft.±
TOTALS		271.7 ac.	849 units		851,975 sq. ft.±

MINOR AMENDMENT to increase max. number of DU on Parcel J from 167 to 260. Effective 10/13/98 Bob Blanchard

KEY
- ARTERIAL OR COLLECTOR STREET
- IMPORTANT LOCAL STREET CONNECTION
- PEDESTRIAN WAY
- POSSIBLE DETENTION POND
- LANDSCAPE/STREETSCAPE AREA
- NEIGHBORHOOD ENTRY FEATURE

SIGNATURE BLOCK

THIS [illegible] DAY OF [illegible] 19[illegible] BY THE UNDERSIGNED, AS SOLE OWNER[illegible] OF RECORD OF [illegible] AVENUES [illegible] OF THE [illegible] AREA, DO HEREBY MAKE, ADOPT, & CONSTRUCT THIS PLAN AND [illegible] AND THE DEVELOPMENT OF ALL PROPERTY WITHIN THE AREA SUBJECT TO SAID PLAN.

[illegible]

STATE OF COLORADO)
) ss
COUNTY OF LARIMER)

THE FOREGOING INSTRUMENT WAS ACKNOWLEDGED BEFORE ME THIS 12th DAY OF August, 1997, BY Stephanie Stuart.

MY COMMISSION EXPIRES 1/28/98
WITNESS MY HAND AND OFFICIAL SEAL
Stephanie Stuart

APPROVED BY THE CITY OF FORT COLLINS PLANNING AND ZONING BOARD THIS 24TH DAY OF MARCH, 1998.

Bob Blanchard
SECRETARY OF THE PLANNING AND ZONING BOARD

CITY OF FORT COLLINS SEAL COLORADO

STEPHANIE STUART NOTARY PUBLIC STATE OF COLORADO

0 200 400

DATE OF PREPARATION: 5-04-92
REVISIONS:

DATE	DESCRIPTION	BY
4.22.92	PARCELS K&M	SM
6.19.92	CITY COMMENTS AT NOTE(*25)	CS
7.6.92	PARCEL S RETAIL/OFFICE	CS
4-25-94	PARCEL Q - DETACHED PATIO HOMES	
11-19-96	Parcel V & New Parcel W	JHK*
2-97	Parcel W removed	JHK*

* Revised By:
JOHN H. KING
DEVELOPMENT CONSULTANT
6551 S. Revere Pkwy., Suite 285
Englewood, CO 80111 (303) 792-5582

Cityscape
urban design, inc.
1430 south college ave., suite 200
fort collins, colorado 80525
(303)226-4074

OAK/COTTONWOOD FARM
AMENDED OVERALL DEVELOPMENT PLAN

ACAD FILE: 7173M1
PROJECT NO. 7173
SCALE: 1"=200'

ENGINEERING DEPT. NOTE:
THIS REPRESENTS THE BEST QUALITY IMAGE POSSIBLE TAKEN FROM VERY POOR QUALITY ORIGINALS

PROJECT DEVELOPMENT PLAN FOR
THE LEARNING EXPERIENCE AT MIRAMONT OFFICE PARK

LOT 3 WITHIN THE MIRAMONT OFFICE PARK PUD
A PLANNED UNIT DEVELOPMENT IN THE CITY OF FORT COLLINS
COUNTY OF LARIMER, STATE OF COLORADO

OCTOBER 2013

P□O□ECT TEAM□

DEVELOPER

RUBENSTEIN REAL ESTATE
C\O LEGEND RETAIL GROUP
5150 E. YALE CIRCLE, SUITE 400
DENVER, COLORADO 80222
720.529.2881
CONTACT: ADAM RUBENSTEIN

CIVIL ENGINEER

REDLAND
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CONTACT: MARK CEVAAL, P.E.
EMAIL: MCEVAAL@REDLAND.COM

LANDSCAPE ARCHITECT

BRITINA DESIGN GROUP
7600 GRANDVIEW AVE., SUITE 210
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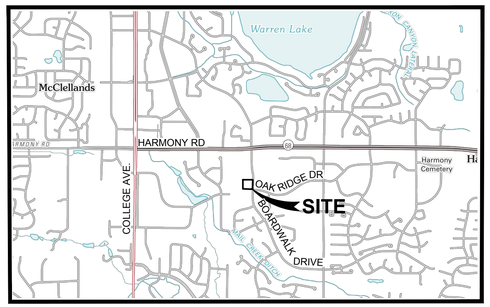
303.556.2887
CONTACT: CHRIS COOPER

ARCHITECT

LIMA ARCHITECTS
4855 TECHNOLOGY WAY, SUITE 200
BOCA RATON, FLORIDA 33431
561.886.6400
CONTACT: OCTAVIO LIMA



□ICINIT□ MAP

INDEX OF DRAWINGS	
SHEET NO.	DESCRIPTION
C0.0	COVER SHEET
C1.0	SITE PLAN
C2.0	GRADING PLAN

LEGAL DESC□IPTION

LOT 3 OF THE MIRAMONT OFFICE PARK LOCATED IN THE NORTHEAST QUARTER OF SECTION 1, TOWNSHIP 6 NORTH, RANGE 69 WEST OF THE SIXTH PRINCIPAL MERIDIAN, CITY OF FORT COLLINS, COUNTY OF LARIMER, STATE OF COLORADO

□ASIS O□ □EA□INGS

THE NORTH LINE OF THE NORTHEAST QUARTER OF SECTION 1 TOWNSHIP 6 NORTH, RANGE 69 WEST OF THE SIXTH PRINCIPAL MERIDIAN IS CONSIDERED TO BEAR NORTH 89°58'54" EAST.

□ENC□MA□□

NGS CONTROL POINT Y402 BEING A STAINLESS STEEL ROD IN A RANGE BOX ON EAST SIDE OF HIGHWAY 287, 900± SOUTH OR HARMONY ROAD.
PUBLISHED ELEVATION 5018.96 (NAVD88)

UNADJUSTED NGVD 1929 ELEVATION 5015.76 PER CITY OF FT. COLLINS
PLANS ARE BASED ON NAVD88 ELEVATION

THIS IS TO CERTIFY THAT, AS OF THE ____ DAY OF _____, 2013 THE UNDERSIGNED PARTIES ARE SOLE OWNERS OF RECORD OF THE REAL PROPERTY DESCRIBED IN THE ABOVE SITE PLAN AS CONSTRUED IN CRS. 31-23-11AND CONSENT TO THE DEVELOPMENT OF SAID PROPERTY AS SHOWN ACCORDING TO SAID PLAN

_____
OWNER

MIRAMONT OFFICE PARK OWNERS ASSN.
4703A BOARDWALK DR.
FORT COLLINS, CO 80525

STATE OF COLORADO)
)SS
COUNTY OF LARIMER)

THE FORGOING INSTRUMENT WAS ACKNOWLEDGED BEFORE ME THIS ____ DAY OF _____, 2013 BY _____ AS _____

MY COMMISSION EXPIRES _____
WITNESS MY HAND AND OFFICIAL SEAL.

_____
NOTARY PUBLIC

APPROVED BY THE PLANNING DIRECTOR OF THE CITY OF FORT COLLINS COLORADO ON THIS _____ DAY OF _____ A.D. 2013

_____
PLANNING DIRECTOR

REDLAND
Where Great Places Begin
8000 South Lincoln Street, #206 | Littleton, CO 80122
Office: (720) 283-6783 | www.redland.com

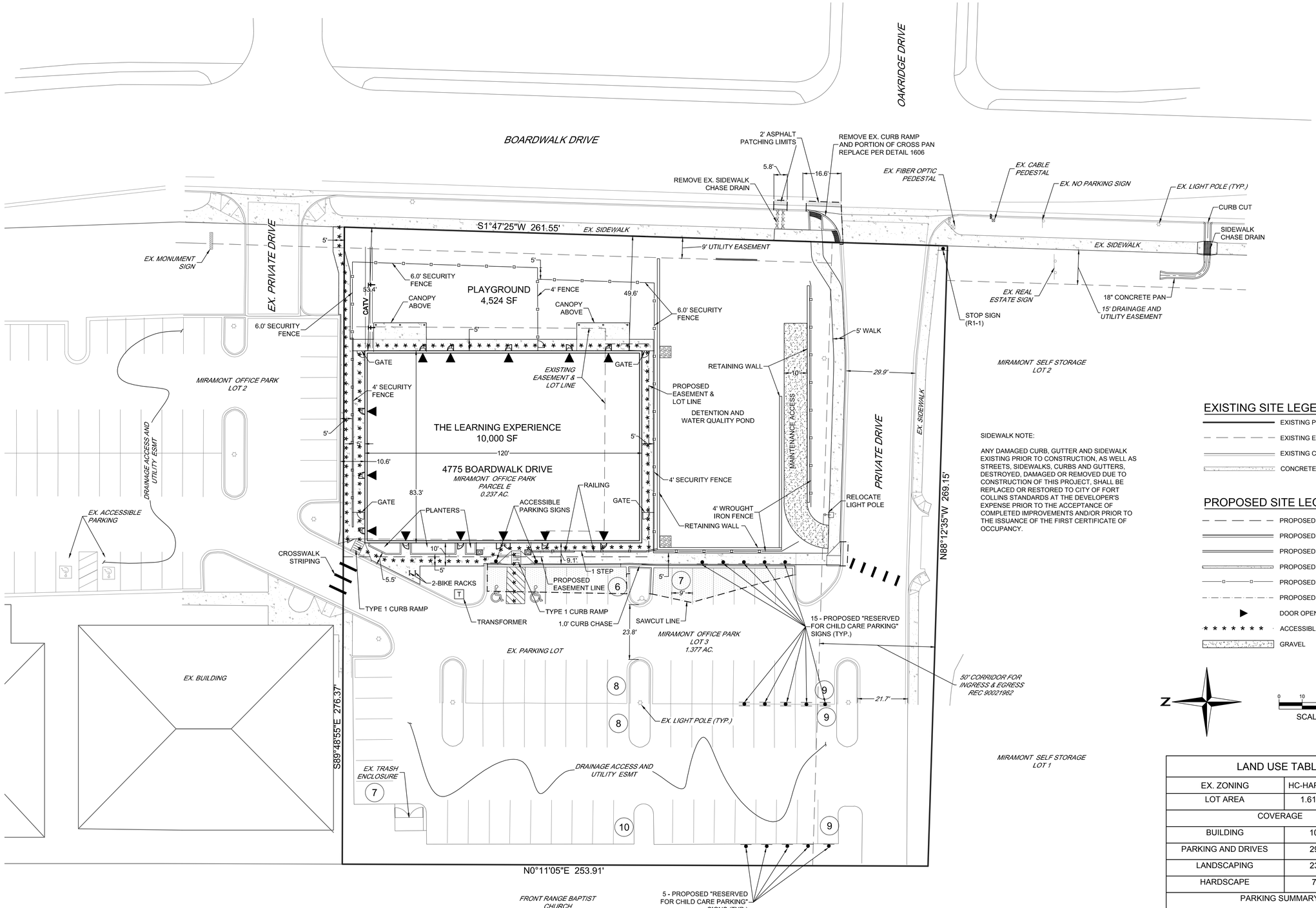
DRAWN AKD
CHECKED MDC
APPROVED MDC
PROJECT NO. 12026
HORZ. SCALE N/A
VERT. SCALE N/A

NOTES	NO.	DATE
1ST SUBMITTAL	1	07.12.2013
2ND SUBMITTAL	2	10.04.2013
3RD SUBMITTAL	3	01.31.2014

THE LEARNING EXPERIENCE
AT MIRAMONT OFFICE PARK

CO□E S□EET

SHEET
C0.0



SIDEWALK NOTE:

ANY DAMAGED CURB, GUTTER AND SIDEWALK EXISTING PRIOR TO CONSTRUCTION, AS WELL AS STREETS, SIDEWALKS, CURBS AND GUTTERS, DESTROYED, DAMAGED OR REMOVED DUE TO CONSTRUCTION OF THIS PROJECT, SHALL BE REPLACED OR RESTORED TO CITY OF FORT COLLINS STANDARDS AT THE DEVELOPER'S EXPENSE PRIOR TO THE ACCEPTANCE OF COMPLETED IMPROVEMENTS AND/OR PRIOR TO THE ISSUANCE OF THE FIRST CERTIFICATE OF OCCUPANCY.

EXISTING SITE LEGEND

- EXISTING PROPERTY LINE
- EXISTING EASEMENT LINE
- EXISTING CURB AND GUTTER
- CONCRETE

PROPOSED SITE LEGEND

- PROPOSED EASEMENT LINE
- PROPOSED CURB AND GUTTER
- PROPOSED WALL
- PROPOSED SIDEWALK
- PROPOSED FENCE
- PROPOSED SAWCUT LINE
- DOOR OPENING
- ACCESSIBLE ROUTE
- GRAVEL

N

0 10 20 40

SCALE: 1" = 20'

LAND USE TABLE	
EX. ZONING	HC-HARMONY CORRIDOR
LOT AREA	1.614 AC; 70,289 SF
COVERAGE	
BUILDING	10,000 SF; 14%
PARKING AND DRIVES	29,422 SF; 42%
LANDSCAPING	23,181 SF; 33%
HARDSCAPE	7,686 SF; 11%
PARKING SUMMARY	
REGULAR SPACES	71
ACCESSIBLE SPACES	2
TOTAL PARKING PROVIDED	73
MAXIMUM BUILDING HEIGHT 24'	
USE: CHILD CARE FACILITY	

REDLAND 5 YEARS 2009-2014
Where Great Places Begin
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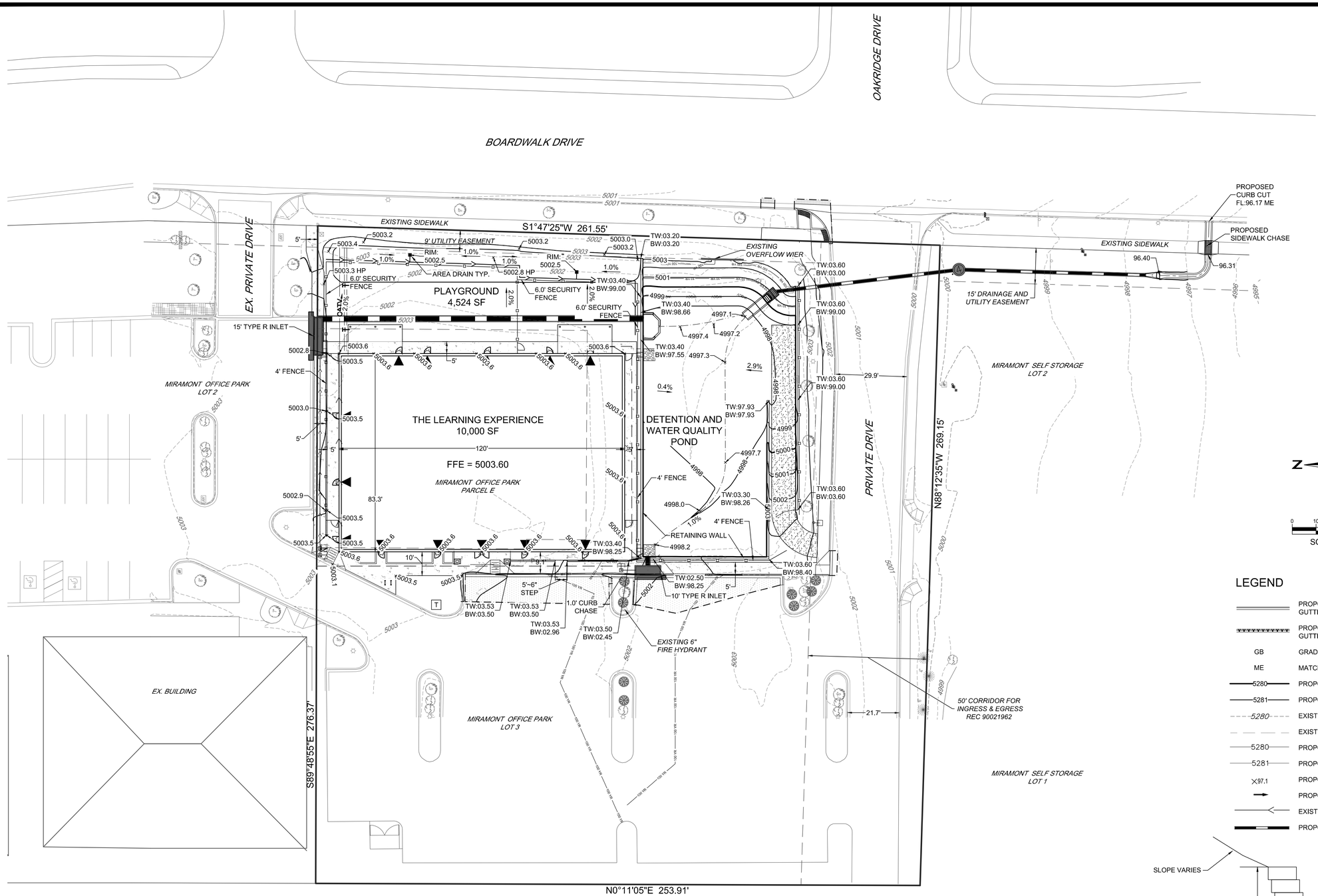
DRAWN AKD
CHECKED MDC
APPROVED MDC
PROJECT NO. 12026
HORZ. SCALE 1" = 20'
VERT. SCALE n/a

NO.	DATE	NOTES
1	07.12.2013	1ST SUBMITTAL
2	10.04.2013	2ND SUBMITTAL
3	01.31.2014	3RD SUBMITTAL

THE LEARNING EXPERIENCE
AT MIRAMONT OFFICE PARK

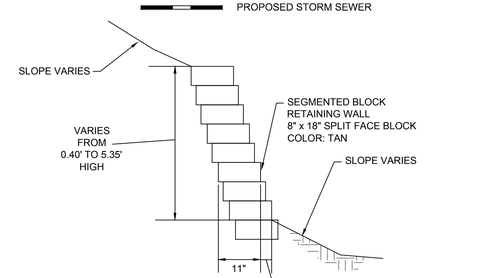
SITE PLAN

SHEET
C1.0



LEGEND

- PROPOSED 6" VERTICAL CURB w/ 1.0' GUTTER (CATCH)
- PROPOSED 6" VERTICAL CURB w/ 1.0' GUTTER (SPILL)
- GB — GRADE BREAK
- ME — MATCH EXISTING
- 5280 — PROPOSED MAJOR CONTOUR
- 5281 — PROPOSED MINOR CONTOUR
- 5280 — EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- 5280 — PROPOSED MAJOR CONTOUR (BY OTHERS)
- 5281 — PROPOSED MINOR CONTOUR (BY OTHERS)
- ×97.1 — PROPOSED SPOT ELEVATION
- PROPOSED FLOW ARROW
- EXISTING STORM SEWER
- PROPOSED STORM SEWER



TYPICAL DETAIL
LANDSCAPE WALL
NOT TO SCALE

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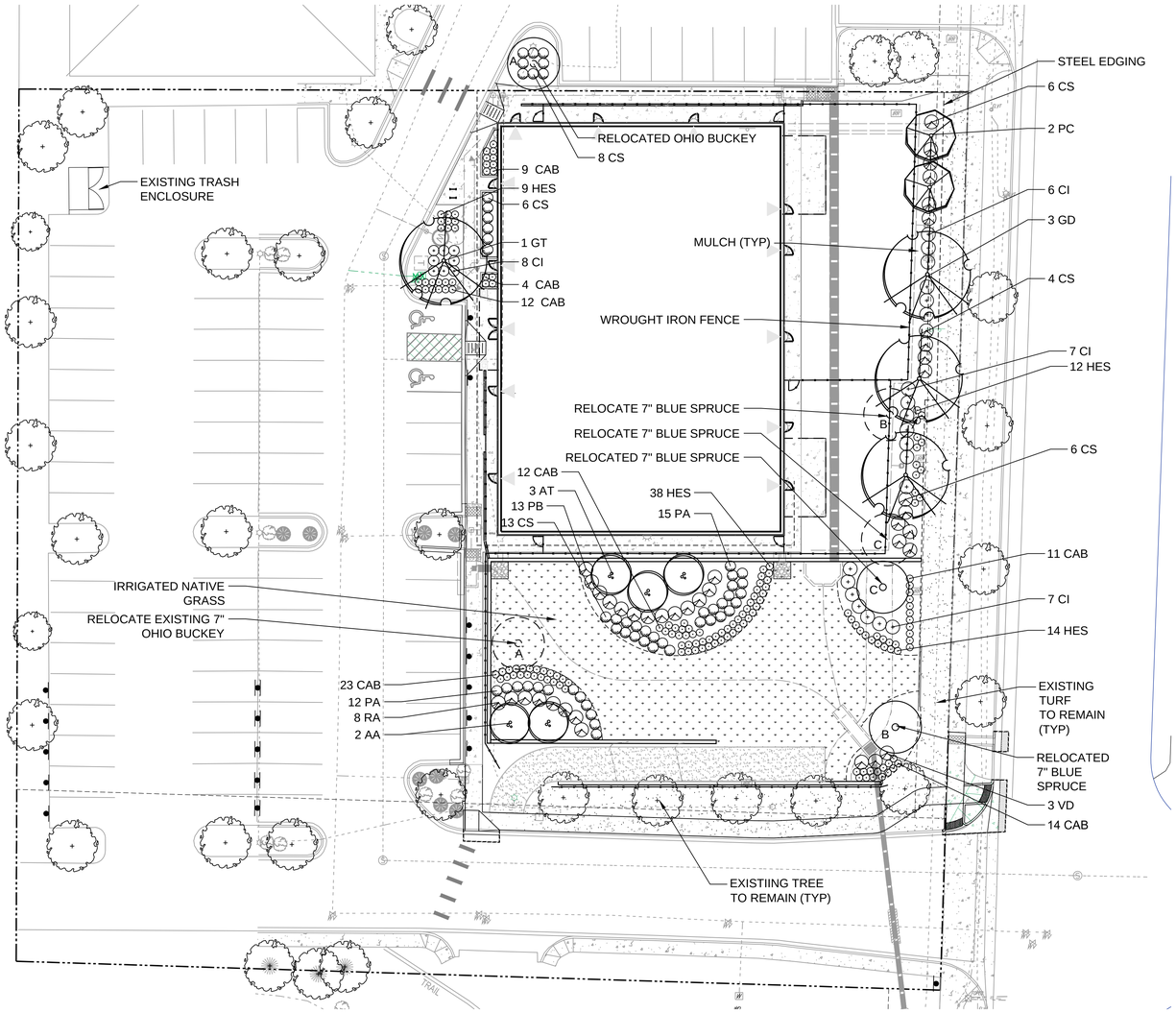
DRAWN	AKD
CHECKED	MDC
APPROVED	MDC
PROJECT NO.	12026
HORZ. SCALE	1" = 20'
VERT. SCALE	n/a

NO.	DATE	NOTES
1	07.12.2013	1ST SUBMITTAL
2	10.04.2013	2ND SUBMITTAL
3	01.31.2014	3RD SUBMITTAL

THE LEARNING EXPERIENCE
AT MIRAMONT OFFICE PARK

GRADING PLAN

SHEET
C2.0



LEGEND

- SHADE TREE
- ORNAMENTAL TREE
- EXISTING TREE TO REMAIN
- EXISTING TREE TO BE RELOCATED
- SHRUBS & PERENNIALS
- EXISTING TURF TO REMAIN
- IRRIGATED NATIVE GRASS
- STEEL EDGING

PLANT LEGEND

Sym.	Botanic Name/Common Name	Size	Spacing	Quantity	Hydrozone
Deciduous Trees					
AA	Amelanchier alnifolia Saskatoon Serviceberry	6' ht.	As Shown	2	Low
AT	Acer tataricum 'Hot Wings' Hot Wings Maple	1.5" cal.	As Shown	3	Moderate
GD	Gymnocladus dioicus 'Espresso' Seedless Kentucky Coffeetree	2" cal.	As Shown	3	Low
GT	Gleditisia triacanthos inermis Imperial Honeylocust	2" cal.	As Shown	1	Moderate
PC	Pyrus calleryana 'Chanticleer' Chanticleer Pear	2" cal.	As Shown	2	Moderate
Deciduous / Evergreen Shrubs					
CI	Caryopteris x incana 'Dark Knight' Dark Knight Spirea	5 gal.	3' o.c.	28	Low
CS	Cornus sericea Arctic Fire Arctic Fire Dogwood	5 gal.	4' o.c.	30	Moderate
PA	Perovskia atriplicifolia Russian Sage	5 gal.	3' o.c.	27	Low
PB	Prunus besseyi Western Sandcherry	5 gal.	4' o.c.	13	Low
RA	Ribes aureum Yellow Flowering Current	5 gal.	4' o.c.	8	Low
VD	Viburnum dentatum 'Blue Muffin' Blue Muffin Arrowwood Viburnum	5 gal.	4' o.c.	3	Moderate
Ornamental Grasses					
CAB	Calamagrostis brachytricha Korean Feather Reed	1 gal.	3' o.c.	85	Low
HES	Helictotrichon sempervirens Blue Oats Grass	1 gal.	2' o.c.	63	Low

Native Grass Mix

New Seeding — Dryland: 20-25 lbs/acre; Irrigated: 40 lbs/acre

Overseeding — Dryland: 10-15 lbs/acre; Irrigated: 20 lbs/acre

Mix:
30% Ephraim Crested Wheatgrass
25% Sheep Fescue
20% Perennial Rye
15% Chewings Fescue
10% Canada Bluegrass

Scale: 1" = 20'-0"
0 10 20 40

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Office: (720) 283-6783 | www.redland.com

BRITTINA design group

DRAWN CPC
CHECKED RMC
APPROVED MDC
PROJECT NO. 12/26
HORZ. SCALE
VERT. SCALE

NO.	DATE	NOTES
1	07.12.2013	1ST SUBMITTAL
2	10.04.2013	2ND SUBMITTAL
3	01.31.2014	3RD SUBMITTAL

THE LEARNING EXPERIENCE
MIRAMONT OFFICE PARK

LANDSCAPE PLAN, PLANT LEGEND

SHEET
L1.0

LANDSCAPE NOTES

1. Landscape materials shall be in accordance with AAN specifications for Number One Grade.
2. Turf areas shall be irrigated with an automatic pop-up irrigation system. Shrub beds and trees to be irrigated with an automatic drip (trickle) irrigation system. The irrigation plan shall be reviewed and approved by the City of Ft. Collins prior to the issuance of a building permit.
3. Trees to be balled and burlapped,unless otherwise noted.
4. Shrub areas shall be mulched with 3"-5" river rock cobble over weed barrier fabric, typ.
5. Landscaping must be installed or secured with an irrevocable letter of credit, Performance Bond, or escrow account for 125% of the valuation of the materials and labor prior to issuance of a Certificate of Occupancy.
6. Landscaping shall be installed and maintained by the property owner, including trees and groundcover within the R.OW.
7. The following separations shall be provided between trees/shrubs and utilities:
   - 40 feet between canopy trees and street lights
   - 15 feet between ornamental trees and streetlights
   - 10 feet between trees and public water and sanitary and storm sewer lines
   - 4 feet between shrubs and public water and sanitary and storm water line
   - 4 feet between trees and gas lines
8. Field locate utilities prior to planting.
9. To the maximum extent feasible, topsoil that is removed during construction activity shall be conserved for later use on areas requiring revegetation and landscaping.
10. Perennial and ornamental grass beds to be mulched with 4" depth shredded wood mulch. No weed barrier shall be placed in these beds.
11. The top 6 inches of topsoil will be stripped and stored on site. The soil will then be placed in the planting areas.
12. The soil in all landscape areas, including parkways and medians, shall be thoroughly loosened to a depth of not less than eight (8) inches and soil amendment shall be thoroughly incorporated into the soil of all landscape areas to a depth of at least six (6) inches by tilling, discing or other suitable method, at a rate of at least three (3) cubic yards of soil amendment per one thousand (1,000) square feet of landscape area.
13. A free permit must be obtained from the City Forester before trees or shrubs as noted on this plan are planted, pruned or removed on the public right-of-way. This includes zones between the sidewalk and curb, median and other city property. This permit shall approve the location and species to be planted. Failure to obtain this permit may result in replacing or relocating trees and a hold on certificate of occupancy.
14. The developer shall contact the City forester to inspect all tree plantings at the completion of each phase of the development. All trees need to have been installed as shown on the landscape plan. Approval of street tree planting is required before final approval of each phase. Failure to obtain approval by the City Forester for the street trees in a phase shall result in a hold on certificate of occupancy for future phases of the development.

TREE PROTECTION NOTES

1. Within the drip line of any protected existing tree, there shall be no cut or fill over a four (4) inches depth unless a qualified arborist or forester has evaluated and approved the disturbance.
2. All protected existing trees shall be pruned to the City of Fort Collins Forestry standards.
3. Prior to and during construction, barriers shall be erected around all protected existing trees with such barriers to be of orange fencing a minimum of four (4) feet in height, secured with metal T-post, no closer than six (6) feet from the trunk or one-half ($\frac{1}{2}$) of the drip line, whichever is greater. Thereshall be no storage or movement of equipment, materials, debris or fill within the fenced tree protection zone.
4. During the construction stage of development, the applicant shall prevent the cleaning of equipment or material or the storage and disposal of waste material such as paints, oils, solvents, asphalt, concrete, motor oil or any other material harmful to the life of a tree within the drip line of a protected tree or group of trees.
5. No damaging attachment, wires, signs or permits may be fastened to any protected tree.
6. Large property areas containing protected trees and separated from construction or land clearing areas, road rights-of-way and utility easements may be "ribboned off", rather than erecting protective fencing around each tree as required as required by subsection (G)(3) above. This may be accomplished by placing metal t-post stakes a maximum of fifty (50) feet and tying ribbon or rope from stake-to-stake along the outside perimeters of such areas being cleared.
7. The installation duties, irrigation lines or any underground fixture requiring excavation deeper than six (6) inches shall be accomplished by boring under the root system of protected existing trees at a minim depth of twenty-four (24) inches. The auger distance is established from the face of the tree (outer bark) and is scaled from the tree diameter at breast height as described in the chart below.

Tree Dia. at Breast Height (inch.)	Auger Dist. From Face of Tree (ft.)
0-2	1
3-4	2
5-9	5
10-14	10
15-19	12
Over 19	15

TREE RELOCATION NOTES

The following is a general guide for tree sizes and spade sizes depending on the type and condition of the trees to be moved. Contractor to evaluate trees which are slated to be moved and determine which size spade will best accommodate the tree. Contractor to put in writing how they will proceed in transplanting trees including spade size, time, staking, ect, and submit the report to the project manager for approval prior to construction.

Tree Spade Size	*Deciduous Tree-Trunk Diameter*	*Evergreen Tree-Height*
44 inches	2 to 3 inches	5 to 7 feet
66 inches	3 to 5 inches	7 to 10 feet
92 inches	6 to 8 inches	12 to 15 feet
100 inches	8 to 10 inches	17 to 20 feet
120 inches	10 to 12 inches	20 to 24 feet

Note: Trunk diameters are measured using a caliper, six inches above the ground for tree four inches in diameter or smaller and 12 inches above the ground for trees with a large diameter.

A. Certain species such as firs, maples, and spruce are best transplanted during the cooler months of spring and early fall. Plants moved in the summer and fall should be dug with an oversized root ball with special attention paid to the species of the tree, its condition and how it is transported. Reduce water loss as much as possible during transportation. Do not move trees on hot, windy days. Spray with an anti-transpirant prior to transplanting to reduce water loss.

B. The soil type of the new location should match the soil type, drainage and pH of the original site as closely as possible. Duplicate the original soil conditions as closely as possible by taking soil analysis at existing tree location and at new location. Add amendments to the new location as recommended by the report, if necessary.

C. Use the same tree spade to excavate the planting hole as was used to extract and transport the tree.

D. Using a tree spade may also cause glazing, the compaction of the soil in the newly-dug hole, which will affect the lateral movement of soil moisture and root penetration. Contractor to roughing up the sides of the new hole and the plug using a shovel, rake or fork, cut exposed roots cleanly during transplanting operations.

E. Water the tree thoroughly 1 to 2 days prior to digging to keep the ball intact and reduce as much soil loss as possible during transport. When positioning the tree in the new hole, it should be placed 2-3" higher than the original grade to allow for settling and orient in the same direction as its original location when possible. If a tree is planted too shallow, the roots may be damaged by temperature fluctuations and lack of soil moisture. Planting a tree too deeply will result in girdling problems later.

F. When extracting the tree, center the trunk within the tree spade and move tree with a solid ball of earth.

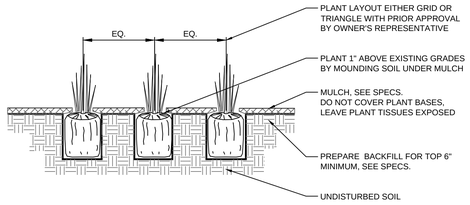
G. Contractor to stake tree securely after transplanted taking into consideration the wind direction. Contractor to submit in writing the type and size of stakes, the strapping, wiring, turnbuckle, etc and have it approved before construction. It is important to remove the staking as soon as the tree is well-rooted as trunk strength can be weakened by long term staking.

H. Create a 6" saucer made of soil around the perimeter to hold water. This saucer should be just outside the transplanted root ball area.

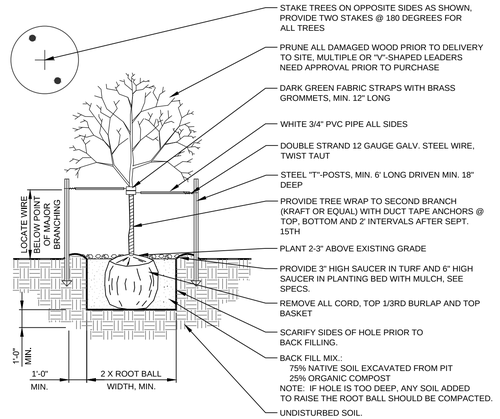
I. Deep water transplanted tree on a regular basis and especially throughout dry periods to reduce water stress. Do not overwater especially where poor drainage and soil conditions occur. This could cause anaerobic environment around the root zone that is favorable to rot-causing fungi and bacteria, or may cause roots to suffocate.

It is important when watering newly transplanted trees that the original soil ball and surrounding soil is saturated to a depth of 12". Apply water slowly to entire area, allowing adequate penetration. Watering is normally required weekly for the first month and twice a month for the rest of the first growing season. Watering should continue as needed for 2-3 seasons after transplanting. It is critical that evergreens be watered regularly and thoroughly until the soil freezes in order to prevent winter browning and needle desiccation due to dehydration to winter winds and sun exposure.

J. After transplanting a tree, apply a 4-6" layer of elongated wood mulch, shredded bark or other organic mulch around the base of the tree, pulling it away from the trunk to reduce damage from trapped moisture. The mulched area should ideally reach out 10-12" past the original root ball. Trees with saucer around the edge of the mulch ring are ideal for retaining mulch through the first growing season. Remove saucer after the first season, creating a clean transition between mulch and turf.



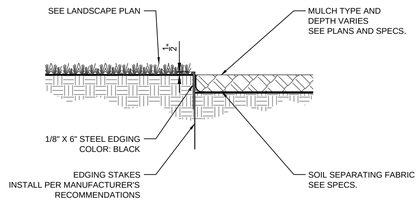
TYPICAL PERENNIAL PLANTING DETAIL
SCALE: 1/2"=1'-0"



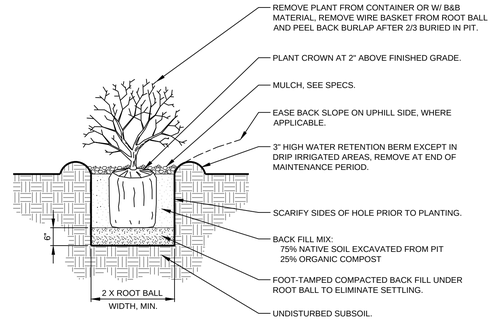
DECIDUOUS TREE PLANTING & STAKING
SCALE: 1/4"=1'-0"

NOTES:

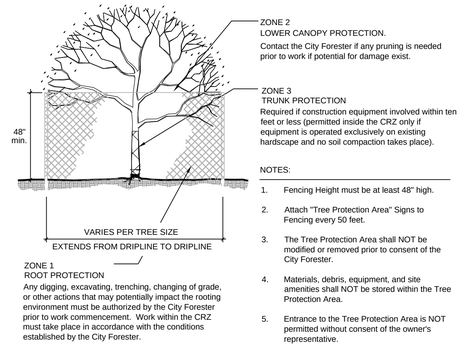
1. FINISHED GRADE FOR SOD TO BE 1/2" BELOW TOP OF EDGING.
2. TAMPER MULCH AT EDGING SO THAT IT DOES NOT SPILL INTO TURF.



STEEL EDGING
SCALE: 1"=1'-0"



TYPICAL SHRUB PLANTING
SCALE: 1/2"=1'-0"



TREE PROTECTION DETAIL
SCALE: NTS

REDLAND
Where Great Places Begin
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Office: (720) 283-6783 | www.redland.com

BRITTINA design group

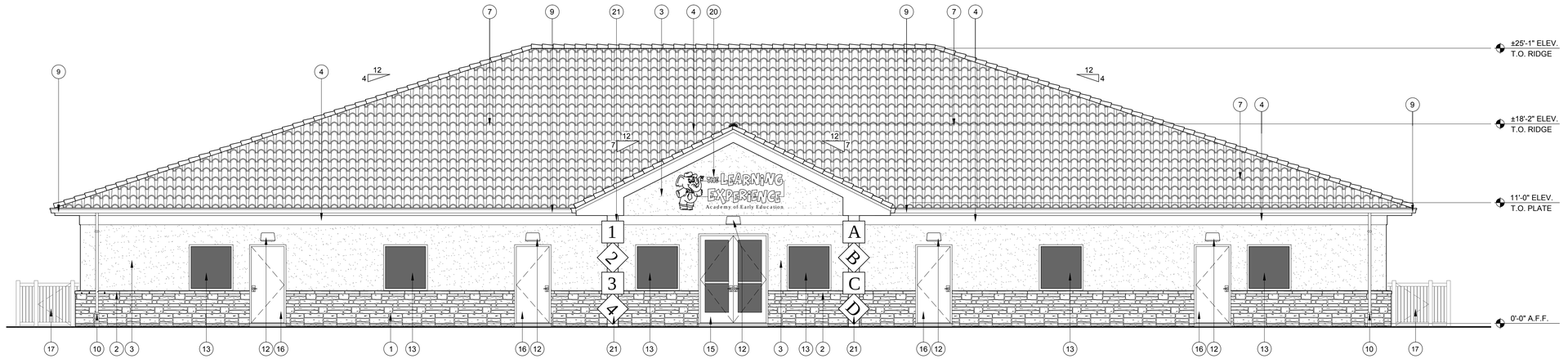
DRAWN CPC
CHECKED RMC
APPROVED MDC
PROJECT NO. 12026
HORZ. SCALE
VERT. SCALE

NO.	NOTES	DATE
1	1ST SUBMITTAL	07.12.2013
2	2ND SUBMITTAL	10.04.2013
3	3RD SUBMITTAL	01.31.2014

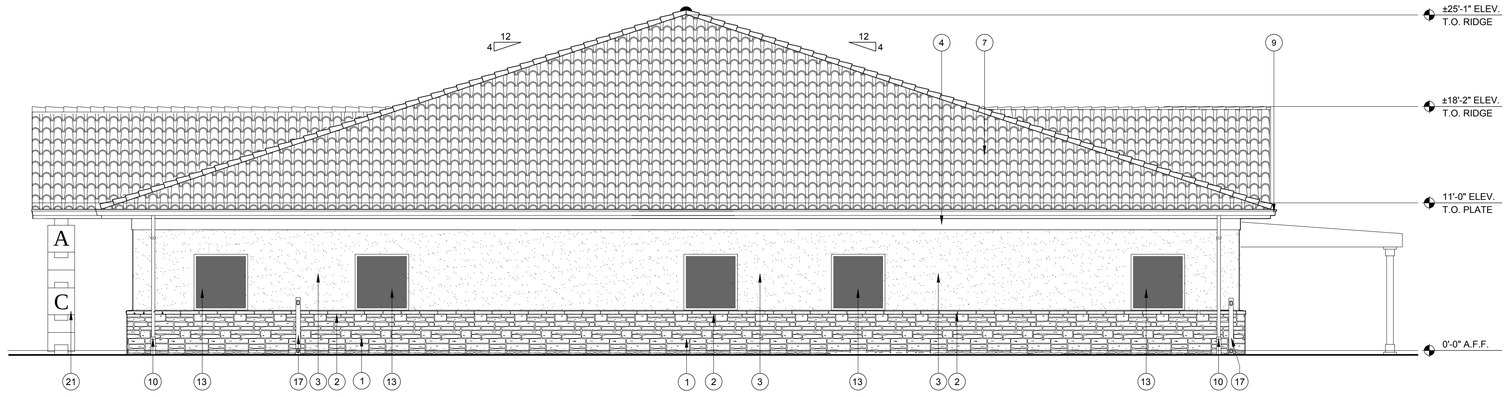
THE LEARNING EXPERIENCE
MIRAMONT OFFICE PARK

LANDSCAPE NOTES & DETAILS

SHEET
L1.1



1 **FRONT ELEVATION** — SCALE: 3/16"=1'-0"



2 **RIGHT ELEVATION** — SCALE: 3/16"=1'-0"

ELEVATION KEYNOTES

NOTE	DESCRIPTION	COLOR FINISH / REMARKS
1	MANUFACTURED STONE VENEER BASE	COLOR: MATCH OFFICE PARK STYLE: MATCH OFFICE PARK
2	MANUFACTURED STONE VENEER SILL	COLOR: MATCH OFFICE PARK STYLE: MATCH OFFICE PARK
3	STUCCO FINISH	COLOR: MATCH OFFICE PARK
4	SMOOTH STUCCO BAND FINISH	COLOR: MATCH OFFICE PARK
5	NOT USED	
6	NOT USED	
7	SPANISH "S" TILE	COLOR: MATCH OFFICE PARK STYLE: MATCH OFFICE PARK
8	NOT USED	
9	GUTTER	6" TYPE K ALUMINUM GUTTER WITH LEAF SCREEN
10	DOWNSPOUT	CONNECT TO UNDERGROUND DRAINAGE
11	NOT USED	
12	EXTERIOR LIGHT FIXTURE	COLOR: WHITE NO: LAREDO SERIES MANUFAC: HUBBELL
13	FIXED ALUM. FRAME WINDOW	MANUFAC: SILVERLINE WINDOWS VINYL CLAD REFER TO SHEET A-12.2
14	METAL FRAME DOORS	WITH GLASS
15	STOREFRONT ALUM FRAME DOORS	MANUFAC: KAWNEER REFER TO SHEET A-12.1
16	METAL FRAME DOORS	REFER TO SHEET A-12.1
17	4' HIGH FENCE	REFER TO SHEET C-1
18	6' HIGH PVC FENCE	REFER TO SHEET C-1
19	FABRIC AWNING W/ ALUM. FRAME	COLOR: BLUE MANUFAC: HUDSON AWNING & SIGN CO. SEE REQUIRED VENDOR
20	T.L.E. SIGNAGE (ILLUMINATED)	REFER TO SHEET C-2 SEE REQUIRED VENDOR
21	T.L.E. SIGNAGE (ALPHABET BLOCKS	REFER TO SHEET A-14.1 SEE REQUIRED VENDOR
22	COLUMN	STL. COL. WRAPPED W/ SQUARE VINYL PVC TUBE NON-TAPERED ECONOMY PLAIN TO MATCH FENCE, REFER TO SHEET C-1 SEE REQUIRED AWNING VENDOR
23	EXTERIOR WATER FOUNTAIN	REFER TO SPECS
24	NOT USED	
25	NOT USED	

NOTE:
"THE LEARNING EXPERIENCE" LOGO SIGN AND "MAKE BELIEVE BOULEVARD" NEON SIGN ARE TO BE BY REQUIRED VENDOR, NO SUBSTITUTIONS ALLOWED.
A&F SIGN COMPANY
28 East Railway Ave., Paterson, NJ 07503
Attn. Frank Ferucci Jr. Ph. (973) 278-3707 Fax. (973) 278-8337

PLAYGROUND AWNINGS TO BE PROVIDED AND INSTALLED BY REQUIRED VENDOR, NO SUBSTITUTIONS ALLOWED.
HUDSON AWNINGS & SIGN CO.
27 Cottage St., Bayonne, NJ 07002
Attn. Ed Burak Ph. (800) 624-1012

3 **ELEVATION KEYNOTES** — SCALE: N.T.S.

LIMA ARCHITECTS
RAFFAELLE F. GRECO
LICENSE NO. C-5064
4855 Technology Way
Suite 700
Boca Raton, FL 33431
PHONE: 561-886-6400
FAX: 561-491-6820

PROPOSED DAYCARE :
THE LEARNING EXPERIENCE
MIRAMONT OFFICE PARK
FORT COLLINS, COLORADO

1. GC MUST provide and install all products per plans. Only Substituted Products need to be submitted to Lima Architects, for Shop Drawing Approval. Unapproved Substitutions will be replaced at the expense of the GC.

2.Verbal representation has no value and all requests to Change any Products or Specifications per Plans, MUST be submitted in writing to Lima and TLE, for approval.

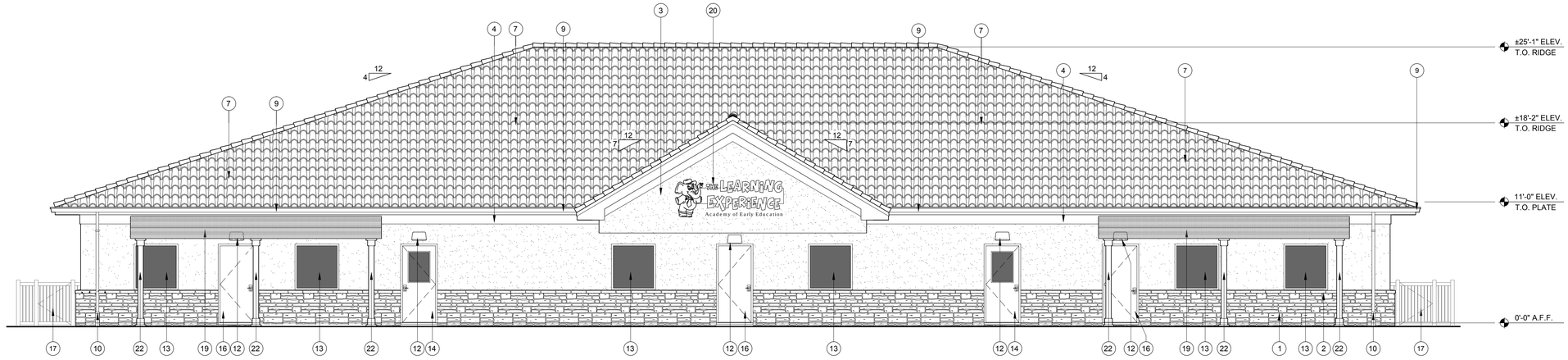
SEAL

REVISIONS

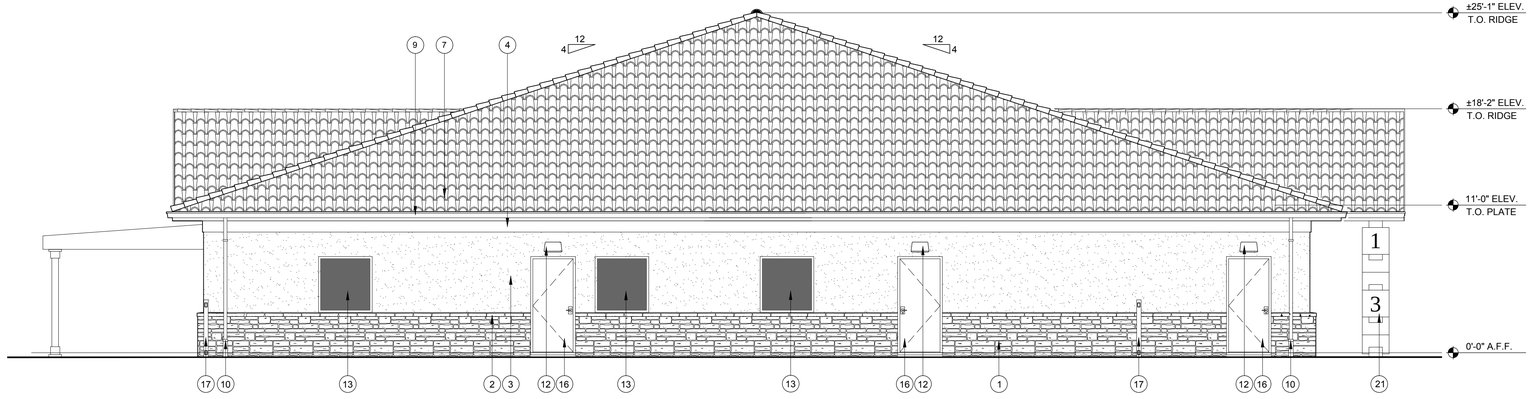
DATE: 01-28-14
DRAWN BY: STAFF

BUILDING ELEVATIONS

SHEET NO.
A-5.1



1 **BACK ELEVATION** SCALE: 3/16"=1'-0"



2 **LEFT ELEVATION** SCALE: 3/16"=1'-0"

ELEVATION KEYNOTES

NOTE	DESCRIPTION	COLOR FINISH / REMARKS
1	MANUFACTURED STONE VENEER BASE	COLOR: MATCH OFFICE PARK STYLE: MATCH OFFICE PARK
2	MANUFACTURED STONE VENEER SILL	COLOR: MATCH OFFICE PARK STYLE: MATCH OFFICE PARK
3	STUCCO FINISH	COLOR: MATCH OFFICE PARK
4	SMOOTH STUCCO BAND FINISH	COLOR: MATCH OFFICE PARK
5	NOT USED	
6	NOT USED	
7	SPANISH "S" TILE	COLOR: MATCH OFFICE PARK STYLE: MATCH OFFICE PARK
8	NOT USED	
9	GUTTER	6" TYPE K ALUMINUM GUTTER WITH LEAF SCREEN
10	DOWNSPOUT	CONNECT TO UNDERGROUND DRAINAGE
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25	NOT USED	

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3 **ELEVATION KEYNOTES** SCALE: N.T.S.

LIMA
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LICENSE NO. C-5064
4855 Technology Way
Suite 700
Boca Raton, FL 33431
PHONE: 561-886-6400
FAX: 561-491-6820

PROPOSED DAYCARE :
THE LEARNING EXPERIENCE
MIRAMONT OFFICE PARK
FORT COLLINS, COLORADO

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2.Verbal representation has no value and all requests to Change any Products or Specifications per Plans, MUST be submitted in writing to Lima and TLE, for approval.

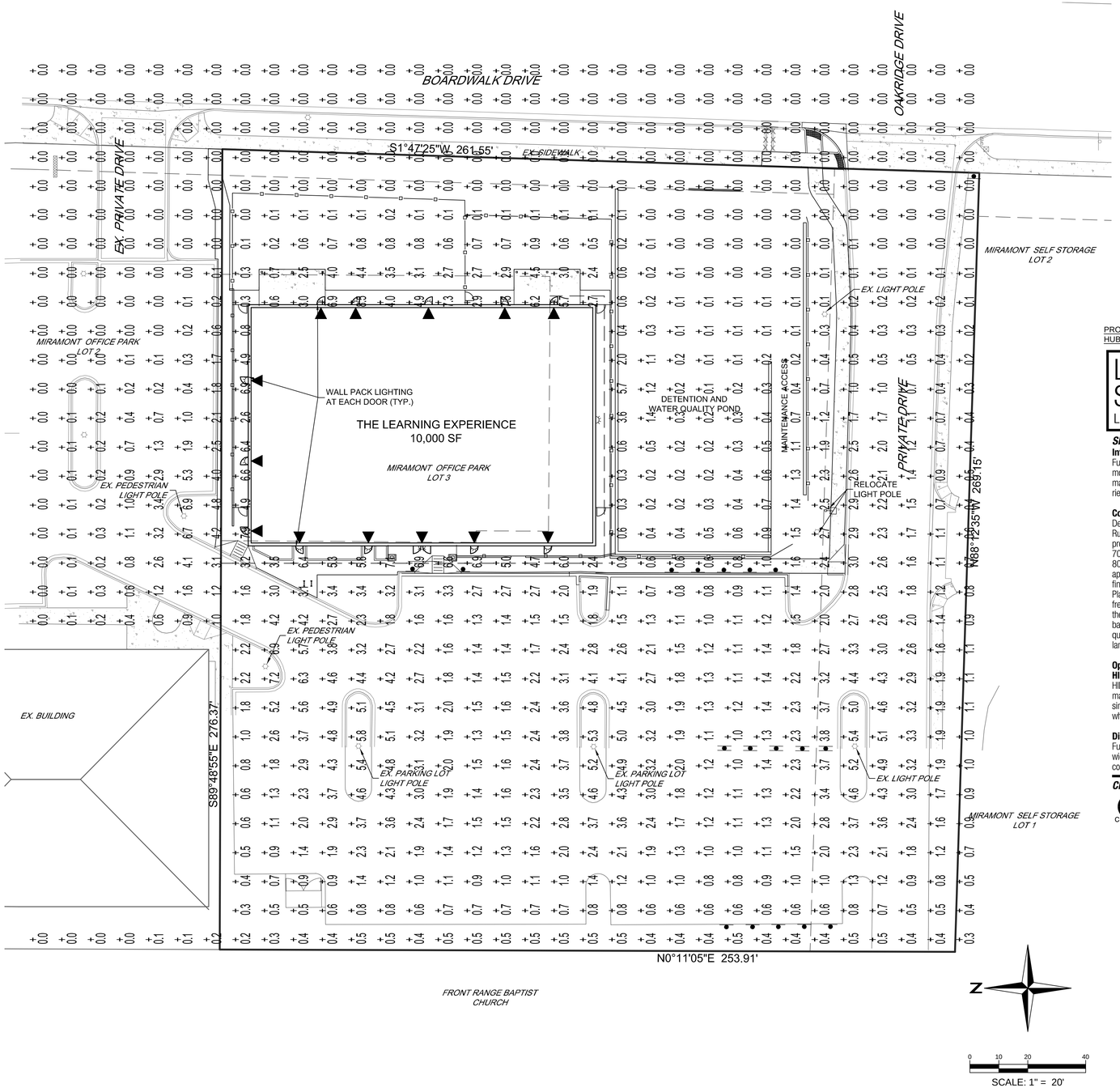
SEAL

REVISIONS

DATE: 01-28-14
DRAWN BY: STAFF

BUILDING ELEVATIONS

SHEET NO.
A-5.2



PROPOSED WALL LIGHTING:
HUBBELL LMC-50P-CS, COLOR OF HOUSING: WHITE

LAREDO SERIES
LMC Series

Cat.#		Approvals
Job	Type	

HUBBELL Outdoor Lighting

SPECIFICATIONS

Intended Use:
Full cutoff perimeter or entry lighting for 10-15ft mounting heights that require high light output and maximum energy efficiency. Ideal for schools, factories, hospitals, warehouses and retail applications.

Construction:
Decorative die cast aluminum housing and door. Rugged design protects internal components and provides excellent thermal management for long life. 70% lumen maintenance at 50,000 hours minimum. 800 series powder paint finishes provide lasting appearance in outdoor environments. Five standard finishes include: Bronze, Black, Gray, White and Platinum. Multiple options customize including a tool-free latch, which allows re-lamping of HID units from the ground, photocontrol for energy savings, integral ballast back-up battery for fluorescent units, fusing, quartz standby and EM sockets for remote power, lamps and five standard finishes.

Optics:
HID/CFL: Vertical lamp position (lamp is optional on HID and CFL units) provides maximum HID performance and life. Standard, removable front shield on single lamp units, reduces forward beam projection while maintaining lateral throw, if desired.

Distribution:
Full cutoff distribution - flat glass and optics provide wide spread with an environmentally friendly light control. IDA compliant.

Electrical:
Wide selection of wattage and sources including pulse start electronic metal halide and fluorescent systems (see below).

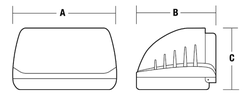
Installation:
Three 1/2" conduit hubs (top and sides), allow feed-thru surface wiring capability on HID and CFL units. Foam gasket for sealing to smooth surfaces with two or three key slot configuration. Mounting template included. Designed with quick mount system to provide rigid mounting over recessed junction boxes – fixture does not require opening for mounting.

Listings:
Listed and labeled to UL 1598 for wet locations, 25˚C ambient environments. U.S. Patent No. D563,587

Warranty:
Five year limited warranty (for more information visit: http://www.hubbelloutdoor.com/resources/warranty/

PRODUCT IMAGE(S)

DIMENSIONS



A	B	C	Weight
16.0" (406 mm)	12.125" (308 mm)	9.0" (229 mm)	20.66 lbs. (9.37 kg)

CERTIFICATIONS/LISTINGS

C SP US

CALCULATION SUMMARY

AREA NAME	DIMENSIONS	GRID / TYPE	# PTS	SPAC	GROUP	AVE	MAX	MIN	MAX/MIN	AVE/MIN
Site	309.25x328.25 Ft	Pavement / H-H	857	10.00	<>	1.30	8.48	0.00	N/A	N/A

TLE at Miramont (07-12-13) LUMINAIRE SCHEDULE

TYP	SYMBOL	DESCRIPTION	LAMP	LUMENS	MOUNTING/BALLAST	LLF	QTY
CC	⌧	HUBBELL LMC-50P-CS (1) "LMC" LMC-70P	(1) MHC70/U/M/4K	6200	WALL PACK WALL MOUNTED	0.72	14

LLF-LIGHT LOSS FACTOR

REDLAND
Where Great Places Begin
8000 South Lincoln Street, #206 | Littleton, CO 80122
Office: (720) 283-6783 | www.redland.com

DRAWN
CHECKED MDC
APPROVED MDC
PROJECT NO. 12026
HORZ. SCALE 1" = 20'
VERT. SCALE n/a

NO.	DATE	NOTES
1	07.12.2013	1ST SUBMITTAL
2	10.04.2013	2ND SUBMITTAL
3	01.31.2014	3RD SUBMITTAL

THE LEARNING EXPERIENCE
AT MIRAMONT OFFICE PARK

PHOTOMETRIC PLAN

SHEET
E1.0

December 12, 2013

Mark Cevaal, PE
Redland
8000 South Lincoln Street, Suite 206
Littleton, CO 80122

RE: The Learning Experience at Miramont Traffic Impact Study

Dear Mr. Cevaal:

The Fox Tuttle Transportation Group has completed a traffic impact study for The Learning Experience (TLE) project proposed within the Miramont office park in Fort Collins. The project is proposing to construct a 10,000 square foot (SF) day care use on a currently vacant site located at the northwest corner of Boardwalk and Oakridge Drive. Access is proposed at existing access locations along Boardwalk aligning with Oakridge Drive and with a Sam's Club access driveway.

The purpose of this study is to assist in identifying potential traffic impacts within the study area as a result of this development project. The traffic study addresses existing and near-term (Year 2015) peak hour intersection conditions in the study area. The information contained in this study is anticipated to be used by the City in identifying any intersection or roadway deficiencies and potential improvements that may be required of the project. This memorandum summarizes our analyses, findings, and recommendations.

Project Description

The project proposes to develop a 10,000 SF day care facility. A vicinity map is shown on **Figure 1**. The proposed site and access plan is provided on **Figure 2**.

Access to the site is proposed as follows:

- Access on Boardwalk via the existing west leg of the Boardwalk & Oakridge Drive intersection
- Access on Boardwalk via an existing shared driveway aligning with the Sam's Club access approximately 230' north of Oakridge Drive

Both accesses are shared with existing office use in the Miramont development.

Study Area

The study area boundaries were developed in consultation with City staff and took into consideration the amount of site traffic added to the surrounding street network and planned access. The existing study area street network consists of arterial and collector streets. The primary public roadways that serve the project site are discussed in the following text.

E. Harmony Road is a four-lane to six-lane major arterial with bicycle lanes that provides east-west access through the City of Fort Collins. The posted speed limit on Harmony Road is 45 miles per hour (mph) in the site vicinity.

Boardwalk is a two-lane collector roadway with bicycle lanes that provides north-south access through the study area with direct access to adjacent uses. The posted speed limit on Boardwalk is 30 mph in the site vicinity. The intersection of Boardwalk with E. Harmony Road is controlled with a traffic signal.

Oakridge Drive is a two-lane collector roadway that provides east-west access through the immediate area with direct access to adjacent uses. The posted speed limit on Oakridge Drive is 25 mph in the site vicinity. The intersection of Oakridge with Boardwalk is controlled with stop signs on the minor street (Oakridge) approaches.

Existing Traffic Volumes

Weekday AM / PM peak hour turning-movement and daily roadway volumes were collected in July and September 2013 for this project. The existing traffic volumes are illustrated on **Figure 3**. Count data sheets are provided in the Appendix.

Existing Intersection Capacity and Queue Analysis

In determining the operational characteristics of an intersection, "Levels of Service" (LOS) A through F are applied, with LOS A indicating very good operations and LOS F indicating congested operations. The intersection LOS is represented as a delay in seconds per vehicle for the intersection as a whole and for each turning movement. A more detailed discussion of LOS methodology is contained in the Appendix for reference. Criteria contained in the Highway Capacity Manual (HCM) was applied for these analyses in order to determine existing levels of service during peak hour periods.

The results of the LOS calculations for the intersections are summarized in **Table 1**. The intersection level of service worksheets are attached in the Appendix. The data in the tables show that all study area intersections are operating with acceptable overall levels of service. No existing capacity deficiencies or mitigation measures were identified for existing traffic volumes.

Future Traffic Volumes and Roadway Network

Per discussions with City staff, a 1.25% annual growth rate was assumed to account for future background traffic growth in the study area. There are no major roadway network or capacity improvements planned by the City within the study area within the short-term planning horizon. Using these assumptions, the Year 2015 background traffic volumes were calculated and are summarized on **Figure 4**.

Year 2015 Background Scenario Analysis (Without Proposed Development)

The study area intersections were evaluated to determine baseline operations for the 2015 scenario and to identify any capacity constraints associated with background traffic. The Level of Service criteria discussed in prior sections was applied to the study area intersections to determine impacts with the addition of site build out traffic volumes in the short-term. The results of the LOS calculations for the intersections are summarized in **Table 1**. The intersection level of service worksheets are attached in the Appendix.

The data **Table 1** shows that all study area intersections will continue to operate well overall with no changes in overall intersection or movement Levels of Service. Therefore, no capacity deficiencies or mitigation measures were identified for the Year 2015 background traffic scenario.

Trip Generation

To establish the volume of new trips that will be added to the area roadway network with redevelopment of the site, trip generation estimates for the proposed site uses were calculated based on rates contained in the Institute of Transportation Engineers (ITE) trip generation manual. The ITE trip rates for land use #565 “Day Care Center” were applied to estimate proposed traffic for the site.

As shown in **Table 2** and based on ITE methodology and the assumptions discussed in this section, the project is anticipated to generate the following trips at build out:

- 741 weekday daily trips
- 122 weekday AM peak hour trips
- 123 weekday PM peak hour trips

Trip Distribution and Assignment

The estimated traffic volumes presented in **Table 2** was distributed onto the adjacent street network based on existing traffic characteristics of the area, as well as land use and traffic patterns in the greater project area.

Using these distribution assumptions, the projected site traffic was assigned to the study area roadway network for the weekday AM and weekday PM peak hour periods. The site-generated volumes are shown on **Figure 5** along with the assumed distribution percentages.

Intersection Capacity Analysis for Year 2015 + Project Scenario

The site-generated traffic volumes were added to the Year 2015 background volumes to analyze potential site impacts in the short-term build out scenario. The Year 2015 + site-generated traffic volumes are illustrated on **Figure 6**. The level of service criteria discussed in prior sections was applied to the study area intersections to determine impacts with the addition of site-build out traffic volumes in the short-term. The results of the LOS calculations for the intersections are summarized in **Table 1**.

The data contained in **Table 1** illustrates that all study area intersections and individual movements will continue to operate acceptably overall (LOS E or better).

No deficiencies or mitigation measures were identified. The LOS analysis shows that the existing northbound shared left-through-right lane on Boardwalk at Oakridge can continue to service volumes with the project with minimal delays. Given the 30 mph speed limit on Boardwalk, the additional right-turn volumes at Sam's Club and Oakridge Drive accesses do not warrant the addition of right-turn deceleration lanes at these accesses using NCHRP Report 273 criteria. The LOS result also do not indicate capacity constraints with the existing shared through-right lane configurations.

Circulation and Drop-Off/Pick-Up

The TLE will operate from 6:30am to 6:30pm, Monday through Friday. The TLE will offer child care to children ages six weeks to five years, with after-school care for children up to eight years of age. Parents will drop children off throughout the morning with no set "bell" time or concentrated arrival times, unlike an elementary or typical public school. Similarly, parents will pick up children throughout the

afternoon and evening hours, with no set bell time and arrivals and departures staggered throughout the peak hours. Drop-off and pick-up activities will occur at random over the AM and PM periods and at the convenience of the parents. Parents are required to park, escort, and check-in/check-out all children into and out of the facility and students will never be dropped off or picked-up outside the facility unattended. Per TLE data, drop-off and pick-up of children will typically take between 5-8 minutes. Based on these characteristics, there is no vehicle queuing or waiting that will occur that may be associated with traditional (set bell time) schools at drop-off and pick-up.

The following data was provided by the applicant for a similar TLE site with a 183-child capacity and illustrates the spread of drop-off and pick-up activity throughout the AM and PM periods:

- Traffic during drop-off (average 5 minutes):
    - 6:30am-7:00am (11 children)
    - 7:00am-7:30am (28 children)
    - 7:30am-8:00am (43 children)
    - 8:00am-8:30am (43 children)
    - 8:30am-9:00am (29 children)
    - 9:00am-9:30am (29 children)
- Traffic during pick-up (average 8 minutes):
    - 3:30pm-4:00pm (11 children)
    - 4:00pm-4:30pm (28 children)
    - 4:30pm-5:00pm (43 children)
    - 5:00pm-5:30pm (43 children)
    - 5:30pm-6:00pm (29 children)
    - 6:00pm-6:30pm (29 children)

The above data suggests that, on average, there may be three to five parents parked to drop off at any time during the AM peak and five to six parents at any time during the PM peak. Given the random arrivals and departures and the requirement that parents must park and walk into and out of the facility with their children, circulation or queuing issues are not anticipated. The existing parking lot will easily accommodate these activities. TLE staff should be encouraged to park furthest away from the front door so as to minimize the distance parents and children will need to walk.

Conclusions

The Learning Experience at Miramont project is proposing to construct a 10,000 SF day care facility at the northwest corner of Boardwalk and Oakridge Drive in the City of Fort Collins. Access is proposed at existing access locations along Boardwalk.

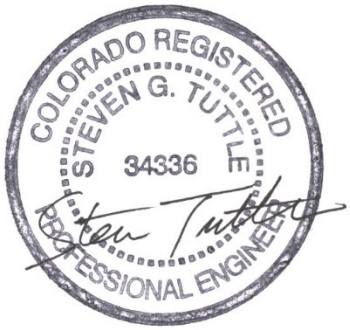
This traffic study evaluated existing and short term (Year 2015) peak hour intersection conditions in the study area with the project to identify potential operational issues and to recommend mitigation measures.

The project is anticipated to generate approximately 741 daily trips, with 122 trips occurring in the AM peak hour and 123 trips occurring in the PM peak hour. It was determined that the project-added traffic volumes can be accommodated on the existing roadway and intersection network with minimal effects. No mitigation measures were identified as necessary to support development of the project as proposed.

Sincerely,
FOX TUTTLE TRANSPORTATION GROUP, LLC

Steve Tuttle

Steve Tuttle, P.E., PTOE
Principal



Tables and Figures:

Table 1 – Peak Hour Intersection LOS Summary
Table 2 – Trip Generation Estimate

Figure 1 – Site Vicinity
Figure 2 – Site Plan
Figure 3 – Existing Traffic Volumes
Figure 4 – Year 2015 Background Traffic Volumes
Figure 5 – Site-Generated Traffic Volumes
Figure 6 – Year 2015 + Site-Generated Traffic Volumes

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Table 1 - Intersection Level of Service Summary

Intersection and Lanes Groups	Existing				Year 2015 Background				Year 2015 w/ Project			
	AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
SIGNAL CONTROL												
Harmony Rd & Boardwalk	**17.0**	**B**	**30.9**	**C**	**17.2**	**B**	**31.9**	**C**	**17.9**	**B**	**33.8**	**C**
Eastbound Left	*7.3*	*A*	*18.3*	*B*	*7.5*	*A*	*19.2*	*B*	*7.6*	*A*	*20.6*	*C*
Eastbound Through	*11.8*	*B*	*26.7*	*C*	*12.0*	*B*	*27.8*	*C*	*12.3*	*B*	*26.5*	*C*
Eastbound Right	*9.0*	*A*	*20.2*	*C*	*9.1*	*A*	*20.7*	*C*	*9.6*	*A*	*21.1*	*C*
Westbound Left	*8.3*	*A*	*27.5*	*C*	*8.4*	*A*	*30.4*	*C*	*8.8*	*A*	*30.3*	*C*
Westbound Through	*10.5*	*B*	*22.8*	*C*	*10.7*	*B*	*23.6*	*C*	*10.8*	*B*	*24.7*	*C*
Westbound Right	*10.4*	*B*	*18.3*	*B*	*10.6*	*B*	*18.8*	*B*	*10.7*	*B*	*18.2*	*B*
Northbound Left	*37.9*	*D*	*47.4*	*D*	*37.9*	*D*	*50.1*	*D*	*37.6*	*D*	*77.8*	*E*
Northbound Through	*49.9*	*D*	*52.8*	*D*	*50.3*	*D*	*53.0*	*D*	*51.3*	*D*	*56.0*	*E*
Northbound Right	*44.5*	*D*	*47.9*	*D*	*44.5*	*D*	*48.0*	*D*	*45.7*	*D*	*49.7*	*D*
Southbound Left	*36.6*	*D*	*48.8*	*D*	*37.6*	*D*	*51.7*	*D*	*39.0*	*D*	*50.1*	*D*
Southbound Through	*43.7*	*D*	*67.3*	*E*	*44.0*	*D*	*68.8*	*E*	*46.1*	*D*	*67.8*	*E*
Southbound Right	*44.5*	*D*	*47.2*	*D*	*45.2*	*D*	*47.2*	*D*	*47.2*	*D*	*47.2*	*D*
STOP CONTROL												
Boardwalk & Oakridge Dr	**3.6**	**A**	**3.4**	**A**	**3.7**	**A**	**3.4**	**A**	**4.3**	**A**	**4.2**	**A**
Eastbound Left+Through+Right	*10.3*	*B*	*12.9*	*B*	*10.4*	*B*	*12.8*	*B*	*12.4*	*B*	*15.8*	*C*
Westbound Left	*11.3*	*B*	*14.1*	*B*	*11.4*	*B*	*14.5*	*B*	*11.8*	*B*	*15.3*	*C*
Westbound Through+Right	*10.0*	*A*	*10.2*	*B*	*10.1*	*B*	*10.3*	*B*	*10.4*	*B*	*10.6*	*B*
Northbound Left	*0.2*	*A*	*0.0*	*A*	*0.2*	*A*	*0.0*	*A*	*0.6*	*A*	*0.5*	*A*
Southbound Left	*7.9*	*A*	*7.9*	*A*	*7.9*	*A*	*8.0*	*A*	*7.9*	*A*	*8.0*	*A*
Boardwalk & Sam's Club	**0.5**	**A**	**1.8**	**A**	**0.6**	**A**	**1.9**	**A**	**1.0**	**A**	**2.2**	**A**
Eastbound Left+Through+Right	*10.9*	*B*	*13.4*	*B*	*11.1*	*B*	*13.7*	*B*	*11.8*	*B*	*15.4*	*C*
Westbound Left+Through+Right	*9.9*	*A*	*11.3*	*B*	*10.0*	*A*	*11.6*	*B*	*10.2*	*B*	*11.9*	*B*
Northbound Left	*7.7*	*A*	*8.2*	*A*	*7.7*	*A*	*8.3*	*A*	*7.8*	*A*	*8.4*	*A*
Southbound Left	*7.8*	*A*	*8.0*	*A*	*7.9*	*A*	*8.0*	*A*	*7.9*	*A*	*8.1*	*A*

Note: Delay represented in average seconds per vehicle.

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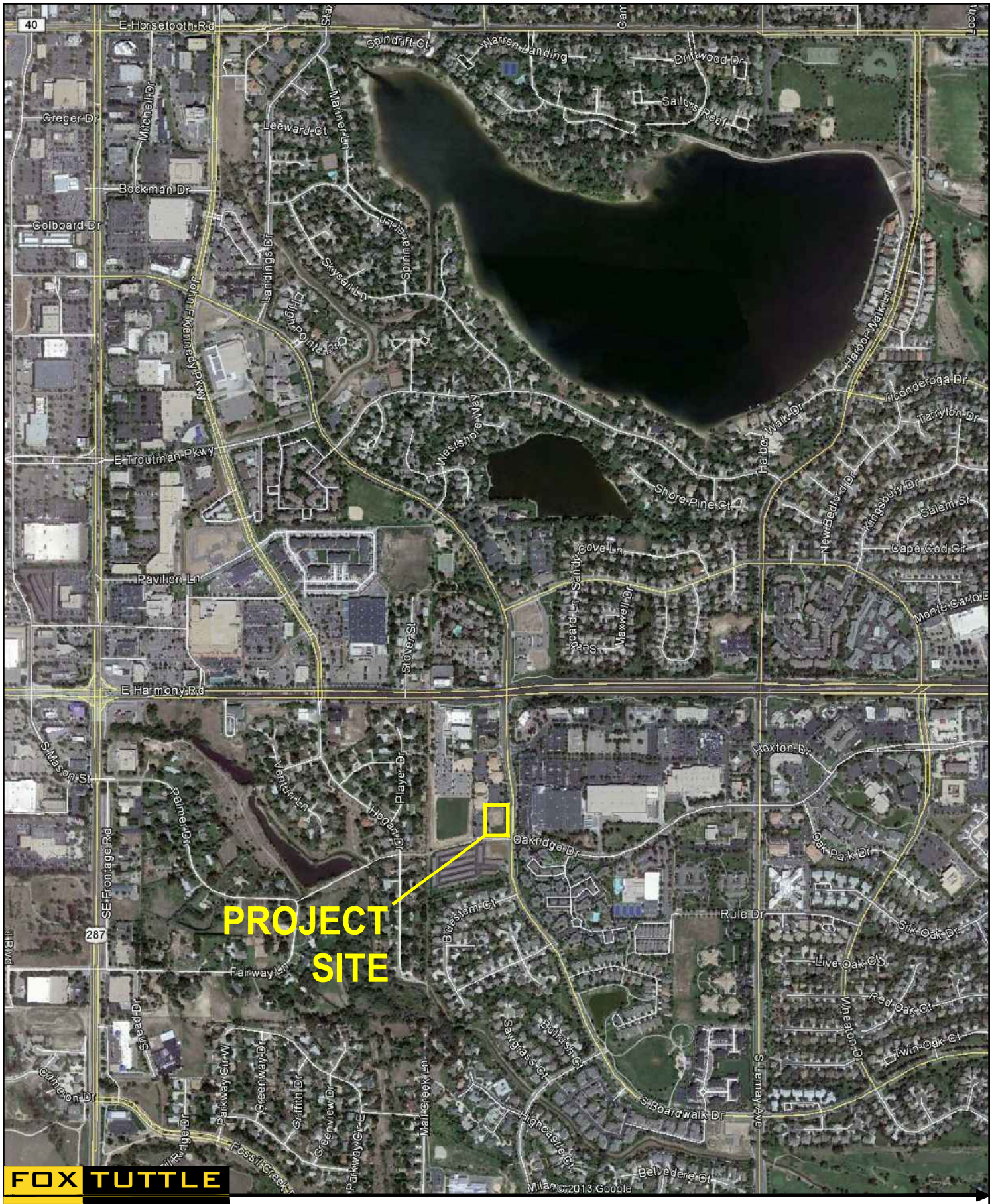
Table 2. Trip Generation Estimate

Land Use	Size	Unit	Average Daily Trips				A.M. Peak Hour Trips				P.M. Peak Hour Trips			
			Rate	Total	In	Out	Rate	Total	In	Out	Rate	Total	In	Out
Day Care Center - ITE #565	10	1,000 SF	74.06	741	371	370	12.18	122	65	57	12.34	123	58	65

Source: ITE Trip Generation 9th Edition. 2012.



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THE LEARNING EXPERIENCE AT MIRAMONT TRAFFIC IMPACT STUDY

VICINITY MAP

FT Project # 13068	Original Scale 1"=1000'	Date 10/4/13	Drawn by SGT	Figure # 1

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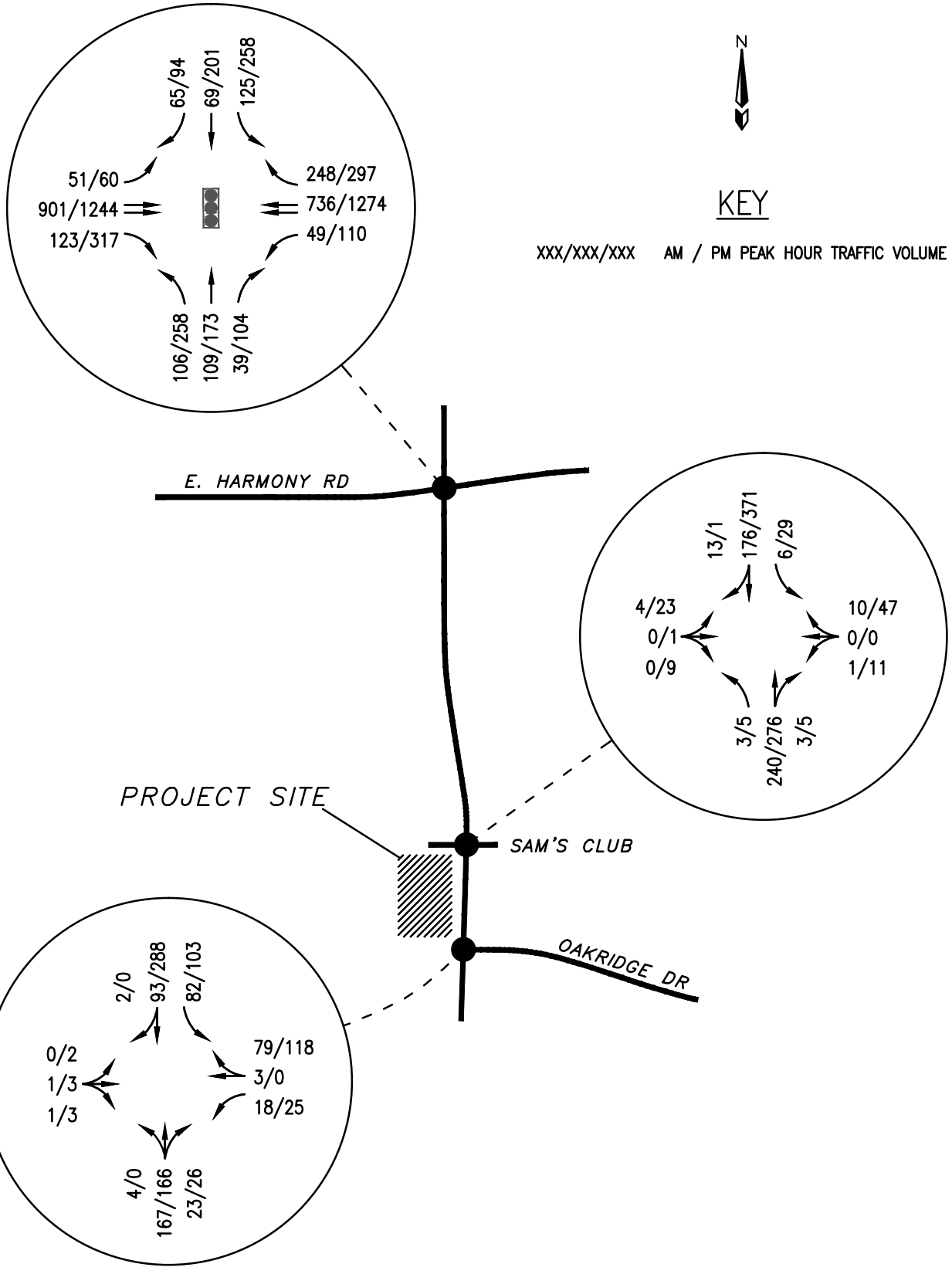
THE LEARNING EXPERIENCE AT MIRAMONT TRAFFIC IMPACT STUDY

SITE PLAN

FT Project # 13068	Original Scale 1"=40'	Date 10/4/13	Drawn by SGT	Figure # 2



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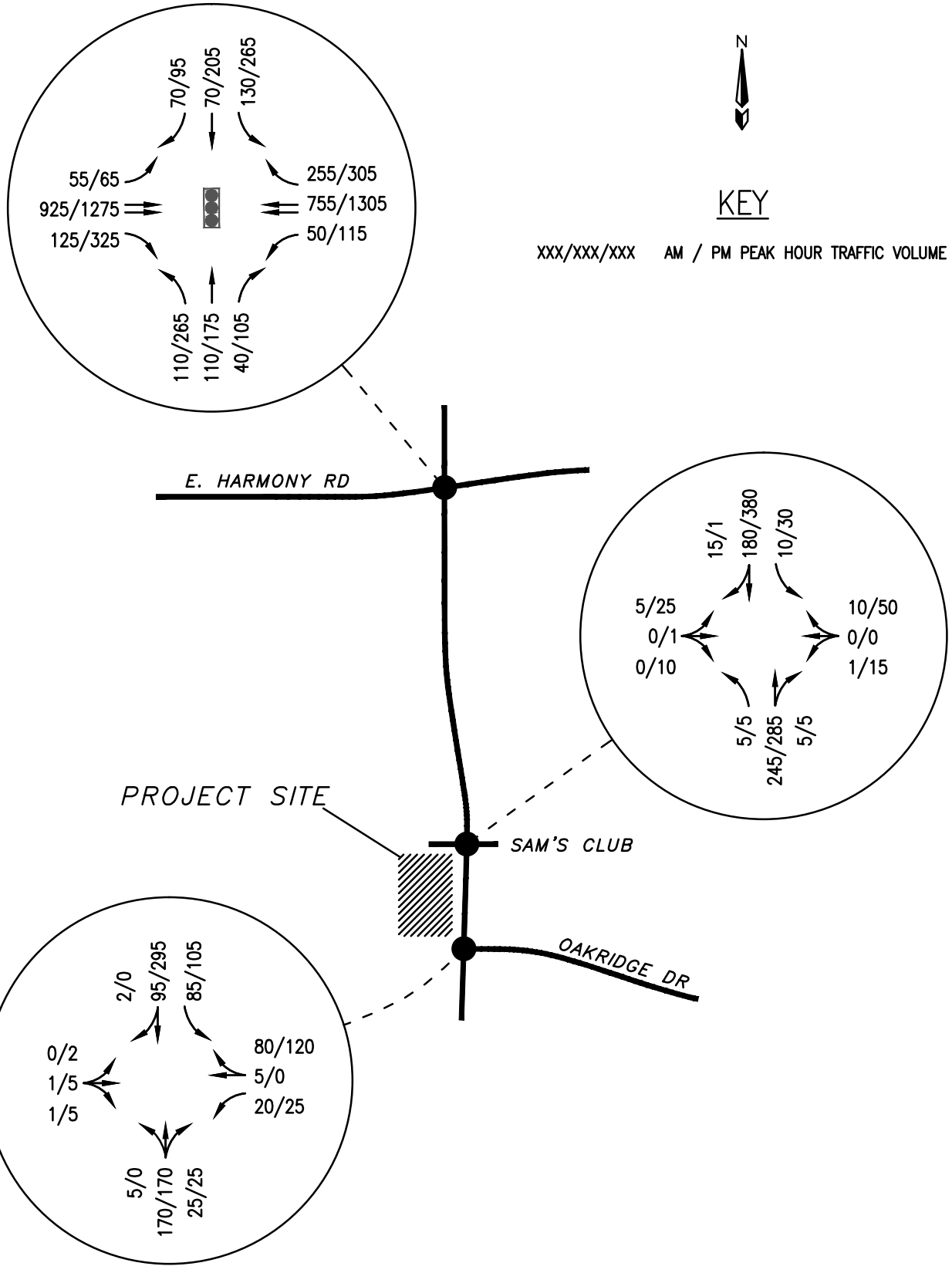
THE LEARNING EXPERIENCE AT MIRAMONT TRAFFIC IMPACT STUDY

EXISTING TRAFFIC VOLUMES

FT Project # 13068	Original Scale NTS	Date 10/4/13	Drawn by SGT	Figure # 3



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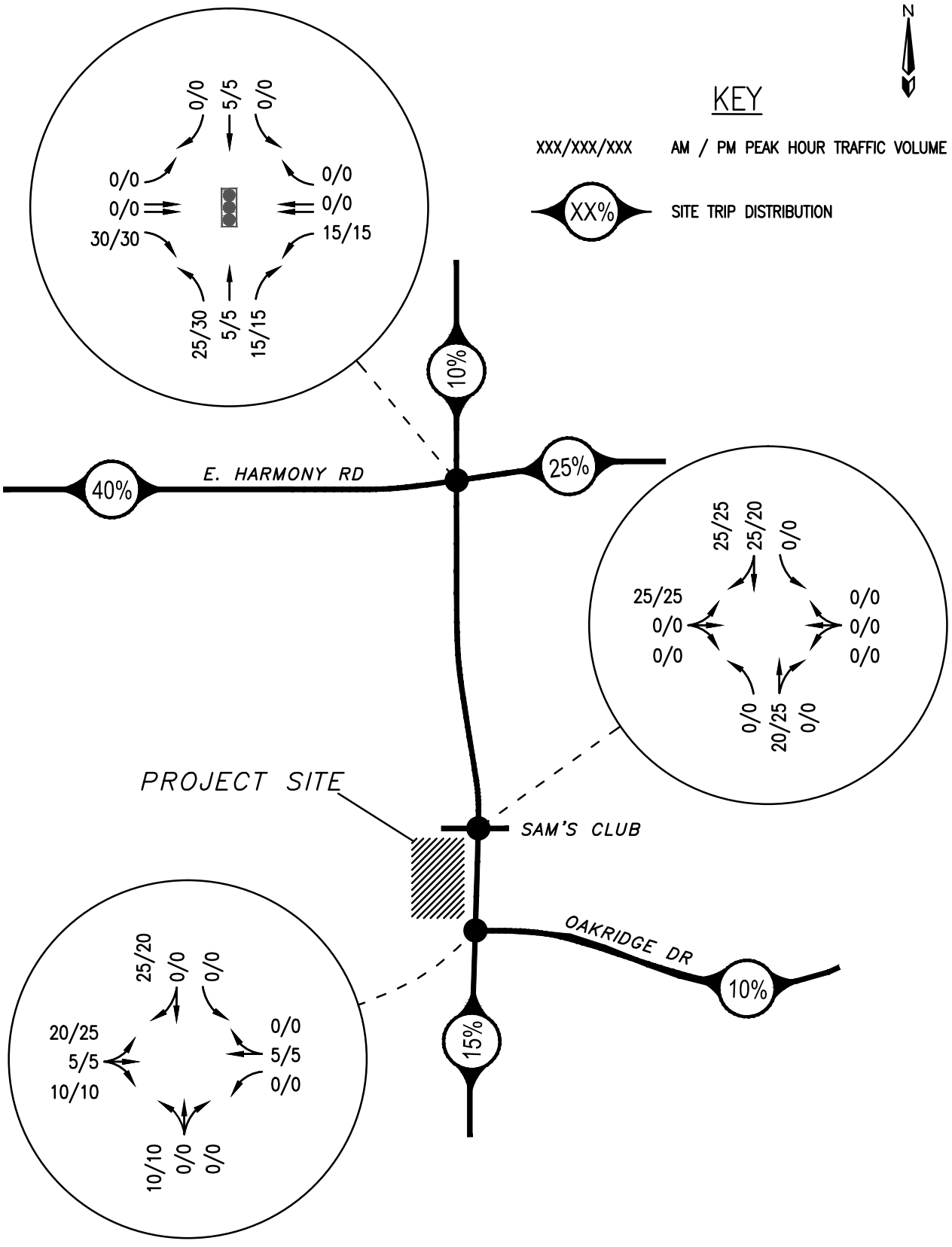
THE LEARNING EXPERIENCE AT MIRAMONT TRAFFIC IMPACT STUDY

YEAR 2015 BACKGROUND TRAFFIC VOLUMES

FT Project # 13068	Original Scale NTS	Date 10/4/13	Drawn by SGT	Figure # 4



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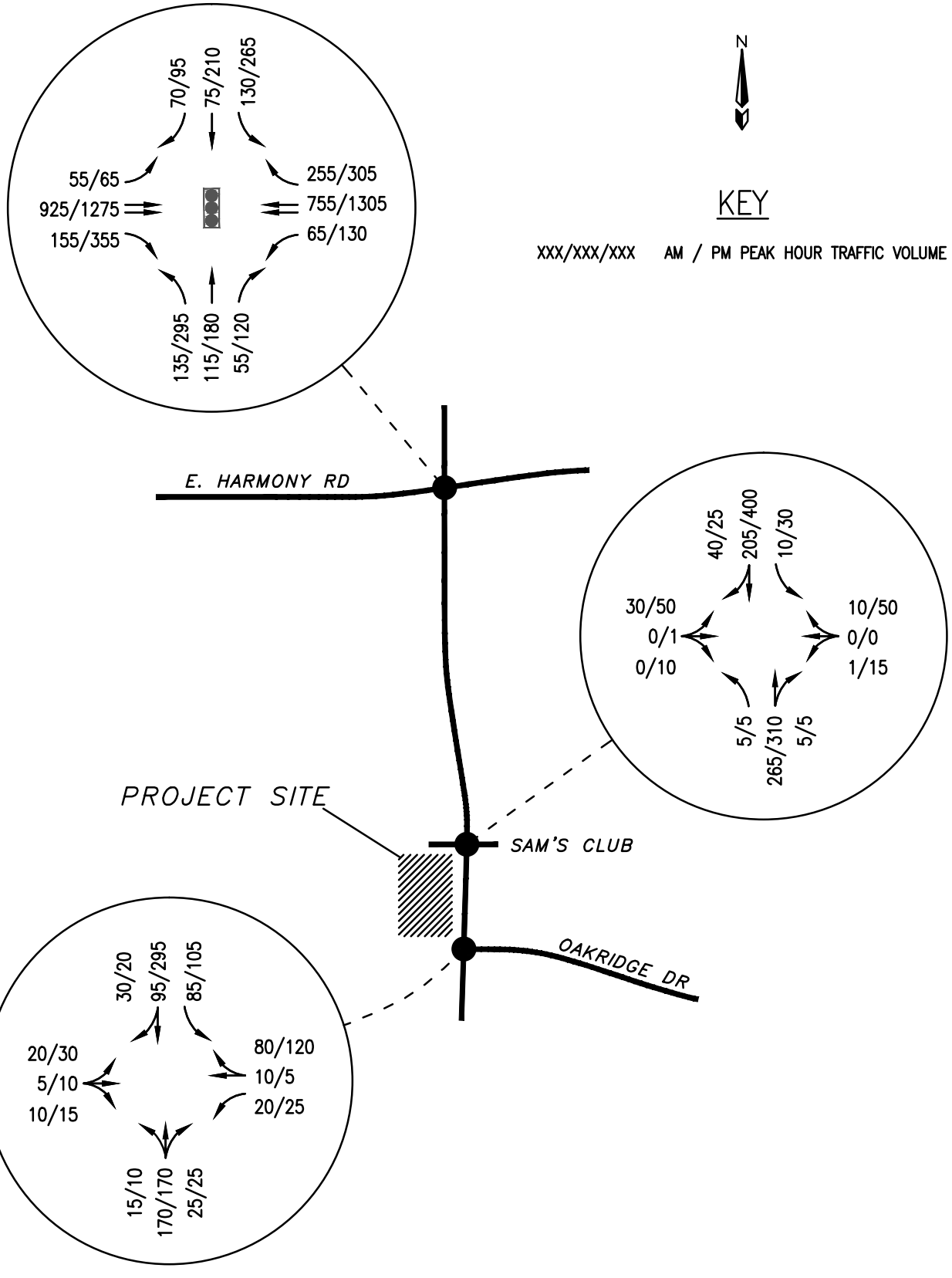
THE LEARNING EXPERIENCE AT MIRAMONT TRAFFIC IMPACT STUDY

SITE-GENERATED TRAFFIC VOLUMES

FT Project # 13068	Original Scale NTS	Date 10/4/13	Drawn by SGT	Figure # 5



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THE LEARNING EXPERIENCE AT MIRAMONT TRAFFIC IMPACT STUDY

YEAR 2015 TOTAL TRAFFIC VOLUMES

FT Project # 13068	Original Scale NTS	Date 10/4/13	Drawn by SGT	Figure # 6

APPENDIX

Attachment A – TIS Base Assumptions
Level of Service Definitions
Intersection Capacity Worksheets
Traffic Count Data Sheets

Attachment A – TIS Base Assumptions

Attachment A
Transportation Impact Study
Base Assumptions

Project Information			
Project Name	The Learning Experience @ Miramont Office Park PDP		
Project Location	Boardwalk + Oakridge		
TIS Assumptions			
Type of Study	Full:		Intermediate: ✓
Study Area Boundaries	North: Harmony Rd		South: Oakridge
	East: Boardwalk		West:
Study Years	Short Range: 2015		Long Range:
Future Traffic Growth Rate	1.25%		
Study Intersections	1. All access drives ✓	5.	
	2. Boardwalk + Harmony	6.	
	3. Boardwalk + Oakridge	7.	
	4.	8.	
Time Period for Study	(AM:) 7:00-9:00	(PM:) 4:00-6:00	Sat Noon:
Trip Generation Rates	ITE		
Trip Adjustment Factors	Passby: —	Captive Market: —	
Overall Trip Distribution	SEE ATTACHED SKETCH		
Mode Split Assumptions	NONE		
Committed Roadway Improvements	NONE		
Other Traffic Studies	NONE		
Areas Requiring Special Study	+ Boardwalk: SBR turn lanes @ Site Accesses; NBL turn Lane @ Site Accesses + Discuss + Analyze drop-off/pickup + site traffic circulation plans to keep traffic from backing up onto Boardwalk.		

Date: 8/28/13

Traffic Engineer: _____

Local Entity Engineer: [signature] 8/28/13

Level of Service Definitions

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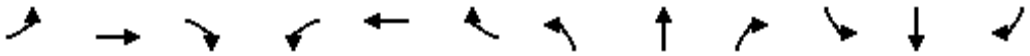
LEVEL OF SERVICE DEFINITIONS

In rating roadway and intersection operating conditions with existing or future traffic volumes, "Levels of Service" (LOS) A through F are used, with LOS A indicating very good operation and LOS F indicating poor operation. Levels of service at signalized and unsignalized intersections are closely associated with vehicle delays experienced in seconds per vehicle. More complete level of service definitions and delay data for signal and stop sign controlled intersections are contained in the following table for reference.

Level of Service Rating	Delay in seconds per vehicle *(a)*		Definition
	Signalized	Unsignalized	
A	0.0 to 10.0	0.0 to 10.0	Low vehicular traffic volumes; primarily free flow operations. Density is low and vehicles can freely maneuver within the traffic stream. Drivers are able to maintain their desired speeds with little or no delay.
B	10.1 to 20.0	10.1 to 15.0	Stable vehicular traffic volume flow with potential for some restriction of operating speeds due to traffic conditions. Vehicle maneuvering is only slightly restricted. The stopped delays are not bothersome and drivers are not subject to appreciable tension.
C	20.1 to 35.0	15.1 to 25.0	Stable traffic operations, however the ability for vehicles to maneuver is more restricted by the increase in traffic volumes. Relatively satisfactory operating speeds prevail, but adverse signal coordination or longer vehicle queues cause delays along the corridor.
D	35.1 to 55.0	25.1 to 35.0	Approaching unstable vehicular traffic flow where small increases in volume could cause substantial delays. Most drivers are restricted in ability to maneuver and selection of travel speeds due to congestion. Driver comfort and convenience are low, but tolerable.
E	55.1 to 80.0	35.1 to 50.0	Traffic operations characterized by significant approach delays and average travel speeds of one-half to one-third the free flow speed. Vehicular flow is unstable and there is potential for stoppages of brief duration. High signal density, extensive vehicle queuing, or corridor signal progression/timing are the typical causes of vehicle delays at signalized corridors.
F	> 80.0	> 50.0	Forced vehicular traffic flow and operations with high approach delays at critical intersections. Vehicle speeds are reduced substantially and stoppages may occur for short or long periods of time because of downstream congestion.

(a) Delay ranges based on 2010 Highway Capacity Manual criteria.

Intersection Capacity Worksheets



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	1	1	18	3	79	4	167	23	82	93	2
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	0	1	1	21	4	93	5	196	27	96	109	2
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			TWLTL	
Median storage veh)											2	
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	618	536	111	524	524	210	112			224		
vC1, stage 1 conf vol	304	304		219	219							
vC2, stage 2 conf vol	314	233		304	305							
vCu, unblocked vol	618	536	111	524	524	210	112			224		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)	6.1	5.5		6.1	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	96	99	89	100			93		
cM capacity (veh/h)	474	536	943	593	560	830	1478			1345		

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total	2	21	96	228	96	112
Volume Left	0	21	0	5	96	0
Volume Right	1	0	93	27	0	2
cSH	683	593	816	1478	1345	1700
Volume to Capacity	0.00	0.04	0.12	0.00	0.07	0.07
Queue Length 95th (ft)	0	3	10	0	6	0
Control Delay (s)	10.3	11.3	10.0	0.2	7.9	0.0
Lane LOS	B	B	B	A	A	
Approach Delay (s)	10.3	10.2		0.2	3.7	
Approach LOS	B	B				

Intersection Summary				
Average Delay	3.6			
Intersection Capacity Utilization	33.1%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	4	0	0	1	0	10	3	240	3	6	176	13
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	5	0	0	1	0	12	4	282	4	7	207	15
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								TWLTL			TWLTL	
Median storage veh)								2			2	
Upstream signal (ft)											1102	
pX, platoon unblocked												
vC, conflicting volume	530	522	215	512	528	284	222			286		
vC1, stage 1 conf vol	229	229		291	291							
vC2, stage 2 conf vol	301	293		221	236							
vCu, unblocked vol	530	522	215	512	528	284	222			286		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)	6.1	5.5		6.1	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	99	100	100	100	100	98	100			99		
cM capacity (veh/h)	616	593	825	634	593	755	1347			1276		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	5	13	4	286	7	222
Volume Left	5	1	4	0	7	0
Volume Right	0	12	0	4	0	15
cSH	616	742	1347	1700	1276	1700
Volume to Capacity	0.01	0.02	0.00	0.17	0.01	0.13
Queue Length 95th (ft)	1	1	0	0	0	0
Control Delay (s)	10.9	9.9	7.7	0.0	7.8	0.0
Lane LOS	B	A	A		A	
Approach Delay (s)	10.9	9.9	0.1		0.2	
Approach LOS	B	A				

Intersection Summary				
Average Delay	0.5			
Intersection Capacity Utilization	22.8%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	51	901	123	49	736	248	106	109	39	125	69	65
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.99		0.99	0.99		0.99
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	193.7	186.3	193.7	186.3	186.3	193.7	186.3	186.3	186.3	186.3	186.3	186.3
Lanes	1	2	1	1	2	1	1	1	1	1	1	1
Cap, veh/h	422	2257	996	351	2256	995	300	175	147	283	204	172
Arrive On Green	0.04	0.61	0.61	0.04	0.61	0.61	0.08	0.09	0.09	0.10	0.11	0.11
Sat Flow, veh/h	1845	3725	1644	1774	3725	1644	1774	1863	1563	1774	1863	1566
Grp Volume(v), veh/h	60	1060	145	58	775	292	112	118	46	147	81	76
Grp Sat Flow(s),veh/h/ln	1845	1863	1644	1774	1863	1644	1774	1863	1563	1774	1863	1566
Q Serve(g_s), s	1.2	16.0	3.9	1.2	10.6	8.7	5.7	6.3	2.8	7.3	4.1	4.7
Cycle Q Clear(g_c), s	1.2	16.0	3.9	1.2	10.6	8.7	5.7	6.3	2.8	7.3	4.1	4.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	422	2257	996	351	2256	995	300	175	147	283	204	172
V/C Ratio(X)	0.14	0.47	0.15	0.17	0.34	0.29	0.37	0.67	0.31	0.52	0.40	0.44
Avail Cap(c_a), veh/h	507	2257	996	434	2256	995	327	227	191	283	227	191
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	7.2	11.1	8.7	8.0	10.1	9.7	37.1	44.9	43.3	35.0	42.4	42.7
Incr Delay (d2), s/veh	0.2	0.7	0.3	0.2	0.4	0.7	0.8	5.1	1.2	1.7	1.2	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.5	6.7	1.4	0.5	4.4	3.2	2.6	3.2	1.1	3.4	2.1	1.9
Lane Grp Delay (d), s/veh	7.3	11.8	9.0	8.3	10.5	10.4	37.9	49.9	44.5	36.6	43.7	44.5
Lane Grp LOS	A	B	A	A	B	B	D	D	D	D	D	D
Approach Vol, veh/h		1265			1125			276			304	
Approach Delay, s/veh		11.3			10.4			44.2			40.5	
Approach LOS		B			B			D			D	

Timer												
Assigned Phs	7	4		3	8		1	6		5	2	
Phs Duration (G+Y+Rc), s	7.3	67.0		7.2	67.0		11.4	15.1		13.0	16.7	
Change Period (Y+Rc), s	4.0	6.0		4.0	6.0		4.0	6.5		4.0	6.5	
Max Green Setting (Gmax), s	8.0	61.0		8.0	61.0		9.0	11.5		9.0	11.5	
Max Q Clear Time (g_c+I1), s	3.2	18.0		3.2	12.6		7.7	8.3		9.3	6.7	
Green Ext Time (p_c), s	0.0	12.9		0.0	13.1		0.0	0.3		0.0	0.5	

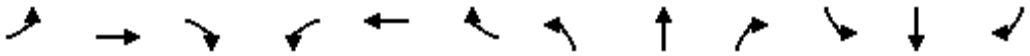
Intersection Summary			
HCM 2010 Ctrl Delay		17.0	
HCM 2010 LOS		B	

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	2	3	3	25	0	118	0	166	26	103	288	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	2	4	4	29	0	139	0	195	31	121	339	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			TWLTL	
Median storage veh)											2	
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	931	807	339	797	792	211	339			226		
vC1, stage 1 conf vol	581	581		211	211							
vC2, stage 2 conf vol	349	226		586	581							
vCu, unblocked vol	931	807	339	797	792	211	339			226		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)	6.1	5.5		6.1	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	99	99	99	93	100	83	100			91		
cM capacity (veh/h)	351	417	703	423	429	830	1220			1343		

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total	9	29	139	226	121	339
Volume Left	2	29	0	0	121	0
Volume Right	4	0	139	31	0	0
cSH	467	423	830	1220	1343	1700
Volume to Capacity	0.02	0.07	0.17	0.00	0.09	0.20
Queue Length 95th (ft)	2	6	15	0	7	0
Control Delay (s)	12.9	14.1	10.2	0.0	7.9	0.0
Lane LOS	B	B	B		A	
Approach Delay (s)	12.9	10.9		0.0	2.1	
Approach LOS	B	B				

Intersection Summary				
Average Delay	3.4			
Intersection Capacity Utilization	42.8%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	23	1	9	11	0	47	5	276	5	29	371	1
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	27	1	11	13	0	55	6	325	6	34	436	1
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								TWLTL			TWLTL	
Median storage veh)								2			2	
Upstream signal (ft)											1102	
pX, platoon unblocked												
vC, conflicting volume	897	848	437	855	845	328	438			331		
vC1, stage 1 conf vol	505	505		339	339							
vC2, stage 2 conf vol	392	342		516	506							
vCu, unblocked vol	897	848	437	855	845	328	438			331		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)	6.1	5.5		6.1	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	94	100	98	97	100	92	99			97		
cM capacity (veh/h)	428	456	619	455	460	714	1122			1229		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	39	68	6	331	34	438
Volume Left	27	13	6	0	34	0
Volume Right	11	55	0	6	0	1
cSH	468	644	1122	1700	1229	1700
Volume to Capacity	0.08	0.11	0.01	0.19	0.03	0.26
Queue Length 95th (ft)	7	9	0	0	2	0
Control Delay (s)	13.4	11.3	8.2	0.0	8.0	0.0
Lane LOS	B	B	A		A	
Approach Delay (s)	13.4	11.3	0.1		0.6	
Approach LOS	B	B				

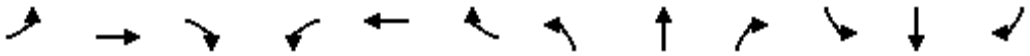
Intersection Summary				
Average Delay	1.8			
Intersection Capacity Utilization	36.2%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	60	1244	317	110	1274	297	258	173	104	258	201	94
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	193.7	186.3	193.7	186.3	186.3	193.7	186.3	186.3	186.3	186.3	186.3	186.3
Lanes	1	2	1	1	2	1	1	1	1	1	1	1
Cap, veh/h	213	1893	835	210	1956	863	345	281	237	376	281	237
Arrive On Green	0.04	0.51	0.51	0.06	0.52	0.52	0.14	0.15	0.15	0.14	0.15	0.15
Sat Flow, veh/h	1845	3725	1643	1774	3725	1644	1774	1863	1571	1774	1863	1571
Grp Volume(v), veh/h	71	1464	373	129	1341	349	272	188	122	304	236	111
Grp Sat Flow(s),veh/h/ln	1845	1863	1643	1774	1863	1644	1774	1863	1571	1774	1863	1571
Q Serve(g_s), s	2.1	37.6	17.0	3.8	31.5	15.1	15.1	11.3	8.4	17.0	14.5	7.6
Cycle Q Clear(g_c), s	2.1	37.6	17.0	3.8	31.5	15.1	15.1	11.3	8.4	17.0	14.5	7.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	213	1893	835	210	1956	863	345	281	237	376	281	237
V/C Ratio(X)	0.33	0.77	0.45	0.61	0.69	0.40	0.79	0.67	0.51	0.81	0.84	0.47
Avail Cap(c_a), veh/h	264	1893	835	229	1956	863	345	292	246	376	292	246
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.4	23.5	18.5	23.3	20.8	16.9	35.8	47.3	46.1	36.3	48.7	45.8
Incr Delay (d2), s/veh	0.9	3.1	1.7	4.2	2.0	1.4	11.6	5.5	1.7	12.5	18.6	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.9	17.5	6.9	2.2	14.3	6.1	8.5	5.9	3.4	9.1	8.5	3.1
Lane Grp Delay (d), s/veh	18.3	26.7	20.2	27.5	22.8	18.3	47.4	52.8	47.9	48.8	67.3	47.2
Lane Grp LOS	B	C	C	C	C	B	D	D	D	D	E	D
Approach Vol, veh/h		1908			1819			582			651	
Approach Delay, s/veh		25.1			22.3			49.3			55.2	
Approach LOS		C			C			D			E	

Timer												
Assigned Phs	7	4		3	8		1	6		5	2	
Phs Duration (G+Y+Rc), s	7.8	65.0		9.7	67.0		20.0	23.3		20.0	23.3	
Change Period (Y+Rc), s	4.0	6.0		4.0	6.0		4.0	6.5		4.0	6.5	
Max Green Setting (Gmax), s	7.0	59.0		7.0	59.0		16.0	17.5		16.0	17.5	
Max Q Clear Time (g_c+I1), s	4.1	39.6		5.8	33.5		17.1	13.3		19.0	16.5	
Green Ext Time (p_c), s	0.0	15.3		0.0	18.8		0.0	1.0		0.0	0.3	

Intersection Summary			
HCM 2010 Ctrl Delay		30.9	
HCM 2010 LOS		C	

Notes



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	1	1	20	5	80	5	170	25	85	95	2
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	0	1	1	24	6	94	6	200	29	100	112	2
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			TWLTL	
Median storage veh)											2	
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	636	554	113	540	541	215	114			229		
vC1, stage 1 conf vol	313	313		226	226							
vC2, stage 2 conf vol	324	241		314	314							
vCu, unblocked vol	636	554	113	540	541	215	114			229		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)	6.1	5.5		6.1	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	96	99	89	100			93		
cM capacity (veh/h)	461	526	940	583	551	825	1475			1339		

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total	2	24	100	235	100	114
Volume Left	0	24	0	6	100	0
Volume Right	1	0	94	29	0	2
cSH	675	583	802	1475	1339	1700
Volume to Capacity	0.00	0.04	0.12	0.00	0.07	0.07
Queue Length 95th (ft)	0	3	11	0	6	0
Control Delay (s)	10.4	11.4	10.1	0.2	7.9	0.0
Lane LOS	B	B	B	A	A	
Approach Delay (s)	10.4	10.4		0.2	3.7	
Approach LOS	B	B				

Intersection Summary				
Average Delay	3.7			
Intersection Capacity Utilization	33.6%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	5	0	0	1	0	10	5	245	5	10	180	15
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	6	0	0	1	0	12	6	288	6	12	212	18
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								TWLTL			TWLTL	
Median storage veh)								2			2	
Upstream signal (ft)											1102	
pX, platoon unblocked												
vC, conflicting volume	556	550	221	538	556	291	229			294		
vC1, stage 1 conf vol	244	244		303	303							
vC2, stage 2 conf vol	312	306		235	253							
vCu, unblocked vol	556	550	221	538	556	291	229			294		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)	6.1	5.5		6.1	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	99	100	100	100	100	98	100			99		
cM capacity (veh/h)	599	577	819	619	579	748	1339			1267		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	6	13	6	294	12	229
Volume Left	6	1	6	0	12	0
Volume Right	0	12	0	6	0	18
cSH	599	734	1339	1700	1267	1700
Volume to Capacity	0.01	0.02	0.00	0.17	0.01	0.13
Queue Length 95th (ft)	1	1	0	0	1	0
Control Delay (s)	11.1	10.0	7.7	0.0	7.9	0.0
Lane LOS	B	A	A		A	
Approach Delay (s)	11.1	10.0	0.2		0.4	
Approach LOS	B	A				

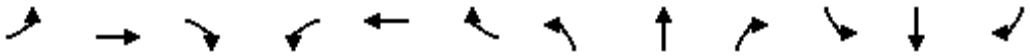
Intersection Summary				
Average Delay	0.6			
Intersection Capacity Utilization	23.2%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	55	925	125	50	755	255	110	110	40	130	70	70
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.99		0.99	0.99		0.99
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	193.7	186.3	193.7	186.3	186.3	193.7	186.3	186.3	186.3	186.3	186.3	186.3
Lanes	1	2	1	1	2	1	1	1	1	1	1	1
Cap, veh/h	414	2255	995	342	2251	993	300	177	148	282	202	170
Arrive On Green	0.04	0.61	0.61	0.04	0.60	0.60	0.08	0.09	0.09	0.10	0.11	0.11
Sat Flow, veh/h	1845	3725	1644	1774	3725	1644	1774	1863	1563	1774	1863	1566
Grp Volume(v), veh/h	65	1088	147	59	795	300	116	120	47	153	82	82
Grp Sat Flow(s),veh/h/ln	1845	1863	1644	1774	1863	1644	1774	1863	1563	1774	1863	1566
Q Serve(g_s), s	1.3	16.7	4.0	1.3	11.0	9.1	5.9	6.4	2.9	7.7	4.2	5.1
Cycle Q Clear(g_c), s	1.3	16.7	4.0	1.3	11.0	9.1	5.9	6.4	2.9	7.7	4.2	5.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	414	2255	995	342	2251	993	300	177	148	282	202	170
V/C Ratio(X)	0.16	0.48	0.15	0.17	0.35	0.30	0.39	0.68	0.32	0.54	0.41	0.48
Avail Cap(c_a), veh/h	497	2255	995	424	2251	993	324	227	190	282	227	191
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	7.3	11.3	8.8	8.2	10.2	9.8	37.0	44.9	43.3	35.5	42.7	43.1
Incr Delay (d2), s/veh	0.2	0.7	0.3	0.2	0.4	0.8	0.8	5.4	1.2	2.1	1.3	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.5	7.0	1.4	0.5	4.6	3.3	2.7	3.3	1.2	3.6	2.1	2.1
Lane Grp Delay (d), s/veh	7.5	12.0	9.1	8.4	10.7	10.6	37.9	50.3	44.5	37.6	44.0	45.2
Lane Grp LOS	A	B	A	A	B	B	D	D	D	D	D	D
Approach Vol, veh/h		1300			1154			283			317	
Approach Delay, s/veh		11.5			10.5			44.3			41.2	
Approach LOS		B			B			D			D	

Timer												
Assigned Phs	7	4		3	8		1	6		5	2	
Phs Duration (G+Y+Rc), s	7.4	67.1		7.3	67.0		11.6	15.2		13.0	16.6	
Change Period (Y+Rc), s	4.0	6.0		4.0	6.0		4.0	6.5		4.0	6.5	
Max Green Setting (Gmax), s	8.0	61.0		8.0	61.0		9.0	11.5		9.0	11.5	
Max Q Clear Time (g_c+I1), s	3.3	18.7		3.3	13.0		7.9	8.4		9.7	7.1	
Green Ext Time (p_c), s	0.0	13.4		0.0	13.7		0.0	0.3		0.0	0.5	

Intersection Summary		
HCM 2010 Ctrl Delay		17.2
HCM 2010 LOS		B

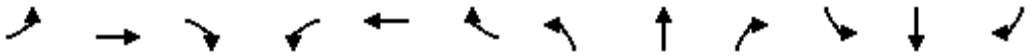
Notes



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	2	5	5	25	0	120	0	170	25	105	295	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	2	6	6	29	0	141	0	200	29	124	347	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			TWLTL	
Median storage veh)											2	
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	950	824	347	818	809	215	347			229		
vC1, stage 1 conf vol	594	594		215	215							
vC2, stage 2 conf vol	356	229		603	594							
vCu, unblocked vol	950	824	347	818	809	215	347			229		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)	6.1	5.5		6.1	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	99	99	99	93	100	83	100			91		
cM capacity (veh/h)	343	411	696	410	422	825	1212			1339		

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total	14	29	141	229	124	347
Volume Left	2	29	0	0	124	0
Volume Right	6	0	141	29	0	0
cSH	476	410	825	1212	1339	1700
Volume to Capacity	0.03	0.07	0.17	0.00	0.09	0.20
Queue Length 95th (ft)	2	6	15	0	8	0
Control Delay (s)	12.8	14.5	10.3	0.0	8.0	0.0
Lane LOS	B	B	B		A	
Approach Delay (s)	12.8	11.0		0.0	2.1	
Approach LOS	B	B				

Intersection Summary				
Average Delay	3.4			
Intersection Capacity Utilization	43.4%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	25	1	10	15	0	50	5	285	5	30	380	1
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	29	1	12	18	0	59	6	335	6	35	447	1
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								TWLTL			TWLTL	
Median storage veh)								2			2	
Upstream signal (ft)											1102	
pX, platoon unblocked												
vC, conflicting volume	924	871	448	880	869	338	448			341		
vC1, stage 1 conf vol	518	518		350	350							
vC2, stage 2 conf vol	406	353		530	519							
vCu, unblocked vol	924	871	448	880	869	338	448			341		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)	6.1	5.5		6.1	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	93	100	98	96	100	92	99			97		
cM capacity (veh/h)	416	448	611	444	452	704	1112			1218		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	42	76	6	341	35	448
Volume Left	29	18	6	0	35	0
Volume Right	12	59	0	6	0	1
cSH	458	620	1112	1700	1218	1700
Volume to Capacity	0.09	0.12	0.01	0.20	0.03	0.26
Queue Length 95th (ft)	8	10	0	0	2	0
Control Delay (s)	13.7	11.6	8.3	0.0	8.0	0.0
Lane LOS	B	B	A		A	
Approach Delay (s)	13.7	11.6	0.1		0.6	
Approach LOS	B	B				

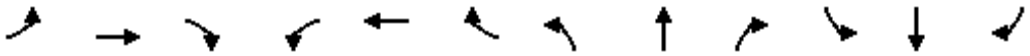
Intersection Summary				
Average Delay	1.9			
Intersection Capacity Utilization	36.7%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	65	1275	325	115	1305	305	265	175	105	265	205	95
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	193.7	186.3	193.7	186.3	186.3	193.7	186.3	186.3	186.3	186.3	186.3	186.3
Lanes	1	2	1	1	2	1	1	1	1	1	1	1
Cap, veh/h	195	1898	837	216	1959	864	347	277	234	368	277	234
Arrive On Green	0.04	0.51	0.51	0.06	0.53	0.53	0.14	0.15	0.15	0.14	0.15	0.15
Sat Flow, veh/h	1845	3725	1643	1774	3725	1644	1774	1863	1571	1774	1863	1571
Grp Volume(v), veh/h	73	1433	365	129	1466	343	298	197	118	298	230	107
Grp Sat Flow(s),veh/h/ln	1845	1863	1643	1774	1863	1644	1774	1863	1571	1774	1863	1571
Q Serve(g_s), s	2.2	36.1	16.5	3.8	36.2	14.7	16.8	11.9	8.1	16.8	14.1	7.3
Cycle Q Clear(g_c), s	2.2	36.1	16.5	3.8	36.2	14.7	16.8	11.9	8.1	16.8	14.1	7.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	195	1898	837	216	1959	864	347	277	234	368	277	234
V/C Ratio(X)	0.37	0.75	0.44	0.60	0.75	0.40	0.86	0.71	0.51	0.81	0.83	0.46
Avail Cap(c_a), veh/h	245	1898	837	235	1959	864	347	293	247	368	293	247
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.3	23.0	18.2	22.5	21.8	16.7	36.5	47.7	46.1	36.2	48.7	45.8
Incr Delay (d2), s/veh	1.2	2.8	1.6	3.6	2.7	1.4	18.9	7.4	1.7	12.7	17.2	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.0	16.5	6.6	4.0	16.4	5.9	10.8	6.3	3.3	8.8	8.2	3.0
Lane Grp Delay (d), s/veh	20.4	25.9	19.9	26.1	24.5	18.1	55.4	55.1	47.8	48.9	65.9	47.2
Lane Grp LOS	C	C	B	C	C	B	E	E	D	D	E	D
Approach Vol, veh/h		1871			1938			613			635	
Approach Delay, s/veh		24.5			23.5			53.8			54.8	
Approach LOS		C			C			D			D	

Timer												
Assigned Phs	7	4		3	8		1	6		5	2	
Phs Duration (G+Y+Rc), s	7.8	65.0		9.7	66.9		20.0	23.0		20.0	23.0	
Change Period (Y+Rc), s	4.0	6.0		4.0	6.0		4.0	6.5		4.0	6.5	
Max Green Setting (Gmax), s	7.0	59.0		7.0	59.0		16.0	17.5		16.0	17.5	
Max Q Clear Time (g_c+I1), s	4.2	38.1		5.8	38.2		18.8	13.9		18.8	16.1	
Green Ext Time (p_c), s	0.0	16.5		0.0	16.4		0.0	0.9		0.0	0.4	

Intersection Summary												
HCM 2010 Ctrl Delay			31.4									
HCM 2010 LOS			C									

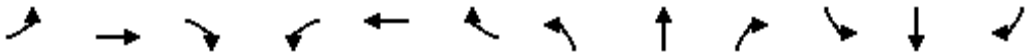
Notes



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	20	5	10	20	10	80	15	170	25	85	95	30
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	24	6	12	24	12	94	18	200	29	100	112	35
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			TWLTL	
Median storage veh)											2	
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	679	594	129	576	597	215	147			229		
vC1, stage 1 conf vol	329	329		250	250							
vC2, stage 2 conf vol	350	265		326	347							
vCu, unblocked vol	679	594	129	576	597	215	147			229		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)	6.1	5.5		6.1	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	95	99	99	96	98	89	99			93		
cM capacity (veh/h)	436	508	920	551	522	825	1435			1339		

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total	41	24	106	247	100	147
Volume Left	24	24	0	18	100	0
Volume Right	12	0	94	29	0	35
cSH	525	551	775	1435	1339	1700
Volume to Capacity	0.08	0.04	0.14	0.01	0.07	0.09
Queue Length 95th (ft)	6	3	12	1	6	0
Control Delay (s)	12.4	11.8	10.4	0.6	7.9	0.0
Lane LOS	B	B	B	A	A	
Approach Delay (s)	12.4	10.6		0.6	3.2	
Approach LOS	B	B				

Intersection Summary				
Average Delay	4.3			
Intersection Capacity Utilization	36.8%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	30	0	0	1	0	10	5	265	5	10	205	40
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	35	0	0	1	0	12	6	312	6	12	241	47
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								TWLTL			TWLTL	
Median storage veh)								2			2	
Upstream signal (ft)											1102	
pX, platoon unblocked												
vC, conflicting volume	624	618	265	591	638	315	288			318		
vC1, stage 1 conf vol	288	288		326	326							
vC2, stage 2 conf vol	335	329		265	312							
vCu, unblocked vol	624	618	265	591	638	315	288			318		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)	6.1	5.5		6.1	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	94	100	100	100	100	98	100			99		
cM capacity (veh/h)	568	551	774	592	547	726	1274			1242		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	35	13	6	318	12	288
Volume Left	35	1	6	0	12	0
Volume Right	0	12	0	6	0	47
cSH	568	711	1274	1700	1242	1700
Volume to Capacity	0.06	0.02	0.00	0.19	0.01	0.17
Queue Length 95th (ft)	5	1	0	0	1	0
Control Delay (s)	11.8	10.2	7.8	0.0	7.9	0.0
Lane LOS	B	B	A		A	
Approach Delay (s)	11.8	10.2	0.1		0.3	
Approach LOS	B	B				

Intersection Summary				
Average Delay	1.0			
Intersection Capacity Utilization	29.2%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	55	925	155	65	755	255	135	115	55	130	75	70
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.99		0.99	0.99		0.99
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	193.7	186.3	193.7	186.3	186.3	193.7	186.3	186.3	186.3	186.3	186.3	186.3
Lanes	1	2	1	1	2	1	1	1	1	1	1	1
Cap, veh/h	412	2240	989	338	2246	991	305	182	152	280	182	152
Arrive On Green	0.04	0.60	0.60	0.04	0.60	0.60	0.10	0.10	0.10	0.10	0.10	0.10
Sat Flow, veh/h	1845	3725	1644	1774	3725	1644	1774	1863	1564	1774	1863	1564
Grp Volume(v), veh/h	65	1088	182	76	795	300	142	125	65	153	88	82
Grp Sat Flow(s),veh/h/ln	1845	1863	1644	1774	1863	1644	1774	1863	1564	1774	1863	1564
Q Serve(g_s), s	1.3	17.0	5.1	1.6	11.1	9.1	7.2	6.7	4.0	7.8	4.6	5.1
Cycle Q Clear(g_c), s	1.3	17.0	5.1	1.6	11.1	9.1	7.2	6.7	4.0	7.8	4.6	5.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	412	2240	989	338	2246	991	305	182	152	280	182	152
V/C Ratio(X)	0.16	0.49	0.18	0.22	0.35	0.30	0.47	0.69	0.43	0.55	0.48	0.54
Avail Cap(c_a), veh/h	495	2240	989	414	2246	991	305	226	190	280	226	190
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	7.4	11.6	9.2	8.4	10.3	9.9	36.5	45.0	43.8	36.9	44.1	44.3
Incr Delay (d2), s/veh	0.2	0.8	0.4	0.3	0.4	0.8	1.1	6.3	1.9	2.2	2.0	2.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.5	7.2	1.9	0.6	4.6	3.5	3.3	3.5	1.6	3.7	2.3	2.1
Lane Grp Delay (d), s/veh	7.6	12.3	9.6	8.8	10.8	10.7	37.6	51.3	45.7	39.0	46.1	47.2
Lane Grp LOS	A	B	A	A	B	B	D	D	D	D	D	D
Approach Vol, veh/h		1335			1171			332			323	
Approach Delay, s/veh		11.7			10.6			44.3			43.0	
Approach LOS		B			B			D			D	

Timer												
Assigned Phs	7	4		3	8		1	6		5	2	
Phs Duration (G+Y+Rc), s	7.4	67.0		7.5	67.2		13.0	15.6		13.0	15.6	
Change Period (Y+Rc), s	4.0	6.0		4.0	6.0		4.0	6.5		4.0	6.5	
Max Green Setting (Gmax), s	8.0	61.0		8.0	61.0		9.0	11.5		9.0	11.5	
Max Q Clear Time (g_c+I1), s	3.3	19.0		3.6	13.1		9.2	8.7		9.8	7.1	
Green Ext Time (p_c), s	0.0	13.7		0.1	14.1		0.0	0.4		0.0	0.5	

Intersection Summary			
HCM 2010 Ctrl Delay		17.9	
HCM 2010 LOS		B	

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	30	10	15	25	5	120	10	170	25	105	295	20
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	35	12	18	29	6	141	12	200	29	124	347	24
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			TWLTL	
Median storage veh)											2	
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	988	859	359	856	856	215	371			229		
vC1, stage 1 conf vol	606	606		238	238							
vC2, stage 2 conf vol	382	253		618	618							
vCu, unblocked vol	988	859	359	856	856	215	371			229		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)	6.1	5.5		6.1	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	89	97	97	92	99	83	99			91		
cM capacity (veh/h)	326	401	686	380	401	825	1188			1339		

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total	65	29	147	241	124	371
Volume Left	35	29	0	12	124	0
Volume Right	18	0	141	29	0	24
cSH	396	380	792	1188	1339	1700
Volume to Capacity	0.16	0.08	0.19	0.01	0.09	0.22
Queue Length 95th (ft)	14	6	17	1	8	0
Control Delay (s)	15.8	15.3	10.6	0.5	8.0	0.0
Lane LOS	C	C	B	A	A	
Approach Delay (s)	15.8	11.4		0.5	2.0	
Approach LOS	C	B				

Intersection Summary				
Average Delay	4.2			
Intersection Capacity Utilization	52.1%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	50	1	10	15	0	50	5	310	5	30	400	25
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	59	1	12	18	0	59	6	365	6	35	471	29
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								TWLTL			TWLTL	
Median storage veh)								2			2	
Upstream signal (ft)											1102	
pX, platoon unblocked												
vC, conflicting volume	991	938	485	933	950	368	500			371		
vC1, stage 1 conf vol	556	556		379	379							
vC2, stage 2 conf vol	435	382		554	571							
vCu, unblocked vol	991	938	485	933	950	368	500			371		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)	6.1	5.5		6.1	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	85	100	98	96	100	91	99			97		
cM capacity (veh/h)	393	427	582	426	426	678	1064			1188		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	72	76	6	371	35	500
Volume Left	59	18	6	0	35	0
Volume Right	12	59	0	6	0	29
cSH	416	597	1064	1700	1188	1700
Volume to Capacity	0.17	0.13	0.01	0.22	0.03	0.29
Queue Length 95th (ft)	15	11	0	0	2	0
Control Delay (s)	15.4	11.9	8.4	0.0	8.1	0.0
Lane LOS	C	B	A		A	
Approach Delay (s)	15.4	11.9	0.1		0.5	
Approach LOS	C	B				

Intersection Summary				
Average Delay	2.2			
Intersection Capacity Utilization	41.4%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	65	1275	355	130	1305	305	295	180	120	265	210	95
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	193.7	186.3	193.7	186.3	186.3	193.7	186.3	186.3	186.3	186.3	186.3	186.3
Lanes	1	2	1	1	2	1	1	1	1	1	1	1
Cap, veh/h	195	1884	831	219	1959	864	343	281	237	364	281	237
Arrive On Green	0.04	0.51	0.51	0.06	0.53	0.53	0.14	0.15	0.15	0.14	0.15	0.15
Sat Flow, veh/h	1845	3725	1643	1774	3725	1644	1774	1863	1571	1774	1863	1571
Grp Volume(v), veh/h	73	1433	399	146	1466	343	331	202	135	298	236	107
Grp Sat Flow(s),veh/h/ln	1845	1863	1643	1774	1863	1644	1774	1863	1571	1774	1863	1571
Q Serve(g_s), s	2.2	36.7	18.8	4.3	36.5	14.8	17.0	12.3	9.5	16.9	14.6	7.4
Cycle Q Clear(g_c), s	2.2	36.7	18.8	4.3	36.5	14.8	17.0	12.3	9.5	16.9	14.6	7.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	195	1884	831	219	1959	864	343	281	237	364	281	237
V/C Ratio(X)	0.37	0.76	0.48	0.67	0.75	0.40	0.96	0.72	0.57	0.82	0.84	0.45
Avail Cap(c_a), veh/h	244	1884	831	230	1959	864	343	290	245	364	290	245
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.4	23.5	19.1	23.6	22.0	16.9	38.9	48.0	46.8	36.4	49.0	45.9
Incr Delay (d2), s/veh	1.2	3.0	2.0	6.7	2.7	1.4	38.9	8.1	2.9	13.7	18.8	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.0	16.9	7.6	4.8	16.8	6.0	3.7	6.5	3.9	9.0	8.5	3.0
Lane Grp Delay (d), s/veh	20.6	26.5	21.1	30.3	24.7	18.2	77.8	56.0	49.7	50.1	67.8	47.2
Lane Grp LOS	C	C	C	C	C	B	E	E	D	D	E	D
Approach Vol, veh/h		1905			1955			668			641	
Approach Delay, s/veh		25.1			24.0			65.6			56.1	
Approach LOS		C			C			E			E	

Timer												
Assigned Phs	7	4		3	8		1	6		5	2	
Phs Duration (G+Y+Rc), s	7.9	65.0		10.2	67.4		20.0	23.4		20.0	23.4	
Change Period (Y+Rc), s	4.0	6.0		4.0	6.0		4.0	6.5		4.0	6.5	
Max Green Setting (Gmax), s	7.0	59.0		7.0	59.0		16.0	17.5		16.0	17.5	
Max Q Clear Time (g_c+I1), s	4.2	38.7		6.3	38.5		19.0	14.3		18.9	16.6	
Green Ext Time (p_c), s	0.0	16.3		0.0	16.4		0.0	0.9		0.0	0.3	

Intersection Summary	
HCM 2010 Ctrl Delay	33.8
HCM 2010 LOS	C

Notes

Count Data Sheets

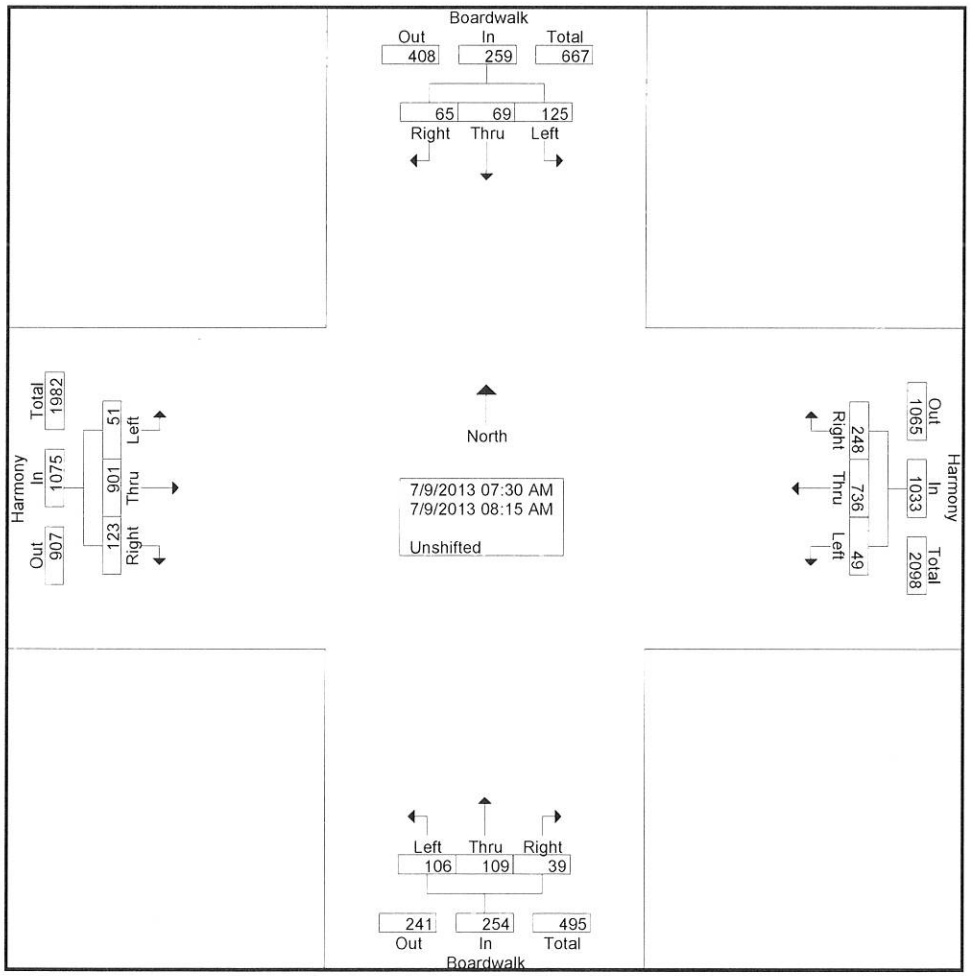
City of Fort Collins Traffic Operations
626 Linden Street, PO Box 580
Fort Collins, CO 80522-0580
Turning Movement Study

North/South Street: Boardwalk
East/West Street: Harmony
Time: AM
ICU Number: 99

File Name : Boardwalk & Harmony 7-9-13
Site Code : 00000099
Start Date : 7/9/2013
Page No : 1

Groups Printed- Unshifted

	Boardwalk Southbound				Harmony Westbound				Boardwalk Northbound				Harmony Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:30 AM	16	12	29	57	58	164	9	231	9	17	15	41	21	208	12	241	570
07:45 AM	12	22	34	68	79	210	9	298	12	36	25	73	31	267	19	317	756
Total	28	34	63	125	137	374	18	529	21	53	40	114	52	475	31	558	1326
08:00 AM	20	21	36	77	65	197	14	276	5	20	29	54	33	216	8	257	664
08:15 AM	17	14	26	57	46	165	17	228	13	36	37	86	38	210	12	260	631
Grand Total	65	69	125	259	248	736	49	1033	39	109	106	254	123	901	51	1075	2621
Apprch %	25.1	26.6	48.3		24	71.2	4.7		15.4	42.9	41.7		11.4	83.8	4.7		
Total %	2.5	2.6	4.8	9.9	9.5	28.1	1.9	39.4	1.5	4.2	4	9.7	4.7	34.4	1.9	41	



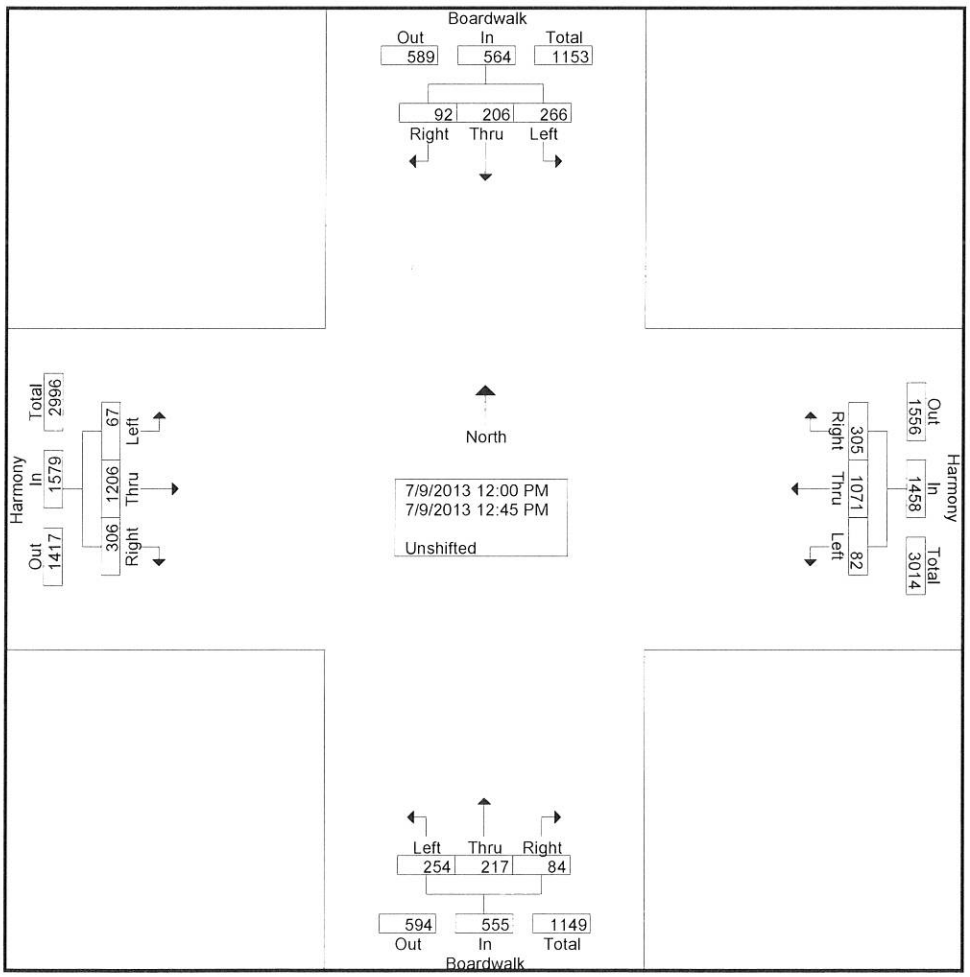
City of Fort Collins Traffic Operations
626 Linden Street, PO Box 580
Fort Collins, CO 80522-0580
Turning Movement Study

North/South Street: Boardwalk
East/West Street: Harmony
Time: NN
ICU Number: 99

File Name : Boardwalk & Harmony 7-9-13
Site Code : 00000099
Start Date : 7/9/2013
Page No : 1

Groups Printed- Unshifted

	Boardwalk Southbound				Harmony Westbound				Boardwalk Northbound				Harmony Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
12:00 PM	22	48	67	137	78	275	26	379	24	66	66	156	74	259	16	349	1021
12:15 PM	21	55	62	138	78	292	17	387	17	35	59	111	68	328	13	409	1045
12:30 PM	28	47	62	137	61	222	19	302	20	60	61	141	74	288	19	381	961
12:45 PM	21	56	75	152	88	282	20	390	23	56	68	147	90	331	19	440	1129
Total	92	206	266	564	305	1071	82	1458	84	217	254	555	306	1206	67	1579	4156
Grand Total	92	206	266	564	305	1071	82	1458	84	217	254	555	306	1206	67	1579	4156
Apprch %	16.3	36.5	47.2		20.9	73.5	5.6		15.1	39.1	45.8		19.4	76.4	4.2		
Total %	2.2	5	6.4	13.6	7.3	25.8	2	35.1	2	5.2	6.1	13.4	7.4	29	1.6	38	



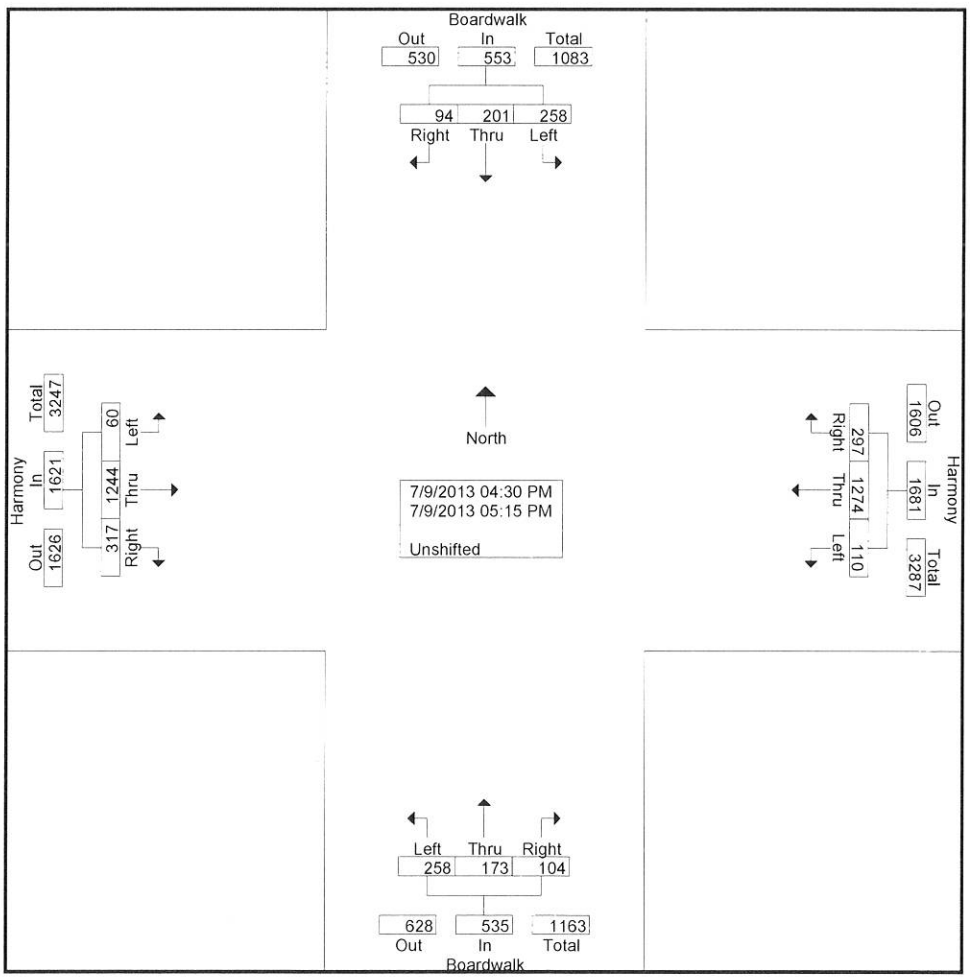
City of Fort Collins Traffic Operations
626 Linden Street, PO Box 580
Fort Collins, CO 80522-0580
Turning Movement Study

North/South Street: Boardwalk
East/West Street: Harmony
Time: PM
ICU Number: 99

File Name : Boardwalk & Harmony 7-9-13
Site Code : 00000099
Start Date : 7/9/2013
Page No : 1

Groups Printed- Unshifted

	Boardwalk Southbound				Harmony Westbound				Boardwalk Northbound				Harmony Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:30 PM	29	41	61	131	70	267	24	361	21	39	73	133	70	296	17	383	1008
04:45 PM	17	46	58	121	72	333	21	426	25	30	56	111	73	354	17	444	1102
Total	46	87	119	252	142	600	45	787	46	69	129	244	143	650	34	827	2110
05:00 PM	26	61	75	162	76	356	25	457	32	60	63	155	74	280	12	366	1140
05:15 PM	22	53	64	139	79	318	40	437	26	44	66	136	100	314	14	428	1140
Grand Total	94	201	258	553	297	1274	110	1681	104	173	258	535	317	1244	60	1621	4390
Apprch %	17	36.3	46.7		17.7	75.8	6.5		19.4	32.3	48.2		19.6	76.7	3.7		
Total %	2.1	4.6	5.9	12.6	6.8	29	2.5	38.3	2.4	3.9	5.9	12.2	7.2	28.3	1.4	36.9	

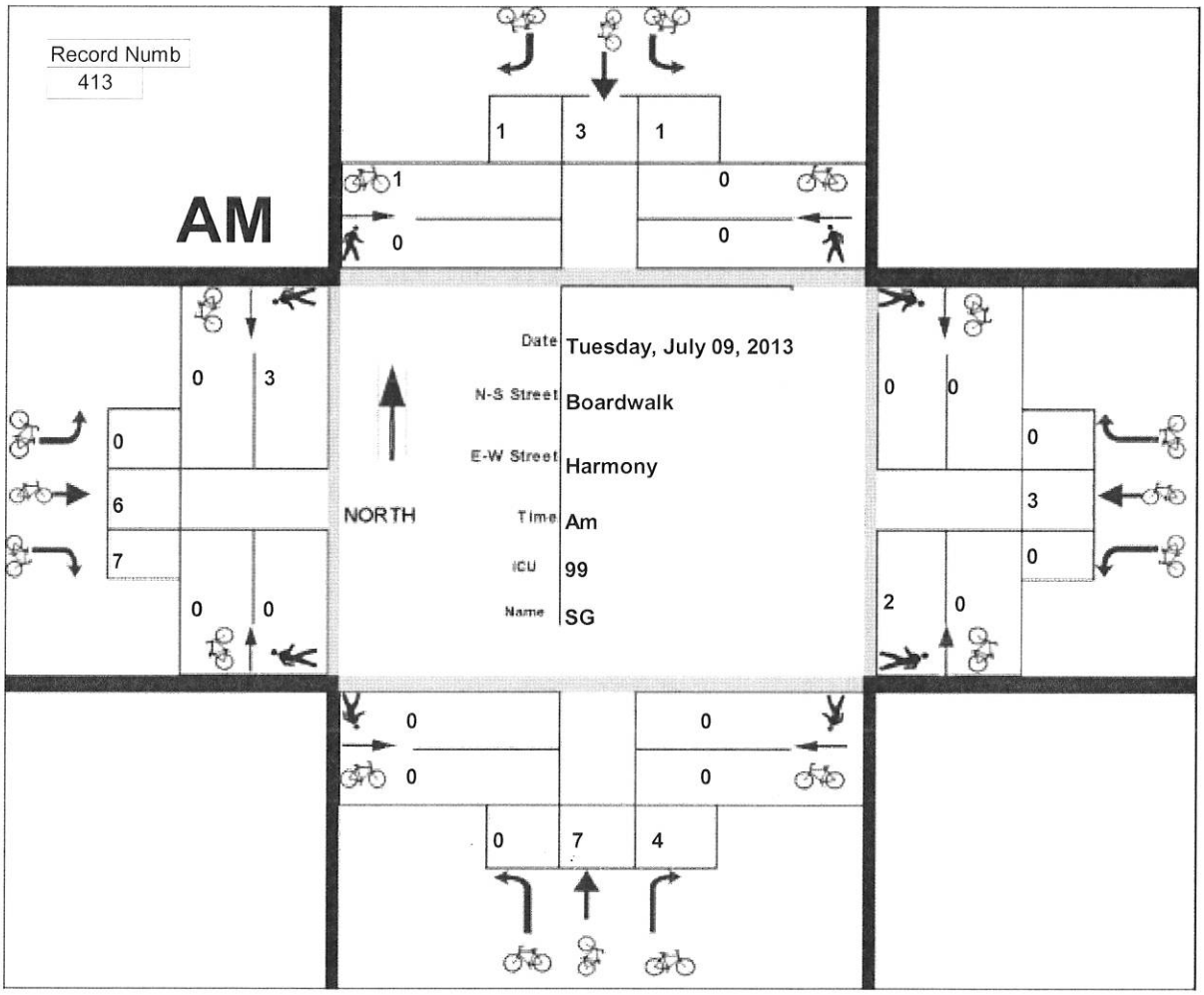


City of Fort Collins Traffic Operations
626 Linden Street, PO Box 580
Fort Collins, CO 80522-0580
Turning Movement Study

North/South Street: Boardwalk
East/West Street: Harmony
Time: PHF
ICU Number: 99

File Name : Boardwalk & Harmony 7-9-13
Site Code : 00000099
Start Date : 7/9/2013
Page No : 1

	Boardwalk Southbound				Harmony Westbound				Boardwalk Northbound				Harmony Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	16	12	29	57	58	164	9	231	9	17	15	41	21	208	12	241	570
07:45 AM	12	**22**	34	68	**79**	**210**	9	**298**	12	**36**	25	73	31	**267**	**19**	**317**	**756**
08:00 AM	**20**	21	**36**	**77**	65	197	14	276	5	20	29	54	33	216	8	257	664
08:15 AM	17	14	26	57	46	165	**17**	228	**13**	36	**37**	**86**	**38**	210	12	260	631
Total Volume	65	69	125	259	248	736	49	1033	39	109	106	254	123	901	51	1075	2621
% App. Total	25.1	26.6	48.3		24	71.2	4.7		15.4	42.9	41.7		11.4	83.8	4.7		
PHF	.813	.784	.868	.841	.785	.876	.721	.867	.750	.757	.716	.738	.809	.844	.671	.848	.867
Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 12:00 PM																	
12:00 PM	22	48	67	137	78	275	**26**	379	**24**	**66**	66	**156**	74	259	16	349	1021
12:15 PM	21	55	62	138	78	**292**	17	387	17	35	59	111	68	328	13	409	1045
12:30 PM	**28**	47	62	137	61	222	19	302	20	60	61	141	74	288	**19**	381	961
12:45 PM	21	**56**	**75**	**152**	**88**	282	20	**390**	23	56	**68**	147	**90**	**331**	19	**440**	**1129**
Total Volume	92	206	266	564	305	1071	82	1458	84	217	254	555	306	1206	67	1579	4156
% App. Total	16.3	36.5	47.2		20.9	73.5	5.6		15.1	39.1	45.8		19.4	76.4	4.2		
PHF	.821	.920	.887	.928	.866	.917	.788	.935	.875	.822	.934	.889	.850	.911	.882	.897	.920
Peak Hour Analysis From 02:00 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	**29**	41	61	131	70	267	24	361	21	39	**73**	133	70	296	**17**	383	1008
04:45 PM	17	46	58	121	72	333	21	426	25	30	56	111	73	**354**	17	**444**	1102
05:00 PM	26	**61**	**75**	**162**	76	**356**	25	**457**	**32**	**60**	63	**155**	74	280	12	366	**1140**
05:15 PM	22	53	64	139	**79**	318	**40**	437	26	44	66	136	**100**	314	14	428	1140
Total Volume	94	201	258	553	297	1274	110	1681	104	173	258	535	317	1244	60	1621	4390
% App. Total	17	36.3	46.7		17.7	75.8	6.5		19.4	32.3	48.2		19.6	76.7	3.7		
PHF	.810	.824	.860	.853	.940	.895	.688	.920	.813	.721	.884	.863	.793	.879	.882	.913	.963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N-S Street
Boardwalk
E-W Street
Harmony
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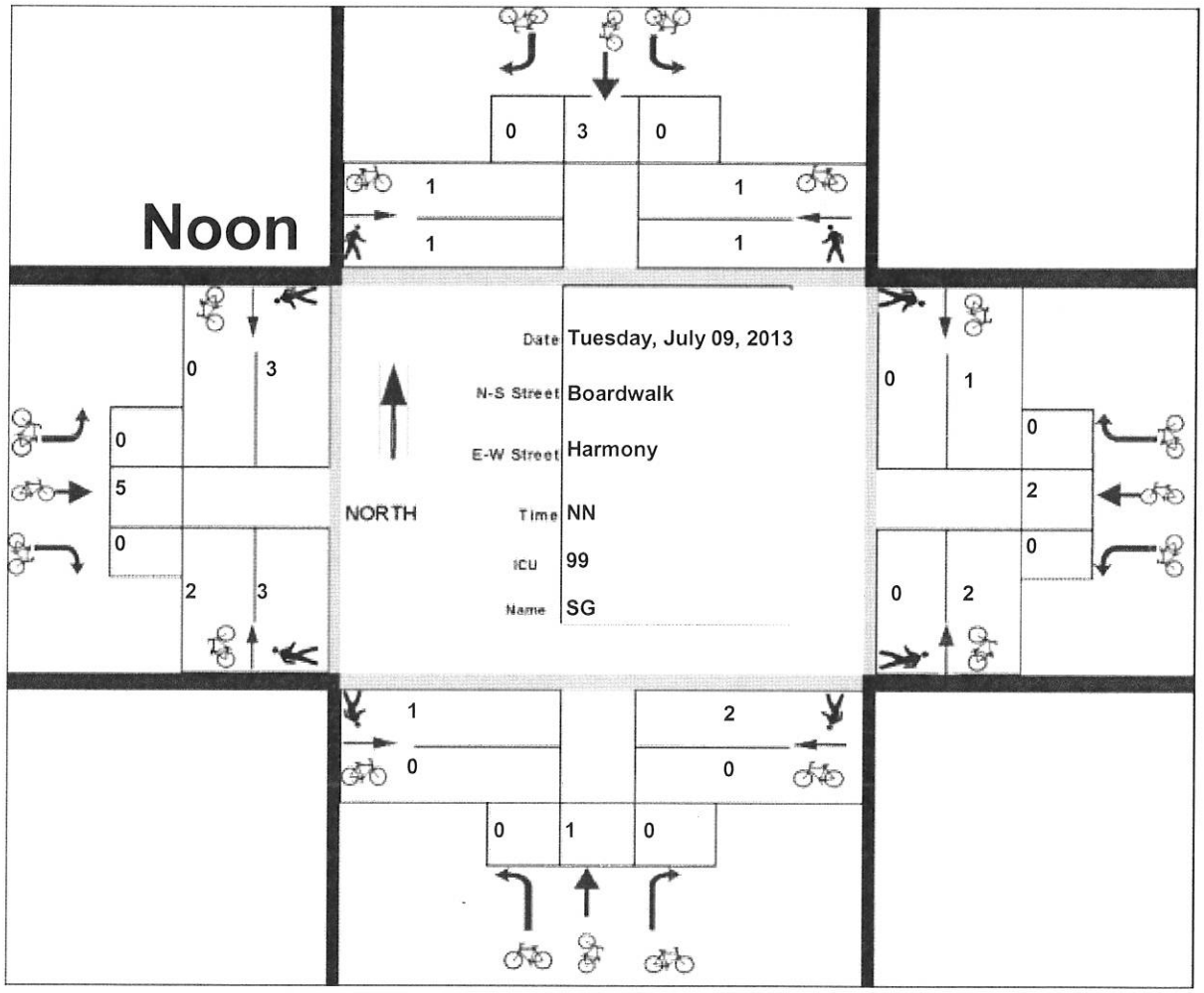
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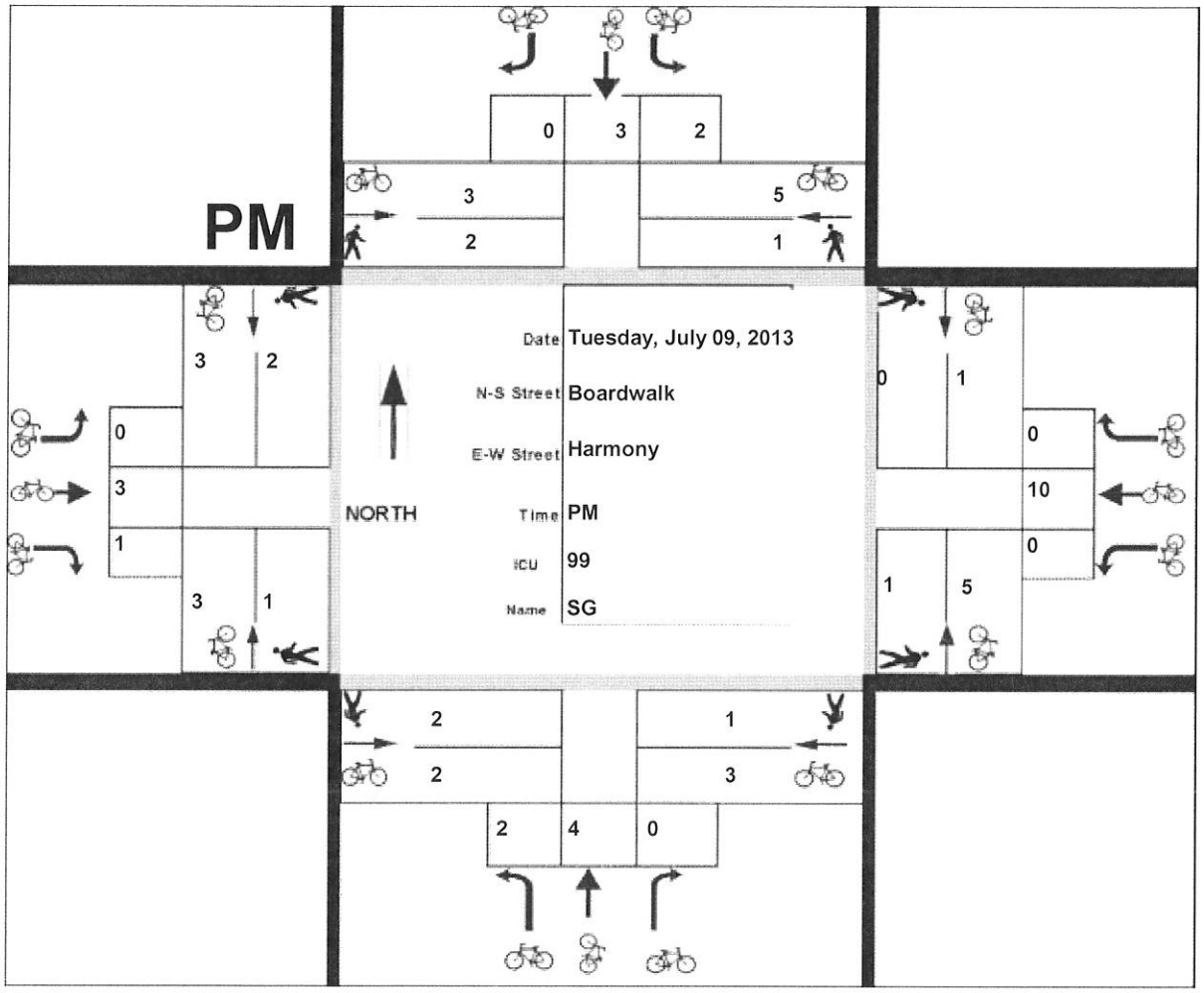
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NORTH
Date
Tuesday, July 09, 2013
N-S Street
Boardwalk
E-W Street
Harmony
Time
PM
ICU
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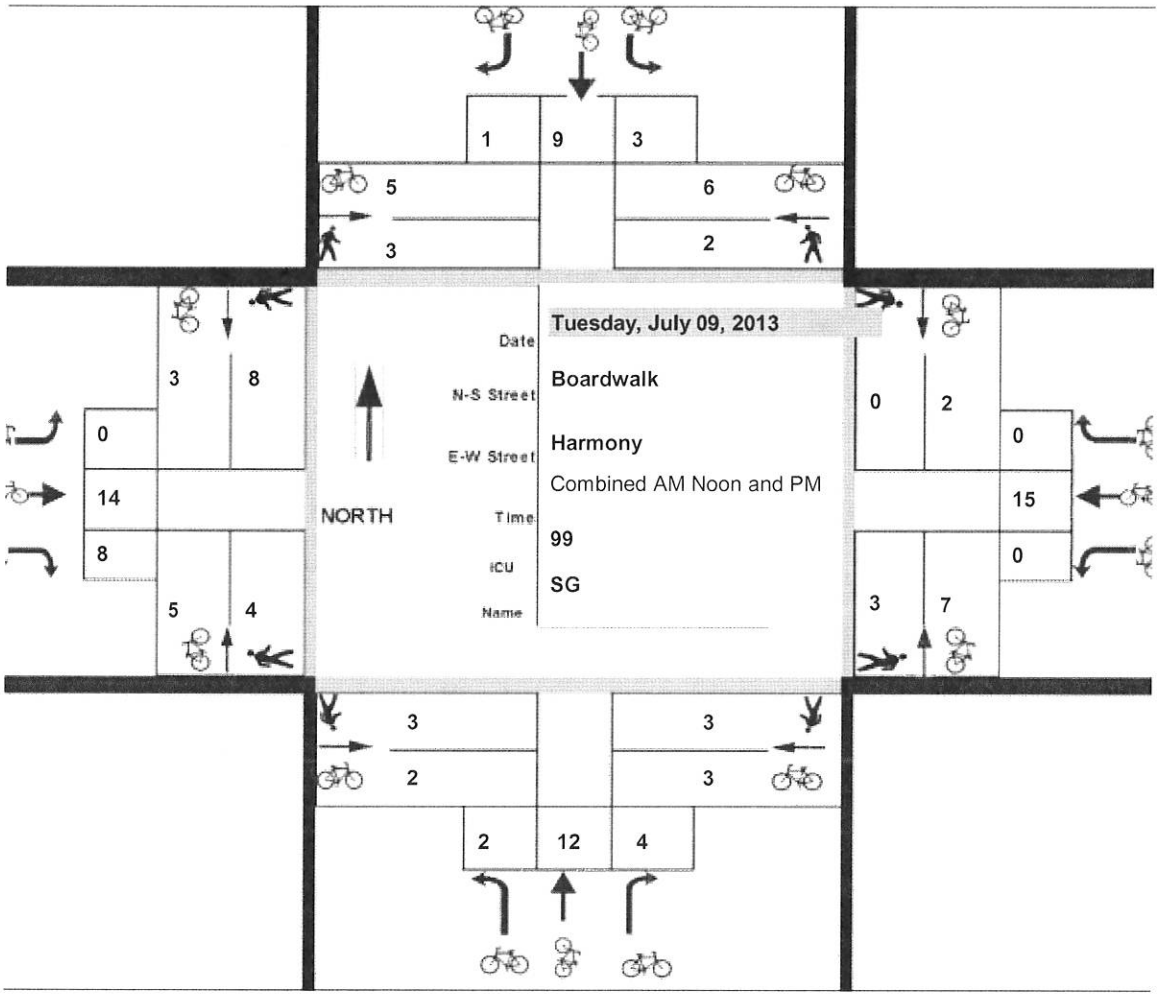
Name
SG

Combined total for AM - Noon and PM



COUNTER MEASURES INC.
1889 YORK STREET
DENVER,COLORADO 80206
303-333-7409

N/S STREET: BOARDWALK DR
E/W STREET: SAMS CLUB / MIRAMONT O-P ACC
CITY: FORT COLLINS
COUNTY: LARIMER

File Name : BROASAMS
Site Code : 00000005
Start Date : 9/17/2013
Page No : 1

Groups Printed- VEHICLES

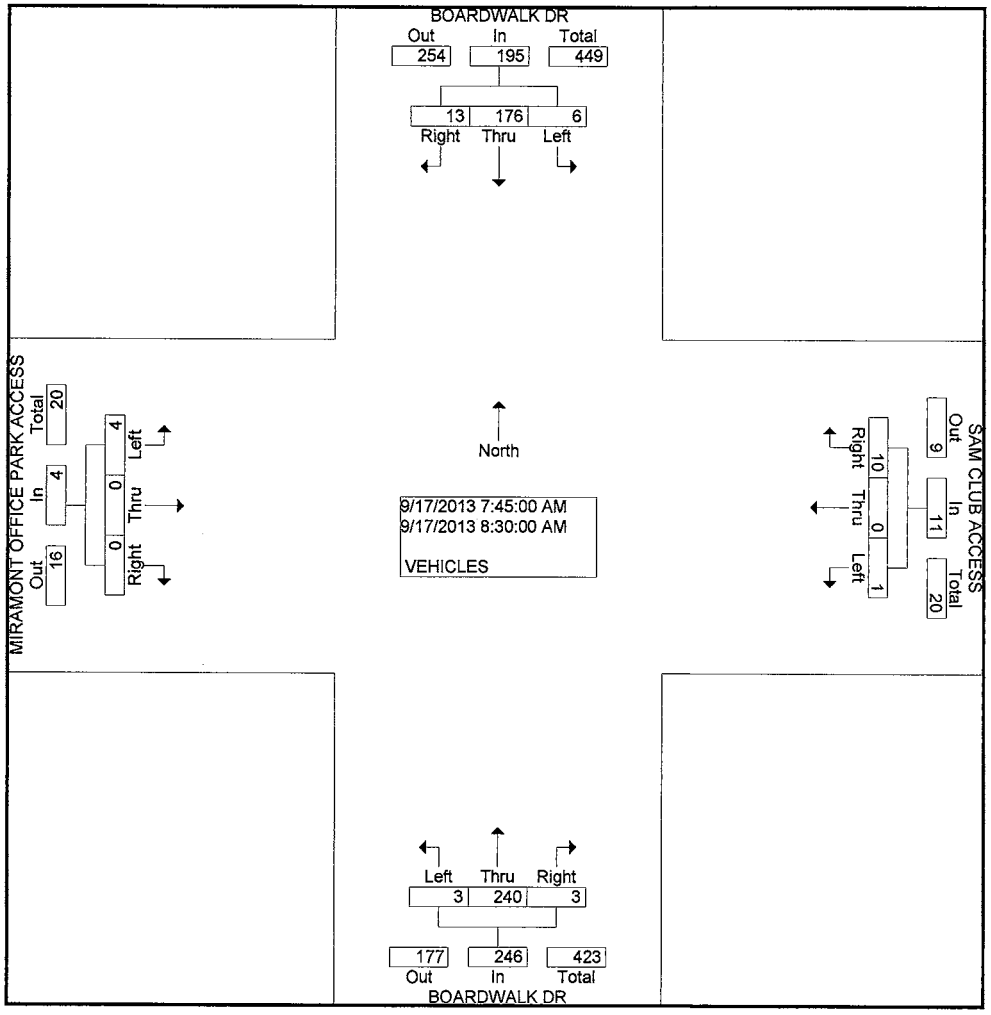
	BOARDWALK DR Southbound			SAM CLUB ACCESS Westbound			BOARDWALK DR Northbound			MIRAMONT OFFICE PARK ACCESS Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
07:00 AM	0	22	1	0	0	0	1	65	0	0	0	0	89
07:15 AM	0	25	1	0	0	0	0	55	0	0	0	0	81
07:30 AM	0	27	2	0	0	1	1	61	0	0	0	0	92
07:45 AM	1	53	6	0	0	0	1	66	0	1	0	0	128
Total	1	127	10	0	0	1	3	247	0	1	0	0	390
08:00 AM	2	37	4	0	0	2	0	61	0	2	0	0	108
08:15 AM	1	43	1	0	0	2	0	57	0	0	0	0	104
08:30 AM	2	43	2	1	0	6	2	56	3	1	0	0	116
08:45 AM	6	43	1	3	0	0	1	62	1	4	0	1	122
Total	11	166	8	4	0	10	3	236	4	7	0	1	450
04:00 PM	10	62	3	5	0	15	0	51	4	17	0	4	171
04:15 PM	6	64	1	2	0	16	0	61	1	4	0	2	157
04:30 PM	9	58	2	2	0	15	0	62	2	3	0	2	155
04:45 PM	12	81	2	5	0	11	2	63	5	4	0	1	186
Total	37	265	8	14	0	57	2	237	12	28	0	9	669
05:00 PM	4	86	0	2	0	10	1	61	1	13	1	4	183
05:15 PM	11	102	0	1	0	11	0	66	1	2	0	3	197
05:30 PM	5	102	0	2	0	11	1	79	3	7	0	0	210
05:45 PM	9	81	1	6	0	15	3	70	0	1	0	2	188
Total	29	371	1	11	0	47	5	276	5	23	1	9	778
Grand Total	78	929	27	29	0	115	13	996	21	59	1	19	2287
Apprch %	7.5	89.8	2.6	20.1	0.0	79.9	1.3	96.7	2.0	74.7	1.3	24.1	
Total %	3.4	40.6	1.2	1.3	0.0	5.0	0.6	43.6	0.9	2.6	0.0	0.8	

COUNTER MEASURES INC.
1889 YORK STREET
DENVER,COLORADO 80206
303-333-7409

N/S STREET: BOARDWALK DR
E/W STREET: SAMS CLUB / MIRAMONT O-P ACC
CITY: FORT COLLINS
COUNTY: LARIMER

File Name : BROASAMS
Site Code : 00000005
Start Date : 9/17/2013

	BOARDWALK DR Southbound				SAM CLUB ACCESS Westbound				BOARDWALK DR Northbound				MIRAMONT OFFICE PARK ACCESS Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour From 07:00 AM to 09:00 AM - Peak 1 of 1																	
Intersection 07:45 AM																	
Volume	6	176	13	195	1	0	10	11	3	240	3	246	4	0	0	4	456
Percent	3.1	90.3	6.7		9.1	0.0	90.9		1.2	97.6	1.2		100.0	0.0	0.0		
07:45 Volume	1	53	6	60	0	0	0	0	1	66	0	67	1	0	0	1	128
Peak Factor																	0.891
High Int. 07:45 AM					08:30 AM				07:45 AM				08:00 AM				
Volume	1	53	6	60	1	0	6	7	1	66	0	67	2	0	0	2	
Peak Factor				0.813				0.393				0.918				0.500	

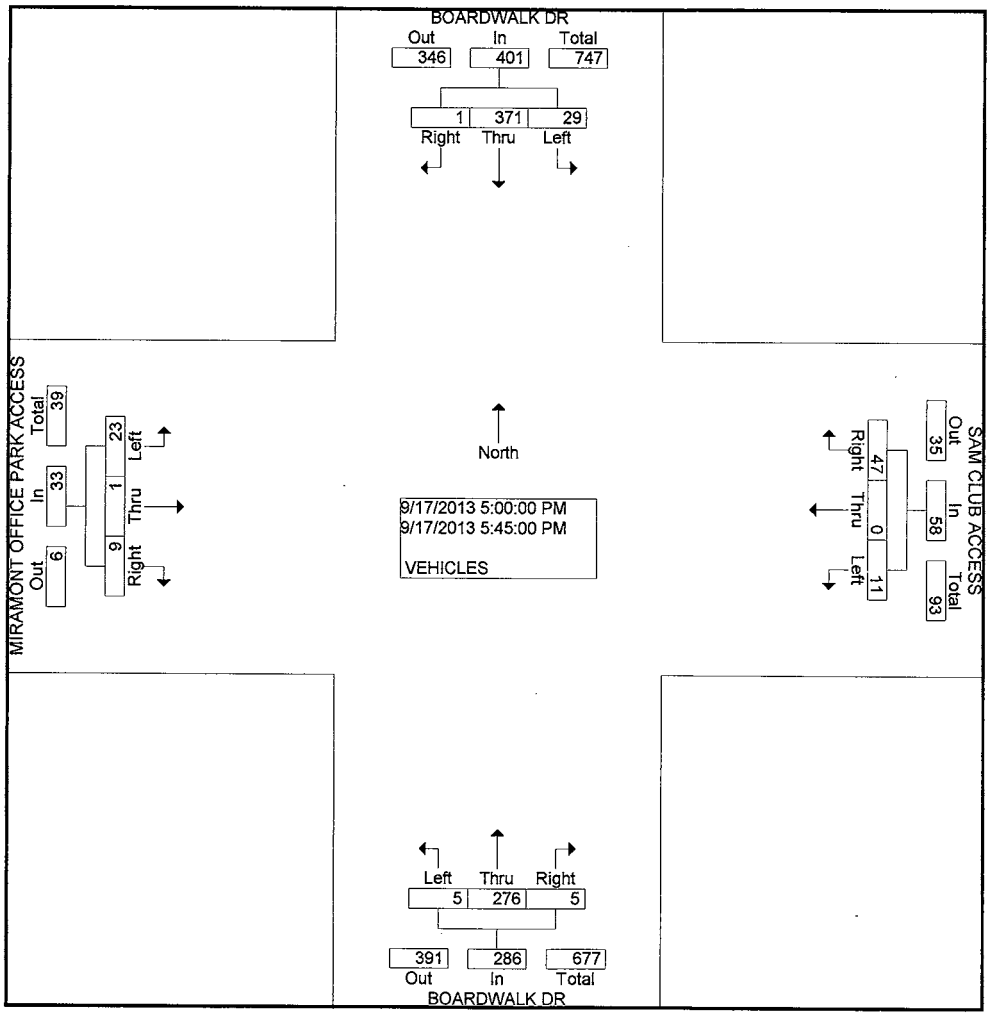


COUNTER MEASURES INC.
1889 YORK STREET
DENVER,COLORADO 80206
303-333-7409

N/S STREET: BOARDWALK DR
E/W STREET: SAMS CLUB / MIRAMONT O-P ACC
CITY: FORT COLLINS
COUNTY: LARIMER

File Name : BROASAMS
Site Code : 00000005
Start Date : 9/17/2013
Page No : 2

	BOARDWALK DR Southbound				SAM CLUB ACCESS Westbound				BOARDWALK DR Northbound				MIRAMONT OFFICE PARK ACCESS Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Intersection 05:00 PM																	
Volume	29	371	1	401	11	0	47	58	5	276	5	286	23	1	9	33	778
Percent	7.2	92.5	0.2		19.0	0.0	81.0		1.7	96.5	1.7		69.7	3.0	27.3		
05:30 Volume	5	102	0	107	2	0	11	13	1	79	3	83	7	0	0	7	210
Peak Factor																	0.926
High Int.	05:15 PM				05:45 PM				05:30 PM				05:00 PM				
Volume	11	102	0	113	6	0	15	21	1	79	3	83	13	1	4	18	
Peak Factor				0.887				0.690				0.861				0.458	



COUNTER MEASURES INC.
1889 YORK STREET
DENVER,COLORADO 80206
303-333-7409

N/S STREET: BROADWAY DR
E/W STREET: OAKRIDGE DR
CITY: FORT COLLINS
COUNTY: LARIMER

File Name : BROAOAKR
Site Code : 00000010
Start Date : 9/17/2013
Page No : 1

Groups Printed- VEHICLES

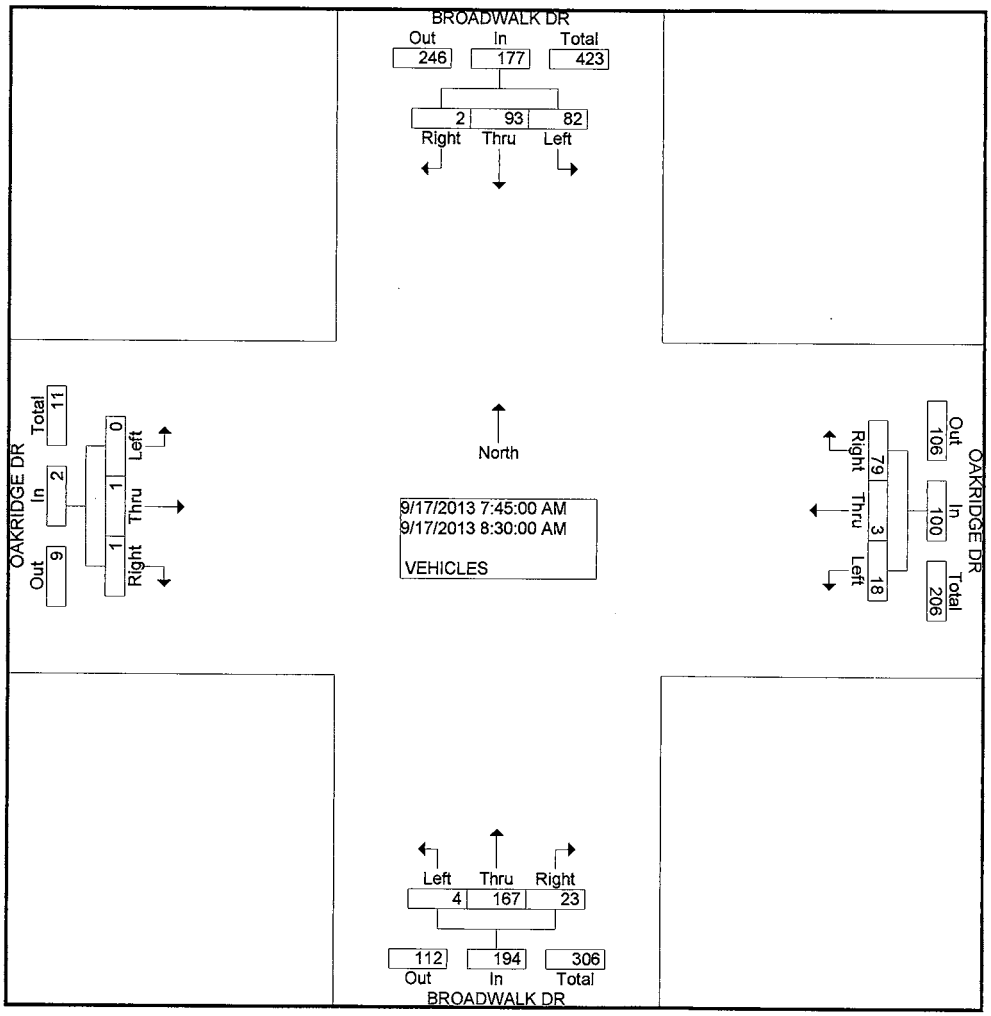
	BROADWALK DR Southbound			OAKRIDGE DR Westbound			BROADWALK DR Northbound			OAKRIDGE DR Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
07:00 AM	13	8	1	2	0	9	0	57	3	0	0	0	93
07:15 AM	14	11	0	1	0	12	0	43	3	0	0	0	84
07:30 AM	15	12	0	3	0	19	0	43	5	0	0	0	97
07:45 AM	23	28	2	3	2	20	3	47	6	0	0	0	134
Total	65	59	3	9	2	60	3	190	17	0	0	0	408
08:00 AM	16	21	0	2	1	21	1	40	2	0	0	0	104
08:15 AM	23	20	0	7	0	17	0	40	7	0	0	0	114
08:30 AM	20	24	0	6	0	21	0	40	8	0	1	1	121
08:45 AM	24	23	0	1	0	15	2	49	9	0	0	0	123
Total	83	88	0	16	1	74	3	169	26	0	1	1	462
04:00 PM	22	49	0	9	0	16	2	38	8	1	0	2	147
04:15 PM	20	48	0	11	0	25	0	37	4	0	0	2	147
04:30 PM	19	43	0	13	0	25	0	38	3	1	1	0	143
04:45 PM	20	67	0	10	0	27	0	43	5	0	0	1	173
Total	81	207	0	43	0	93	2	156	20	2	1	5	610
05:00 PM	19	73	0	7	0	29	0	32	8	2	3	3	176
05:15 PM	25	81	0	5	0	24	0	43	6	0	0	0	184
05:30 PM	32	72	0	6	0	34	0	49	8	0	0	0	201
05:45 PM	27	62	0	7	0	31	0	42	4	0	0	0	173
Total	103	288	0	25	0	118	0	166	26	2	3	3	734
Grand Total	332	642	3	93	3	345	8	681	89	4	5	9	2214
Apprch %	34.0	65.7	0.3	21.1	0.7	78.2	1.0	87.5	11.4	22.2	27.8	50.0	
Total %	15.0	29.0	0.1	4.2	0.1	15.6	0.4	30.8	4.0	0.2	0.2	0.4	

COUNTER MEASURES INC.
1889 YORK STREET
DENVER,COLORADO 80206
303-333-7409

N/S STREET: BROADWAY DR
E/W STREET: OAKRIDGE DR
CITY: FORT COLLINS
COUNTY: LARIMER

File Name : BROAOAKR
Site Code : 00000010
Start Date : 9/17/2013
Page No : 2

	BROADWALK DR Southbound				OAKRIDGE DR Westbound				BROADWALK DR Northbound				OAKRIDGE DR Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour From 07:00 AM to 09:00 AM - Peak 1 of 1																	
Intersection 07:45 AM																	
Volume	82	93	2	177	18	3	79	100	4	167	23	194	0	1	1	2	473
Percent	46.3	52.5	1.1		18.0	3.0	79.0		2.1	86.1	11.9		0.0	50.0	50.0		
07:45 Volume	23	28	2	53	3	2	20	25	3	47	6	56	0	0	0	0	134
Peak Factor																	0.882
High Int. 07:45 AM					08:30 AM				07:45 AM				08:30 AM				
Volume	23	28	2	53	6	0	21	27	3	47	6	56	0	1	1	2	
Peak Factor				0.835				0.926				0.866				0.250	



COUNTER MEASURES INC.
1889 YORK STREET
DENVER,COLORADO 80206
303-333-7409

N/S STREET: BROADWAY DR
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File Name : BROAOAKR
Site Code : 00000010
Start Date : 9/17/2013
Page No : 2

	BROADWALK DR Southbound				OAKRIDGE DR Westbound				BROADWALK DR Northbound				OAKRIDGE DR Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Intersection 05:00 PM																	
Volume	103	288	0	391	25	0	118	143	0	166	26	192	2	3	3	8	734
Percent	26.3	73.7	0.0		17.5	0.0	82.5		0.0	86.5	13.5		25.0	37.5	37.5		
05:30 Volume	32	72	0	104	6	0	34	40	0	49	8	57	0	0	0	0	201
Peak Factor																	0.913
High Int.	05:15 PM				05:30 PM				05:30 PM				05:00 PM				
Volume	25	81	0	106	6	0	34	40	0	49	8	57	2	3	3	8	
Peak Factor				0.922				0.894				0.842				0.250