MEETING DATE March 2nd, 2017

STAFF Clay Frickey

ADMINISTRATIVE HEARING

STAFF REPORT

PROJECT: Ziegler Townhomes, FDP160043

APPLICANT: Cathy Mathis
TB Group
444 Mountain Ave.
Berthoud, CO 80513

OWNERS: Manhattan Land Company, LLC
772 Whalers Way
Fort Collins, CO 80525

PROJECT DESCRIPTION:
This is a request for Project Development Plan/ Final Plan to create a for-sale, single family attached townhome project. There are 6 buildings proposed, with a total of 36 units. All of the units have 3 bedrooms. The buildings will be two stories in height and will contain from four to seven units per building. The overall density of the project will be 8.93 dwelling units per acre. The site is located on 4.029 acres and zoned (LMN) Low Density Mixed-Use Neighborhood.

RECOMMENDATION: Staff recommends approval of Ziegler Townhomes, FDP160036.

EXECUTIVE SUMMARY:
Staff finds the proposed Ziegler Townhomes combined Project Development Plan/Final Plan complies with the applicable requirements of the City of Fort Collins Land Use Code (LUC), more specifically:

- The Project Development Plan complies with the process located in Division 2.2 – Common Development Review Procedures for Development Applications of Article 2 – Administration.

- The Modification of Standard to Section 3.5.2(D)(1) that is proposed with this Project Development Plan meets the applicable requirements of Section 2.8.2(H), in that the granting of the Modification would not be detrimental to the

public good and that by reason of exceptional physical conditions or other extraordinary and exceptional situations, unique to such property, the strict application of the standard sought to be modified would result in unusual and exceptional practical difficulties.

- The Modification of Standard to Section 3.5.2(D)(2) that is proposed with this Project Development Plan meets the applicable requirements of Section 2.8.2(H), in that the granting of the Modification would not be detrimental to the public good and the proposal submitted is equal to a compliant plan.

- The Modification of Standard to Section 3.5.2(E)(2) that is proposed with this Project Development Plan meets the applicable requirements of Section 2.8.2(H), in that the granting of the Modification would not be detrimental to the public good and the proposal submitted is equal to a compliant plan.

- The Project Development Plan complies with relevant standards of Article 3 – General Development Standards, if the Modification of Standard to Sections 3.5.2(D)(1), 3.5.2(D)(2), and 3.5.2(E)(2) are approved.

- The Project Development Plan complies with relevant standards located in Division 4.5 Low Density Mixed-Use Neighborhood (LMN) of Article 4 – Districts.

COMMENTS:

1. Background

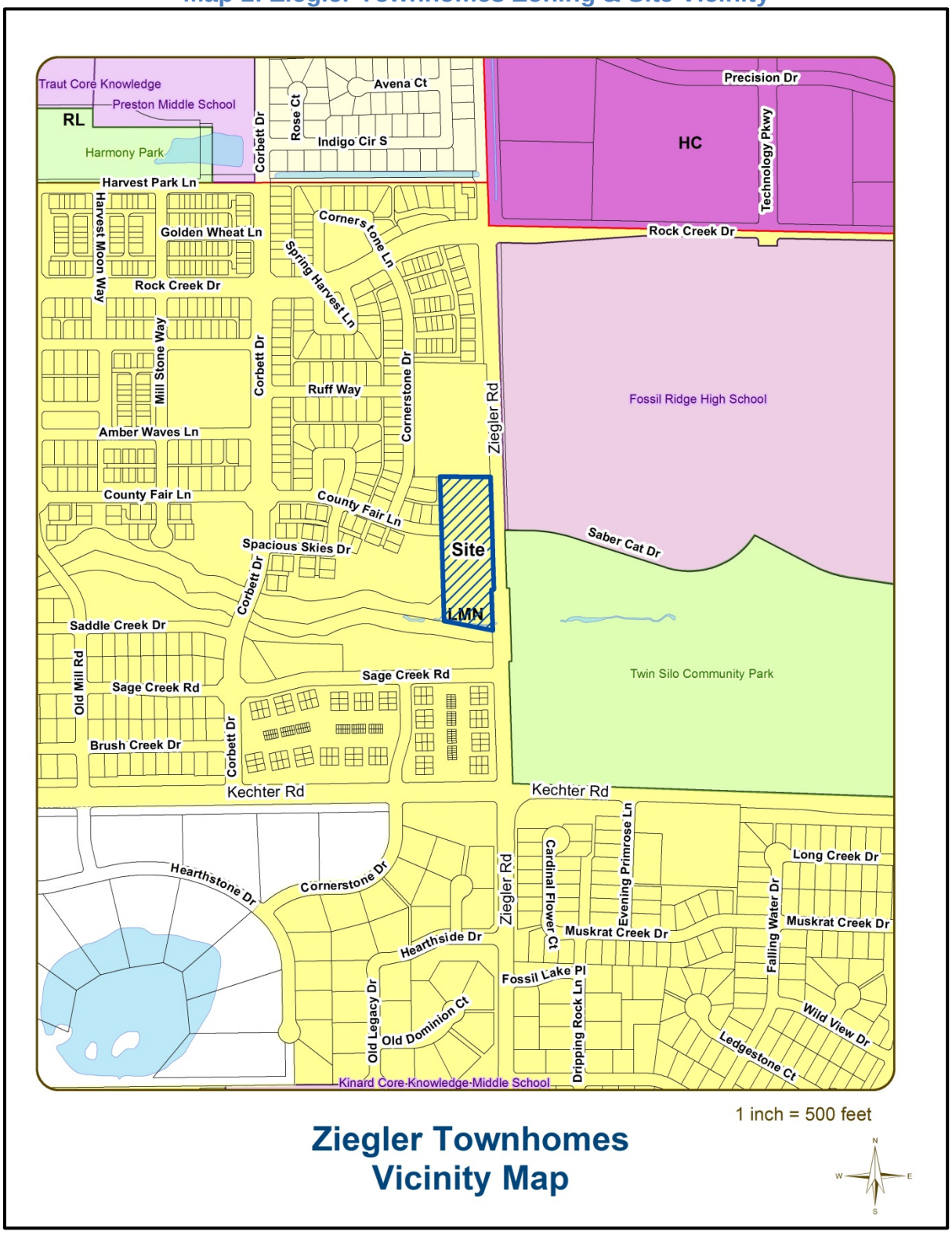
The property was incorporated into the City of Fort Collins as a part of the Weiner Enclave Annexation on March 6, 2007. A previous PDP application for this site was approved and made it to the Final Plan stage but was never recorded. This expired plan called for 22 dwelling units in four buildings on the southwest corner of County Fair Lane and Ziegler Road.

The surrounding zoning and land uses are as follows:

Direction	Zone District	Existing Land Uses
North	Low Density Mixed-Use Neighborhood (LMN)	Residential
South	Low Density Mixed-Use Neighborhood (LMN)	Residential
East	Public Open Lands (POL)	High school, community park
West	Low Density Mixed-Use Neighborhood (LMN)	Residential

Below is a zoning and site vicinity map.

Map 1: Ziegler Townhomes Zoning & Site Vicinity



2. <u>Compliance with Section 2.8.2(H) of the Land Use Code - Modification of Standards</u>

Modification #1 Description:
The applicant requests a Modification to Section *3.5.2(D)(1) – Relationships of Dwellings to Streets and Parking* to have a unit with a primary entrance more than 200 feet away from the nearest street sidewalk.

Land Use Code Standard Proposed to be Modified (areas underlined and bolded for emphasis):

> *(1) Orientation to a Connecting Walkway. Every front facade with a primary entrance to a dwelling unit shall face the adjacent street to the extent reasonably feasible.* ***<u>Every front facade with a primary entrance to a dwelling unit shall face a connecting walkway with no primary entrance more than two hundred (200) feet from a street sidewalk.</u>***

Land Use Code Modification Criteria:

"The decision maker may grant a modification of standards only if it finds that the granting of the modification would not be detrimental to the public good, and that:

(1) the plan as submitted will promote the general purpose of the standard for which the modification is requested equally well or better than would a plan which complies with the standard for which a modification is requested; or

(2) the granting of a modification from the strict application of any standard would, without impairing the intent and purpose of this Land Use Code, substantially alleviate an existing, defined and described problem of city-wide concern or would result in a substantial benefit to the city by reason of the fact that the proposed project would substantially address an important community need specifically and expressly defined and described in the city's Comprehensive Plan or in an adopted policy, ordinance or resolution of the City Council, and the strict application of such a standard would render the project practically infeasible; or

(3) by reason of exceptional physical conditions or other extraordinary and exceptional situations, unique to such property, including, but not limited to, physical conditions such as exceptional narrowness, shallowness or topography, or physical conditions which hinder the owner's ability to install a solar energy system, the strict application of the standard sought to be modified would result in unusual and exceptional practical difficulties, or exceptional or undue hardship

upon the owner of such property, provided that such difficulties or hardship are not caused by the act or omission of the applicant; or

(4) the plan as submitted will not diverge from the standards of the Land Use Code that are authorized by this Division to be modified except in a nominal, inconsequential way when considered from the perspective of the entire development plan, and will continue to advance the purposes of the Land Use Code as contained in Section 1.2.2.

Any finding made under subparagraph (1), (2), (3) or (4) above shall be supported by specific findings showing how the plan, as submitted, meets the requirements and criteria of said subparagraph (1), (2), (3) or (4).

Summary of Applicant's Justification:
The applicant requests that the Modification be approved and provides the following justification based upon Criterion 1 (proposal submitted is equal to or better than a compliant plan) and Criterion 3 (physical hardship):

Summary of Applicant's Justification to Modification #1:

- *To meet the standard, the development would have to put a street through the middle of the site, which is impractical.*
- *Each building faces a connecting walkway and there are numerous routes to the sidewalk through the development.*
- *The modification is minor from the perspective of the overall development.*
- *The buildings exceed the standards of 3.5.2.*
- *This development will greatly improve the vacant site.*

Staff Finding:

Staff finds that the request for a Modification of Standard to Section 3.5.2(D)(1) is justified by the applicable standards in 2.8.2(H)(3).

A. The granting of the Modification would not be detrimental to the public good
B. The project design satisfies 2.8.2(H)(3): *by reason of exceptional physical conditions or other extraordinary and exceptional situations, unique to such property, the strict application of the standard sought to be modified would result in unusual and exceptional practical difficulties.*

A compliant plan would require a street to run north-south through the site with buildings oriented to face this street. Building such a street is impractical given the size and shape of the site.

The site in question is long and narrow with limited options to provide vehicular access to the site. While the site has 701 feet of frontage on Ziegler Rd., 470 feet of this frontage is located south of the intersection of County Fair Ln. and Ziegler Rd. The minimum access spacing requirements along a two-lane arterial street is 460 feet per the Larimer County Urban Area Street Standards (LCUASS). That would mean an access point for this site could be allowed on Ziegler Rd., but this access point would be in the natural habitat buffer zone. Due to this physical constraint, the access for both portions of the site must come from County Fair Ln.

A local street that meets LCUASS requires 51 feet of right-of-way. The width of the parcel is approximately 216 feet. That means a local street would encumber 23.6% of the site. After factoring in 15-foot setbacks on either side of the right-of-way, this local street would essentially encumber 37.5% of the site. This would result in small buildable lots that would not continue the pattern of development established in Harvest Park and Sage Creek.

The proposed plan meets the code for all but the three most southerly units in Building E. The unit furthest away is a 281-foot walk to the public sidewalk on County Fair Ln. The walkway leading from the unit to County Fair Ln. is direct and continuous and so it meets the intent of the Code. By meeting the intent of the code section, staff finds that the strict application of this section would result in impractical difficulties due to the orientation of the site.

Modification #2 Description:
The applicant requests a Modification to Section *3.5.2(D)(2) – Street Facing Façades* to have buildings setback closer than 15 feet away from the right-of-way.

Land Use Code Standard Proposed to be Modified:

Land Use Code 3.5.2(D)(2):

Street-Facing Facades. Every building containing four (4) or more dwelling units shall have at least one (1) building entry or doorway facing any adjacent street that is smaller than a full arterial or has on-street parking.

Summary of Applicant's Justification:
The applicant requests that the Modification be approved and provides the following justification based upon Criterion 1 (proposal is equal to or better than a compliant plan):

Summary of Applicant's Justification for Modification #2:

- *The standard requires buildings to have street-facing doorways along County Fair Lane. To meet the standard, the buildings would have to be moved north and south. Neither is feasible due to the potential negative impacts of disturbing the wetlands and the natural habitat buffer zone on the south and the infeasibility of locating the buildings to the north due to several existing trees.*
- *The purpose of the standard for which the modification is sought is to "promote variety, visual interest and pedestrian-oriented streets in residential development." The proposed plan in which the buildings do not have street-facing doorways promotes such purpose equally well or better for the following reasons:*
    - *The modification is minor and only affects the four buildings along the north and south sides of County Fair Lane.*
    - *The proposed alternative plan continues to improve the design, quality and character of new development by exceeding the building standards set forth in Section 3.5. The use of high quality residential building materials, building articulation, projections and recesses, along with pitched roof elements ensures sensitivity to and compatibility with the surrounding neighborhood.*
    - *The street-facing sides of the buildings contain enhanced landscaping with shrubs and ornamental grasses in combination with upright evergreen plantings to break up the mass of the buildings.*
    - *In addition, the wall-mounted meters will be screend with walls and ornamental grasses.*

Staff Finding:

Staff finds that the request for a Modification of Standard to section 3.5.2(D)(2) is justified by the applicable standards in 2.8.2(H)(1).

A. The granting of the Modification would not be detrimental to the public good
B. The project design satisfies 2.8.2(H)(1): *the plan as submitted will promote the general purpose of the standard for which the modification is requested equally well or better than would a plan which complies with the standard for which a modification is requested.*

The purpose of the street facing façade standard is to prevent the sides of buildings dominating the streetscape. Sides of buildings do not promote the same level of pedestrian activity or visual interest than front facades that typically

have a greater number of windows and doorways, and richer architectural features and materials. By having buildings front on streets, new developments support the town-like pattern envisioned by City Plan.

The code would require all of the front doors for buildings A, F, and E to front on to County Fair Lane. This would extend the existing pattern of homes fronting on streets established in Harvest Park to the west. Instead, the proposed plan shows three buildings with front doors oriented to Ziegler Rd. with the remaining three buildings with front doors oriented to a common green space. The principal concern for this development is how pedestrians will experience walking along County Fair Ln. into and out of Harvest Park. For pedestrians coming from the neighborhood or Ziegler Rd., the first things they will see are the front porches and picket fenced yards of the proposed townhomes. This promotes the purpose of this standard by highlighting the entries to the buildings. To further enhance the sides of the buildings, the architecture provides windows and changes in materials to add interest to the building from the street. The landscaping will also screen areas of low interest on the sides of the building to further enhance the presence of the development. For these reasons, staff finds the proposed plan is equal to a compliant plan.

Modification #3 Description:
The applicant requests a Modification to Section *3.5.2(E)(2) – Residential Building Setbacks, Lot Width and Size* to have buildings setback closer than 15 feet away from the right-of-way.

Land Use Code Standard Proposed to be Modified (areas underlined and bolded for emphasis):

Land Use Code 3.5.2(E)(2):

> *(2) Setback from Nonarterial Streets.* ***The minimum setback of every residential building and of every detached accessory building that is incidental to the residential building shall be fifteen (15) feet from any public street right-of-way other than an arterial street right-of-way****, except for those buildings regulated by Section 3.8.30 of this Code, which buildings must comply with the setback regulations set forth in Section 3.8.30. Setbacks from garage doors to the nearest portion of any public sidewalk that intersects with the driveway shall be at least twenty (20) feet.*

Summary of Applicant's Justification:

The applicant requests that the Modification be approved and provides the following justification based upon Criterion 1 (proposal is equal to or better than a compliant plan):

Summary of Applicant's Justification for Modification #3:

- *A lesser setback allows the buildings to be further out of the natural habitat buffer zone.*
- *The development meets the intent of the standard to promote variety, visual interest and pedestrian-oriented streets in residential developments.*
- *The modification is minor when considered from the perspective of the entire development plan.*
- *The building exceeds the requirements of section 3.5.2.*
- *The project is designed to reflect the characteristics of the existing, established residential neighborhood.*
- *The visual impact of the building will be reduced by the proposed landscaping.*
- *This development will greatly improve the vacant lot.*

Staff Finding:

Staff finds that the request for a Modification of Standard to section 3.5.2(E)(2) is justified by the applicable standards in 2.8.2(H)(1).

C. The granting of the Modification would not be detrimental to the public good
D. The project design satisfies 2.8.2(H)(1): *the plan as submitted will promote the general purpose of the standard for which the modification is requested equally well or better than would a plan which complies with the standard for which a modification is requested.*

The applicant is requesting relief to the setback standards for one entire building and the portion of another. Building F is proposed to be setback 10.4 feet from the back of the sidewalk. Portions of Building C are proposed to be as close as 9.5 feet to the back of the sidewalk, widening out to 20 feet near the intersection of Ziegler Rd. and County Fair Ln. This plan could comply by locating the buildings on the south side of County Fair Ln. further back to accommodate these setbacks. This would push the buildings further into the natural habitat buffer zone, however. To mitigate for encroaching into the setback, the applicant proposes enhanced landscaping to visually soften the presence of the buildings. The applicant also proposes a deeper setback on the north side of County Fair Ln. to provide further mitigation. Staff finds the enhanced landscaping and

deeper setback on the north side of County Fair Ln. makes the proposed plan equal to a compliant plan.

3. <u>Compliance with Article 3 of the Land Use Code – General Development Standards:</u>

The project complies with all applicable General Development Standards as follows:

A. *Section 3.2.1(D) – Tree Planting Standards*

All developments must establish groves and belts of trees along all public streets, in and around parking lots, and in landscape areas within 50' of buildings. Ziegler Townhomes proposes street trees planted at 40' intervals in accordance with City standards, trees planted in clusters on the western property line, and full tree stocking around each building.

B. *Section 3.2.1(D)(3) – Minimum Species Diversity*

When a development proposes more than 60 trees, the maximum amount of any one species is 15%. None of the proposed trees will make up more than 15% of the overall tree count.

C. *Section 3.2.1(E)(3) – Water Conservation*

All proposed landscaping must be designed to incorporate water conservation materials and techniques, and not exceed 15 gallons/square foot over the site. The proposed landscaping uses low water use plants and has an overall annual water budget of 6.66 gallons/square foot.

D. *Section 3.2.2(C)(4)(b) – Bicycle Parking Space Requirement*

Multi-family residential projects must provide one bicycle parking space per bedroom. 60% of these spaces must be in enclosed locations with 40% provided via fixed racks. The project contains 108 bedrooms. The site plan shows 108 bicycle parking spaces. 94 of the spaces are located in the garages of each unit. The remaining 14 spaces are provided via fixed rack. This exceeds the minimum for enclosed spaces and thus meets this standard.

E. *Section 3.2.2(C)(5) - Walkways*

Walkways must be provided to link sidewalks with building entries through parking lots. These walkways must also provide direct connections to off-site pedestrian and bicycle destinations. The proposed walkways connect all of the building entrances to the public sidewalks along County Fair Ln. and Ziegler Rd. The walkways also allow pedestrians to navigate the site while avoiding drive aisles.

F. *Section 3.2.2(D)(1) – Access and Parking Lot Requirements - Pedestrian/Vehicle Separation*

To the maximum extent feasible, pedestrians and vehicles shall be separated through provisions of a sidewalk or walkway. The site complies with this standard by providing an extensive sidewalk network around each building. The sidewalk is separated from vehicle use areas by a curb.

G. *Section 3.2.1(F) – Tree Protection and Replacement*

The tree mitigation plan submitted proposes the removal of 57 trees. Of these 57 trees, 24 have mitigation value totaling to the need for 46 mitigation trees. The landscape plan shows 46 upsized trees to meet the mitigation requirement.

H. *Section 3.2.2(J) - Setbacks*

The proposed parking lots are setback further than the 10-foot minimum from non-arterial streets and 5-foot minimum along a lot line required per the Land Use Code.

I. *Section 3.2.2(K)(1)(a) – Residential Parking Requirements*

Three-bedroom units must provide two parking spaces per unit. The project proposes 36 units, each with three bedrooms. The proposal meets this requirement.

Number of Units	Spaces Required	Spaces Provided
36	72 (36 units * 2 spaces per unit)	77

J. *Section 3.2.2(K)(5) - Handicap Parking*

Sites with 1-25 parking spaces are required to provide one handicap parking space, which must be van accessible. The site plan shows two handicap spaces, both of which are van accessible.

K. *Section 3.2.3 - Solar access, orientation, shading*

All developments must be designed to accommodate active and/or passive solar installations and must not deny adjacent properties access to sunshine. The proposed building is designed and located to minimize the casting of shadows on adjacent properties and could accommodate future active and/or passive solar installations.

L. *Section 3.2.4 - Site Lighting*

The proposed lighting plan is consistent with the requirements of the Land Use Code in regards to the general standard, lighting levels and design standards.

M. *Section 3.2.5 - Trash and Recycling Enclosures*

Trash and recycling enclosures must be provided in locations abutting refuse collection or storage areas, shall be designed to allow walk-in access without having to open the main service gate, shall be screened from public view and shall be constructed on a concrete pad. The proposed trash and recycling enclosure abuts a storage area, allows walk-in access without having to open the main service gate, is screened from public view and is built on a concrete pad.

N. *Section 3.4.1(A) – Natural Habitat and Features – Applicability*

This section of the Land Use Code applies when a project is within 500 feet of an area or feature identified as a natural habitat or feature on the City's *Natural Habitats and Features Inventory Map*. The site is within of wetlands and McClelland Creek, so Section 3.4.1 applies.

O. *Section 3.4.1(E) – Establishment of Buffer Zones*

Developments must provide at least a 50-foot-widebuffer from wetlands and 100-foot-wide buffer from tributaries of Fossil Creek. McClelland's Creek is a tributary of Fossil Creek, so the 100-foot buffer applies. The decision maker may enlarge or reduce the buffer distance so long as the development meets a variety of performance standards. In summary, the development must preserve the ecological character of the habitat feature, enhance or preserve wildlife movement through the corridor, preserve existing trees and vegetation, and integrate with the feature.

The buffer zone proposed is smaller than the 100 feet required by the Land Use Code. The applicant proposes enhanced plantings in the buffer zone to mitigate for a smaller buffer zone. Staff finds the enhanced plantings enhance the buffer zone adequately to mitigate for a reduced buffer size and thus meets this code section.

P. *Section 3.5.1 - Building and Project Compatibility*

The proposed plan is consistent with the requirements of the Land Use Code in regards to building and project compatibility including building size, height, bulk, mass, scale, mechanical equipment screening and operational/physical compatibility.

Size, Height, Bulk, Mass and Scale

The projects adjacent to Ziegler Townhomes include a mix of residential uses. Harvest Park contains single-family detached homes, duplexes, and townhomes with five units per building. This development borders Ziegler Townhomes to the north and west. The Sage Creek development to the south contains a mix of six-unit townhomes and single-family detached homes. Two-story structures predominate both developments.

Ziegler Townhomes propose two-story townhomes with buildings consisting of four, five, six, and seven units. Each building has a similar size, height, bulk, mass, and scale to the townhomes in adjacent developments. The largest building part of Ziegler Townhomes will have a roughly 8,000 sq. ft. footprint. This footprint is nearly 2,000 sq. ft. smaller than the five unit buildings in Harvest Park. As such, the proposed development meets this code requirement.

Outdoor Storage Areas/Mechanical Equipment

The proposed plan is consistent with the requirements of the Land Use Code in regards to the location of outdoor storage, screening of storage areas, and screening of rooftop mechanical equipment from public view.

Operational/Physical Compatibility
The proposed plan is consistent with the requirements of the Land Use Code in regards to hours of operation, placement of trash receptacles and location and number of off-street parking spaces.

Q. *Section 3.5.2(C)(2) – Housing Model Variety and Variation Among Buildings*

Single-family attached developments with more than five buildings that have more than two units each must have three distinctly different building designs. The proposed Ziegler Townhomes provides four distinctly different building designs. Each of these designs contains variations in massing, materials, footprint size, and color to differentiate each building. Each building does have similar roof forms and proportions to create a cohesive development without appearing repetitious.

R. *Section 3.5.2(E)(1) – Setback from Arterial Streets*

Residential buildings must be setback at least 30 feet from arterial streets. Ziegler Rd. is an arterial street. All of the buildings are setback at least 30 feet from Ziegler Rd.

S. *Section 3.5.2(E)(2) – Side and Rear Yard Setbacks*

The minimum side yard setback is five feet and the minimum rear yard setback is eight feet. The proposed buildings are all set back further than the minimum in the rear and side yard.

T. *Section 3.5.2(F) – Garage Doors*

Garage doors must be located in such a way to minimize the visual impact of garage doors from the street and major walkway spines. All of the garages are oriented towards the internal access drives serving the project. This orientation minimizes the visual impact of garage doors and meets the standard.

4. Compliance with Article 4 of the Land Use Code – Low Density Mixed-Use Neighborhood (LMN), Division 4.5:

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

A. *Section 4.5(B)(2)(a) – Permitted Uses*

The proposed use, single-family attached dwellings, is permitted in the LMN zone district and is consistent with the district's intent to provide a predominance of low-density housing.

B. *Section 4.5(D)(1) – Density*

The minimum density for developments in the LMN shall be four dwelling units per net acre. The maximum density for developments in the LMN shall be nine dwelling units per gross acre. The proposed development has a density of 8.93 dwelling units per gross acre.

C. *Section 4.5(E)(3) – Maximum Residential Building Height*

Residential buildings in the LMN shall have a maximum height of two and one-half stories. The proposed buildings are all two stories.

5. Findings of Fact/Conclusion:

In evaluating the request for the Ziegler Townhomes Project Development Plan/Final Plan, Staff makes the following findings of fact:

A. The Project Development Plan complies with the process located in Division 2.2 – Common Development Review Procedures for Development Applications of Article 2 – Administration.

B. The Modification of Standard to Section 3.5.2(D)(1) that is proposed with this Project Development Plan meets the applicable requirements of Section 2.8.2(H), in that the granting of the Modification would not be detrimental to the public good and that by reason of exceptional physical conditions or other extraordinary and exceptional situations, unique to such property, the strict application of the standard sought to be modified would result in unusual and exceptional practical difficulties.

C. The Modification of Standard to Section 3.5.2(D)(2) that is proposed with this Project Development Plan meets the applicable requirements of Section

2.8.2(H), in that the granting of the Modification would not be detrimental to the public good and the proposal submitted is equal to a compliant plan.

D. The Modification of Standard to Section 3.5.2(E)(2) that is proposed with this Project Development Plan meets the applicable requirements of Section 2.8.2(H), in that the granting of the Modification would not be detrimental to the public good and the proposal submitted is equal to a compliant plan.

E. The Project Development Plan complies with relevant standards of Article 3 – General Development Standards, if the Modification of Standard to Sections 3.5.2(D)(1), 3.5.2(D)(2), and 3.5.2(E)(2) are approved.

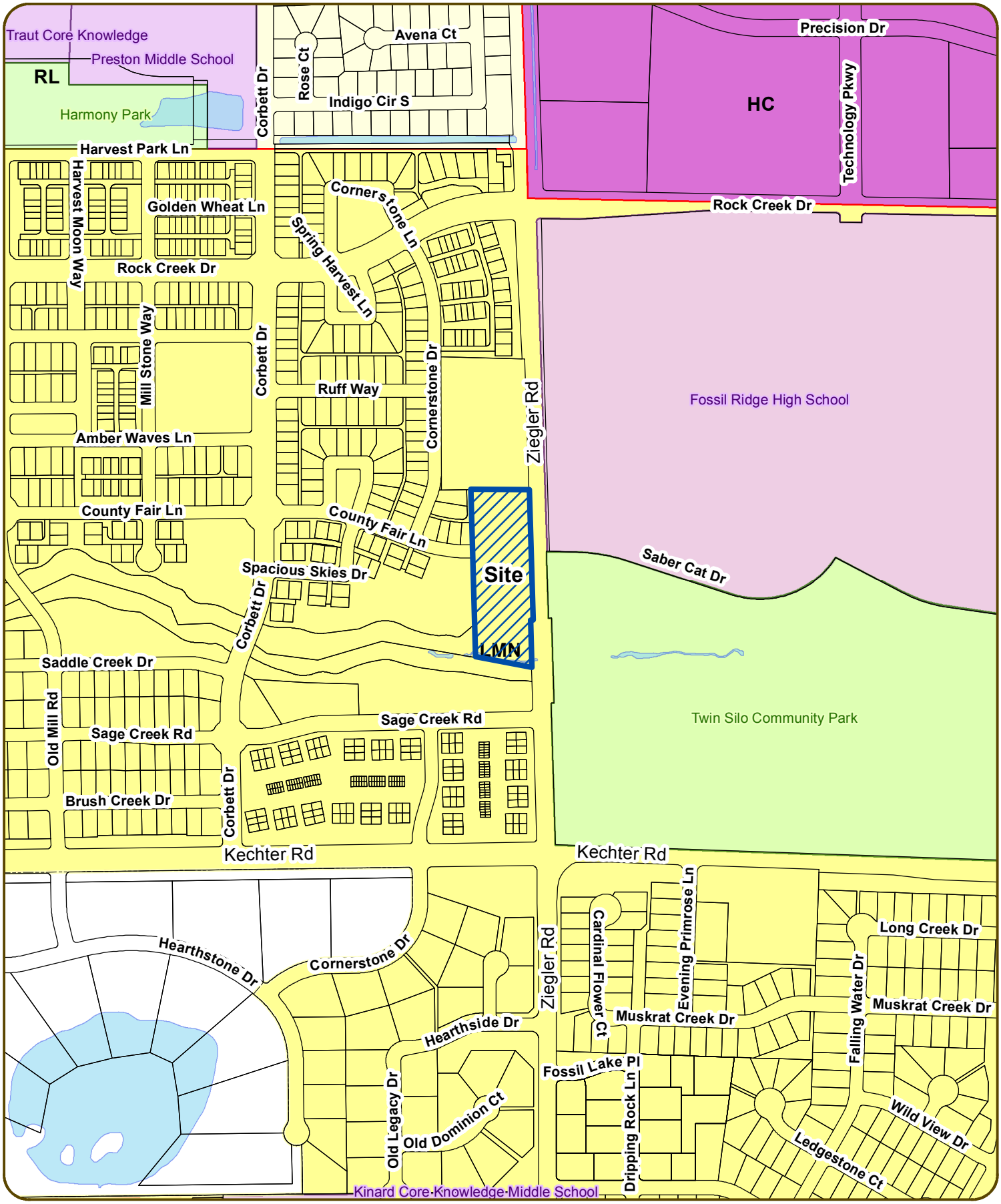
F. The Project Development Plan complies with relevant standards located in Division 4.5 Low Density Mixed-Use Neighborhood (LMN) of Article 4 – Districts.

RECOMMENDATION:

Staff recommends approval of Ziegler Townhomes, FDP160043.

ATTACHMENTS:

1. Zoning & Site Vicinity Map
2. Applicant's Modification of Standard Requests
3. Ziegler Townhomes Planning Document Set (Plat, Site Plan, Landscape Plan, Elevations, & Photometric Plan)
4. Ziegler Townhomes Traffic Impact Study



1 inch = 500 feet

Ziegler Townhomes
Vicinity Map

N
W
E
S

TB GROUP
landscape architecture | planning | illustration

January 10, 2017

City of Fort Collins
Current Planning Department
281 North College Ave.
Fort Collins, CO 80524

Re: The Park Townhomes at Fossil Ridge

Please accept this request for a Modification of Standards to **Section 3.5.2(E)(2)** and **Section 3.5.2 (D)(1)** of the Land Use Code.

Background

The proposed The Park Townhomes at Fossil Ridge project is located at 5305 Ziegler Road. The 4.029-acre site is bounded by Ziegler Road to the east and the Harvest Park Subdivision and a regional detention pond to the west. The intent of this PDP and combined Final Plan application is to create a for-sale single family attached townhome project. There are 6 buildings proposed, with a total of 36 units. All of the units have 3-bedrooms. Overall density 8.93 dwelling units per acre.

This modification request is in accordance with the review procedures set forth in Section 2.8.2(H) of the Land Use Code as follows:

Modification to Section 3.5.2(E)(2)

Code Language: Section 3.5.2(E)(2) ***Residential Building Setbacks, Lot Width and Size*** statess the following:

> (2) *Setback from Nonarterial Streets.* The minimum setback of every residential building and of every detached accessory building that is incidental to the residential building shall be fifteen (15) feet from any public street right-of-way other than an arterial street right-of-way, except for those buildings regulated by Section 3.8.30 of this Code, which buildings must comply with the setback regulations set forth in Section 3.8.30. Setbacks from garage doors to the nearest portion of any public sidewalk that intersects with the driveway shall be at least twenty (20) feet.

Requested Modification: The project is requesting to have the minimum setback for Buildings C and E be less than fifteen (15) feet from the County Fair Lane public street right-of-way.

Justification

The granting of this modification of standards would not be detrimental to the public good, and the plan as submitted will promote the general purpose of the standard for which the modification is requested **equally well or better than** would a plan which complies with the standard for

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which a modification is requested. The applicant offers the following in support of its request for modification:

- The standard requires buildings to be set back a minimum of 15 feet from County Fair Lane. To meet the standard, the two buildings would have to be moved south. This is not feasible due to the potential negative impacts of disturbing the wetlands and the natural habitat buffer zone on the south.

- The purpose of the standard for which the modification is sought is to "promote variety, visual interest and pedestrian-oriented streets in residential development." The proposed plan in which the buildings are closer to the public street promotes such purpose equally well or better for the following reasons:

    - The modification is minor, when considered from the perspective of the entire development plan, which provides consistency with the Land Use Code in terms of enhanced architecture, building articulation and quality materials. In addition, the modification is only for two buildings south of County Fair Lane. The buildings on the north side meet the standard.

    - The proposed alternative plan continues to improve the design, quality and character of new development by exceeding the building standards set forth in Section 3.5. The use of high quality residential building materials, building articulation, projections and recesses, along with pitched roof elements ensures sensitivity to and compatibility with the surrounding neighborhood.

    - In addition, the project is designed to reflect the characteristics of the existing established residential neighborhood. The buildings have entrances orienting to the street and sidewalks, private outdoor space, and individual identities. The garages are rear-loaded and visibility from the public streets will be minimized.

    - The visual impacts of the building will be greatly reduced by the use of extensive, enchanced landscaping along the street frontage, utilizing a combination of shrubs, grasses and street trees that will provide adequate screening and visual interest.

    - The construction of the proposed plan will greatly improve a vacant parcel with partially-constructed infrastructure. Although not strictly a criteria for justification, the consruction of the project would be a benefit to the neighborhood.

    - The proposed alternative plan ensures sensitivity to the surrounding neighborhood by building an attractive, desirable product in an infill site with a price point that the market desires and that the community can be proud of.

Finally, the proposed alternative plan is not a detriment to the public good, as it results in the development of a vacant property within an established areas in accordance with the overall City goals outlined in City Plan. Most importantly,it is practically infeasible to meet the standards and the alternative plan accomplishes the purpose and objective of the standard equally well or better.

Modification to Section 3.5.2(D)(1)(b)

Code Language: Section 3.5.2(D)(1) ***Relationship of Dwellings to Streets and Parking*** statess the following:

> (1) *Orientation to a Connecting Walkway.* Every front facade with a primary entrance to a dwelling unit shall face the adjacent street to the extent reasonably feasible. Every front facade with a primary entrance to a dwelling unit shall face a connecting walkway with no primary entrance more than two hundred (200) feet from a street sidewalk. The following exceptions to this standard are permitted:
>
> > (a) Up to two (2) single-family detached dwellings on an individual lot that has frontage on either a public or private street.
> >
> > (b) A primary entrance may be up to three hundred fifty (350) feet from a street sidewalk if the primary entrance faces and opens directly onto a connecting walkway that qualifies as a major walkway spine.
> >
> > (c) If a multi-family building has more than one (1) front facade, and if one (1) of the front facades faces and opens directly onto a street sidewalk, the primary entrances located on the other front facade(s) need not face a street sidewalk or connecting walkway.

Requested Modification: The Ziegler Townhomes project is requesting to allow Buildings F and E to have their primary entrance be greater than 200 feet from the County Fair Lane street sidewalk.

Justification

The granting of this modification of standards would not be detrimental to the public good, and the plan as submitted will promote the general purpose of the standard for which the modification is requested **equally well or better than** would a plan which complies with the standard for which a modification is requested and **by reason of exceptional physical conditions or other extraordinary and exceptional situations**, the strict application of the standard would result in unusual and exceptional practical difficulties, or exceptional or undue hardship upon the owner of such property. The applicant offers the following in support of its request for modification:

- The standard requires building entrances face a public street in a traditional neighborhood pattern. To meet the standard, the project would have to add new streets throughout the site. This is not feasible due to the potential negative impacts of disturbing the creek and associated wetlands and the infeasibility of adding new streets due to the narrowness of the site.

- The purpose of the standard for which the modification is sought is to "promote variety, visual interest and pedestrian-oriented streets in residential development." The proposed plan in which buildings face a walkway spine instead of a public street promotes such purpose equally well or better for the following reasons:

    - Although the primary entrances to Buildings F and E are greater than 200 feet from the public street, there are numerous paths throughout the project that connect to the street. Each front door has a sidewalk connetion to a walkway spine that opens diresctly to the public sidewalk on County Fair Lane.

- The modification is minor, when considered from the perspective of the entire development plan, which provides consistency with the Land Use Code in terms of enhanced architecture, building articulation and quality materials.

- The proposed alternative plan continues to improve the design, quality and character of new development by exceeding the building standards set forth in Section 3.5. The use of high quality residential building materials, building articulation, projections and recesses, along with pitched roof elements ensures sensitivity to and compatibility with the surrounding neighborhood.

- The construction of the proposed plan will greatly improve a vacant parcel with partially-constructed infrastructure. Although not strictly a criteria for justification, the consruction of the project would be a benefit to the neighborhood.

- The proposed alternative plan ensures sensitivity to the surrounding neighborhood by building an attractive, desirable product in an infill site with a price point that the market desires and that the community can be proud of.

TB GROUP
landscape architecture | planning | illustration

February 28, 2017

City of Fort Collins
Current Planning Department
281 North College Ave.
Fort Collins, CO 80524

Re: The Park Townhomes at Fossil Ridge

Please accept this request for a Modification of Standards to **Section 3.5.2(D)(2)** of the Land Use Code.

Background

The proposed project is located at 5305 Ziegler Road. The 4.029-acre site is bounded by Ziegler Road to the east and the Harvest Park Subdivision and a regional detention pond to the west. The intent of this PDP and combined Final Plan application is to create a for-sale single family attached townhome project. There are 4 buildings proposed, with a total of 36 units. All of the units have 3-bedrooms. Overall density 8.93 dwelling units per acre.

This modification request is in accordance with the review procedures set forth in Section 2.8.2(H) of the Land Use Code as follows:

Modification to Section 3.5.2(D)(2)

Code Language: Section 3.5.2(D)(2) ***Relationship of Dwellings to Streets and Parking*** statess the following:

> (2) *Street-Facing Facades* . Every building containing four (4) or more dwelling units shall have at least one (1) building entry or doorway facing any adjacent street that is smaller than a full arterial or has on-street parking.

Requested Modification: The Park Townhomes at Fossil Ridge project is requesting not have building entries or doorways on the buildings facing the County Fair Lane public street right-of-way.

Justification

The granting of this modification of standards would not be detrimental to the public good, and the plan as submitted will promote the general purpose of the standard for which the modification is requested **equally well or better than** would a plan which complies with the standard for which a modification is requested. The applicant offers the following in support of its request for modification:

- The standard requires buildings to have street-facing doorways along County Fair Lane. To meet the standard, the buildings would have to be moved north and south. Neither is

444 Mountain Ave.
Berthoud, CO 80513
TEL 970.532.5891
WEB TBGroup.us

feasible due to the potential negative impacts of disturbing the wetlands and the natural habitat buffer zone on the south and the infeasibility of locating the buildings to the north due to several existing trees.

- The purpose of the standard for which the modification is sought is to "promote variety, visual interest and pedestrian-oriented streets in residential development." The proposed plan in which the buildings do not have street-facing doorways promotes such purpose equally well or better for the following reasons:

    - The modification is minor and only affects the four buildings along the north and south sides of County Fair Lane.

    - The proposed alternative plan continues to improve the design, quality and character of new development by exceeding the building standards set forth in Section 3.5. The use of high quality residential building materials, building articulation, projections and recesses, along with pitched roof elements ensures sensitivity to and compatibility with the surrounding neighborhood.

    - The street-facing sides of the buildings contain enhanced landscaping with shrubs and ornamental grasses in combination with upright evergreen plantings to break up the mass of the buildings.

    - In addition, the wall-mounted meters will be screend with walls and ornamental grasses.

Finally, the proposed alternative plan is not a detriment to the public good, as it results in the development of a vacant property within an established areas in accordance with the overall City goals outlined in City Plan. Most importantly,it is practically infeasible to meet the standards and the alternative plan accomplishes the purpose and objective of the standard equally well or better.

THE PARK TOWNHOMES AT FOSSIL RIDGE

A TRACT OF LAND LOCATED IN THE SOUTHEAST QUARTER OF SECTION 5, TOWNSHIP 6 NORTH, RANGE 68 WEST OF THE 6TH PRINCIPAL MERIDIAN, CITY OF FORT COLLINS, COUNTY OF LARIMER, STATE OF COLORADO

STATEMENT OF OWNERSHIP AND SUBDIVISION:

Know all persons by these presents, that the undersigned owner(s) of the following described land: A tract of land located in the Southeast Quarter of Section 5, Township 6 North, Range 68 West of the 6th P.M., City of Fort Collins, County of Larimer, State of Colorado being more particularly described as follows:

Considering the East line of the Southeast Quarter of said Section 5 as bearing South 01° 45' 51" East, and with all bearings contained herein relative thereto:

COMMENCING at the Southeast corner of said Section 5; thence along said East line, North 01° 45' 51" West, 716.72 feet to the southeast corner of Sage Creek Subdivision, said point being the **POINT OF BEGINNING**; thence along the northerly line of Sage Creek Subdivision, North 80° 02' 26" West, 264.43 feet to the southeast corner of Harvest Park Subdivision; thence, along the easterly line of Harvest Park Subdivision, North 01° 45' 51" West, 654.53 feet to a point on the southerly line of a tract of land as described at Reception No. 20100032332, Larimer County Clerk and Recorder; thence along said southerly line, North 89° 44' 09" East, 259.00 feet to a point on the East line of the Southeast Quarter of Section 5; thence along said East line, South 01° 45' 51" East, 701.48 feet to the POINT OF BEGINNING.

Contains 175,543 square feet or 4.030 acres, more or less.

For themselves and their successors in interest (collectively "Owner") have caused the above described land to be surveyed and subdivided into lots, tracts and streets as shown on this Plat to be known as THE PARK TOWNHOMES AT FOSSIL RIDGE (the "Development"), subject to all easements and rights-of-way now of record or existing or indicated on this Plat. The rights and obligations of this Plat shall run with the land.

CERTIFICATE OF DEDICATION:

The Owner does hereby dedicate and convey to the City of Fort Collins, Colorado (hereafter "City"), for public use, forever, a permanent right-of-way for street purposes and the "Easements" as laid out and designated on this Plat; provided, however, that (1) acceptance by the City of this dedication of Easements does not impose upon the City a duty to maintain the Easements so dedicated and (2) acceptance by the City of this dedication of streets does not impose upon the City a duty to maintain streets so dedicated until such time as provisions of the Maintenance Guarantee have been fully satisfied. The streets dedicated on this Plat are the fee property of the City as provided in Section31-23-107 C.R.S. The City's rights under the Easements include the right to install, operate, access, maintain, repair, reconstruct, remove and replace within the Easements public improvements consistent with the intended purpose of the Easements; the right to install, maintain and use gates in any fences that cross the Easements; the right to mark the location of the Easements with suitable markers; and the right to permit other public utilities to exercise these same rights. Owner reserves the right to use the Easements for purposes that do not interfere with the full enjoyment of the rights hereby granted. The City is responsible for maintenance of its own improvements and for repairing any damage caused by its activities in the Easements, but by acceptance of this dedication, the City does not accept the duty of maintenance of the Easements, or of improvements in the Easements that are not owned by the City. Owner will maintain the surface of the Easements in a sanitary condition in compliance with any applicable weed, nuisance or other legal requirements.

Except as expressly permitted in an approved plan of development or other written agreement with the City, Owner will not install on the Easements, or permit the installation on the Easements, of any building, structure, improvement, fence, retaining wall, sidewalk, tree or other landscaping (other than usual and customary grasses and other ground cover). In the event such obstacles are installed in the Easements, the City has the right to require the Owner to remove such obstacles from the Easements. If Owner does not remove such obstacles, the City may remove such obstacles without any liability or obligation for repair and replacement thereof, and charge the Owner the City's costs for such removal. If the City chooses not to remove the obstacles, the City will not be liable for any damage to the obstacles or any other property to which they are attached.

The rights granted to the City by this Plat inure to the benefit of the City's agents, licensees, permittees and assigns.

OWNER: The Park at Fossil Ridge, LLC

BY: _____

STATE OF COLORADO)
)ss.
COUNTY OF LARIMER)

The foregoing instrument was acknowledged before me this _____ day of _____, 20___, by

_____, as _____ of The Park at Fossil Ridge, LLC.

Witness my hand and official seal

My commission expires: _____

_____
Notary Public

APPROVED AS TO FORM, CITY ENGINEER

By the City Engineer of the City of Fort Collins, Colorado this _____day of _____ A.D., 20_____.

_____
City Engineer

PLANNING APPROVAL

By the Director of Community Development and Neighborhood Services of the City of Fort Collins, Colorado this _____ day of _____ A.D., 20_____.

_____
Director of Community Development and Neighborhood Services

MAINTENANCE GUARANTEE:

The Owner hereby warrants and guarantees to the City, for a period of two (2) years from the date of completion and first acceptance by the City of the improvements warranted hereunder, the full and complete maintenance and repair of the improvements to be constructed in connection with the Development which is the subject of this Plat. This warranty and guarantee is made in accordance with the City Land Use Code and/or the Transitional Land Use Regulations, as applicable. This guarantee applies to the streets and all other appurtenant structures and amenities lying within the rights-of-way, Easements and other public properties, including, without limitation, all curbing, sidewalks, bike paths, drainage pipes, culverts, catch basins, drainage ditches and landscaping. Any maintenance and/or repair required on utilities shall be coordinated with the owning utility company or department.

The Owner shall maintain said improvements in a manner that will assure compliance on a consistent basis with all construction standards, safety requirements and environmental protection requirements of the City. The Owner shall also correct and repair, or cause to be corrected and repaired, all damages to said improvements resulting from development-related or building-related activities. In the event the Owner fails to correct any damages within thirty (30) days after written notice thereof, then said damages may be corrected by the City and all costs and charges billed to and paid by the Owner. The City shall also have any other remedies available to it as authorized by law. Any damages which occurred prior to the end of said two (2) year period and which are unrepaired at the termination of said period shall remain the responsibility of the Owner.

REPAIR GUARANTEE:

In consideration of the approval of this final Plat and other valuable consideration, the Owner does hereby agree to hold the City harmless for a five (5) year period, commencing upon the date of completion and first acceptance by the City of the improvements to be constructed in connection with the development which is the subject of this Plat, from any and all claims, damages, or demands arising on account of the design and construction of public improvements of the property shown herein; and the Owner furthermore commits to make necessary repairs to said public improvements, to include, without limitation, the roads, streets, fills, embankments, ditches, cross pans, sub-drains, culverts, walls and bridges within the right-of-way, Easements and other public properties, resulting from failures caused by design and/or construction defects. This agreement to hold the City harmless includes defects in materials and workmanship, as well as defects caused by or consisting of settling trenches, fills or excavations.

Further, the Owner warrants that he/she owns fee simple title to the property shown hereon and agrees that the City shall not be liable to the Owner or his/her successors in interest during the warranty period, for any claim of damages resulting from negligence in exercising engineering techniques and due caution in the construction of cross drains, drives, structures or buildings, the changing of courses of streams and rivers, flooding from natural creeks and rivers, and any other matter whatsoever on private property. Any and all monetary liability occurring under this paragraph shall be the liability of the Owner. I further warrant that I have the right to convey said land according to this Plat.

NOTICE OF OTHER DOCUMENTS:

All persons take notice that the Owner has executed certain documents pertaining to this Development which create certain rights and obligations of the Development, the Owner and/or subsequent Owners of all or portions of the Development site, many of which obligations constitute promises and covenants that, along with the obligations under this Plat, run with the land. The said documents may also be amended from time to time and may include, without limitation, the Development Agreement, Site And Landscape Covenants, Final Site Plan, Final Landscape Plan, and Architectural Elevations, which documents are on file in the office of the Clerk of the City and should be closely examined by all persons interested in purchasing any portion of the Development site.

ATTORNEY'S CERTIFICATION

I hereby certify that this Subdivision Plat has been duly executed as required pursuant to Section 2.2.3(C)(3)(a) through (e) inclusive of the Land Use Code of the City of Fort Collins and that all persons signing this Subdivision Plat on behalf of a corporation or other entity are duly authorized signatories under the laws of the State of Colorado. This Certification is based upon the records of the Clerk and Recorder of Larimer County, Colorado as of the date of execution of the Plat and other information discovered by me through reasonable inquiry and is limited as authorized by Section 2.2.3(C)(3)(f) of the Land Use Code.

Attorney:_____

Address: _____

_____

Registration No.:_____

SIGHT DISTANCE EASEMENT RESTRICTIONS:

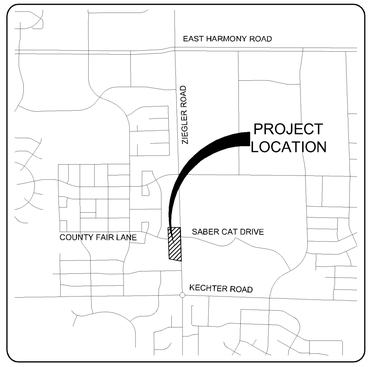
Sight Distance Easement - The sight distance easement is an easement required by the City at some street intersections where it is necessary to protect the line of sight for a motorist needing to see approaching traffic and to react safely for merging their vehicle into the traffic flow. The following are requirements for certain objects that may occupy a sight distance easement for level grade:

1. Structures and landscaping within the easement shall not exceed 24 inches in height with the following exceptions:
2. Fences up to 42 inches in height may be allowed as long as they do not obstruct the line of sight for motorists.
3. Deciduous trees may be allowed as long as all branches of the trees are trimmed so that no portion thereof or leaves thereon hang lower than six (6) feet above the ground, and the trees are spaced such that they do not obstruct line of sight for motorists. Deciduous trees with trunks large enough to obstruct line of sight for motorists shall be removed by the owner.

For non-level areas these requirements shall be modified to provide the same degree of visibility.

NOTICE

ALL RESPONSIBILITIES AND COSTS OF OPERATION, MAINTENANCE AND RECONSTRUCTION OF THE PRIVATE STREETS AND/OR DRIVES LOCATED ON THE PRIVATE PROPERTY THAT IS THE SUBJECT OF THIS PLAT SHALL BE BORNE BY THE OWNERS OF SAID PROPERTY, EITHER INDIVIDUALLY, OR COLLECTIVELY, THROUGH A PROPERTY OWNERS' ASSOCIATION, IF APPLICABLE. THE CITY OF FORT COLLINS SHALL HAVE NO OBLIGATION OF OPERATION, MAINTENANCE OR RECONSTRUCTION OF SUCH PRIVATE STREETS AND/OR DRIVES NOR SHALL THE CITY HAVE ANY OBLIGATION TO ACCEPT SUCH STREETS AND/OR DRIVES AS PUBLIC STREETS OR DRIVES.



NORTH VICINITY MAP
1"=1500'

NOTES:

1. The Basis of Bearings is the East line of the Southeast Quarter of Section 5, T6N, R68W, as bearing South 01° 45' 51" East (being a grid bearing of the Colorado State Plane Coordinate System, North Zone, North American Datum 1983/92), and monumented as shown on drawing.

2. All information regarding easements, rights-of-way or Title of Record, Northern Engineering relied upon Commitment No. FCC25142251-3, prepared by Land Title Guarantee Company, dated 08-11-2016.

3. The lineal unit of measurement for this plat is U. S. Survey Feet.

4. There shall be no private conditions, covenants or restrictions that prohibit or limit the installation of resource conserving equipment or landscaping that are allowed by Sections 12-120 - 12-122 of the City code.

SURVEYOR'S NOTE CONCERNING SUBJECT PROPERTY BOUNDARY:

The Subject Property Landowner's Deed (Warranty Deed recorded November 23, 2009 as Reception No. 20090078070) contains calls which place the Southerly boundary lines of the Subject Parcel well into Tract K (open space parcel) of the Sage Creek Subdivision, which was recorded August 28, 2000 as Reception No. 2000058708. The title work being utilized for this project disclosed no documentation that supported a portion of the Subject Parcel having ever been conveyed to the developers of the Sage Creek Subdivision. The possibility arises that an executed deed for this overlapping land exists that was not subsequently properly recorded and that the Subject Parcel should have been diminished in area by the action of execution of a deed. Once again, that document has not been provided. Additional research has not uncovered any such document. The boundary calls within the Warranty Deed recorded November 23, 2009 as Reception No. 20090078070 are consistent with older deeds of conveyance for the Subject Property (for instance Book 1264, Page 300 recorded September 29, 1964).

A Special Warranty Deed recorded December 9, 1999 as Reception No. 0099103590 conveyed to the developer of Sage Creek Subdivision the parcel of land out of which Tract K of Sage Creek Subdivision was created. The calls within this property description clearly call for the boundary lines which match the parcel described in Book 1264, Page 300 and follow along a portion of the Westerly line and then the Southerly lines of that parcel until intersecting the East line of the Southeast Quarter of Section 5. A Deed of Trust to the Developer recorded August 3, 2000 also calls for a boundary matching Book 1264, Page 300. The Weiner Enclave Annexation recorded April 5, 2007 as Reception No. 20070025558 and prepared by the City of Fort Collins Engineering Division Staff also illustrates a boundary that is consistent with the boundary as called for in Book 1264, Page 300.

A Deed of Dedication for road right of way recorded July 24, 2000 as Reception No. 2000049499, signed by the then present landowner of the Subject Parcel depicts a boundary line between Tract K and the Subject Parcel that seems to indicate that a conveyance may have been executed at some point in that general timeframe.

It is the intent of the owners of the Subject Property to convey the area of overlap along the south side of the Subject Property by deeding the area to the owners of Tract K of the Sage Creek Subdivision.

SURVEYOR'S STATEMENT

I, Robert C. Tessely, a Colorado Registered Professional Land Surveyor do hereby state that this Subdivision Plat was prepared from an actual survey under my personal supervision, that the monumentation as indicated hereon were found or set as shown, and that the foregoing plat is an accurate representation thereof, all this to the best of my knowledge, information and belief.

DRAFT
2-15-17

For and on Behalf of Northern Engineering Services, Inc.
Robert C. Tessely
Colorado Registered Professional
Land Surveyor No. 38470

NOTICE:
According to Colorado law you must commence any legal action based upon any defect in this survey within three years after you discover such defect. In no event may any action based upon any defect in this survey be commenced more than ten years after the date of the certificate shown hereon.

SECTION: 5
TOWNSHIP: 6N
RANGE: 68 W of the 6th PM

NORTHERN ENGINEERING
PHONE 970.221.4158
www.northernengineering.com
301 North Howes Street, Suite 100
Fort Collins, Colorado 80521

DATE: 2/15/17
SCALE: N.A.
REVIEWED BY: R. Tessely
PROJECT: 1124-002
DESIGNED BY:
DRAWN BY: L. Smith

THE PARK TOWNHOMES AT FOSSIL RIDGE
CITY OF FORT COLLINS
STATE OF COLORADO

Sheet 1
Of 2 Sheets

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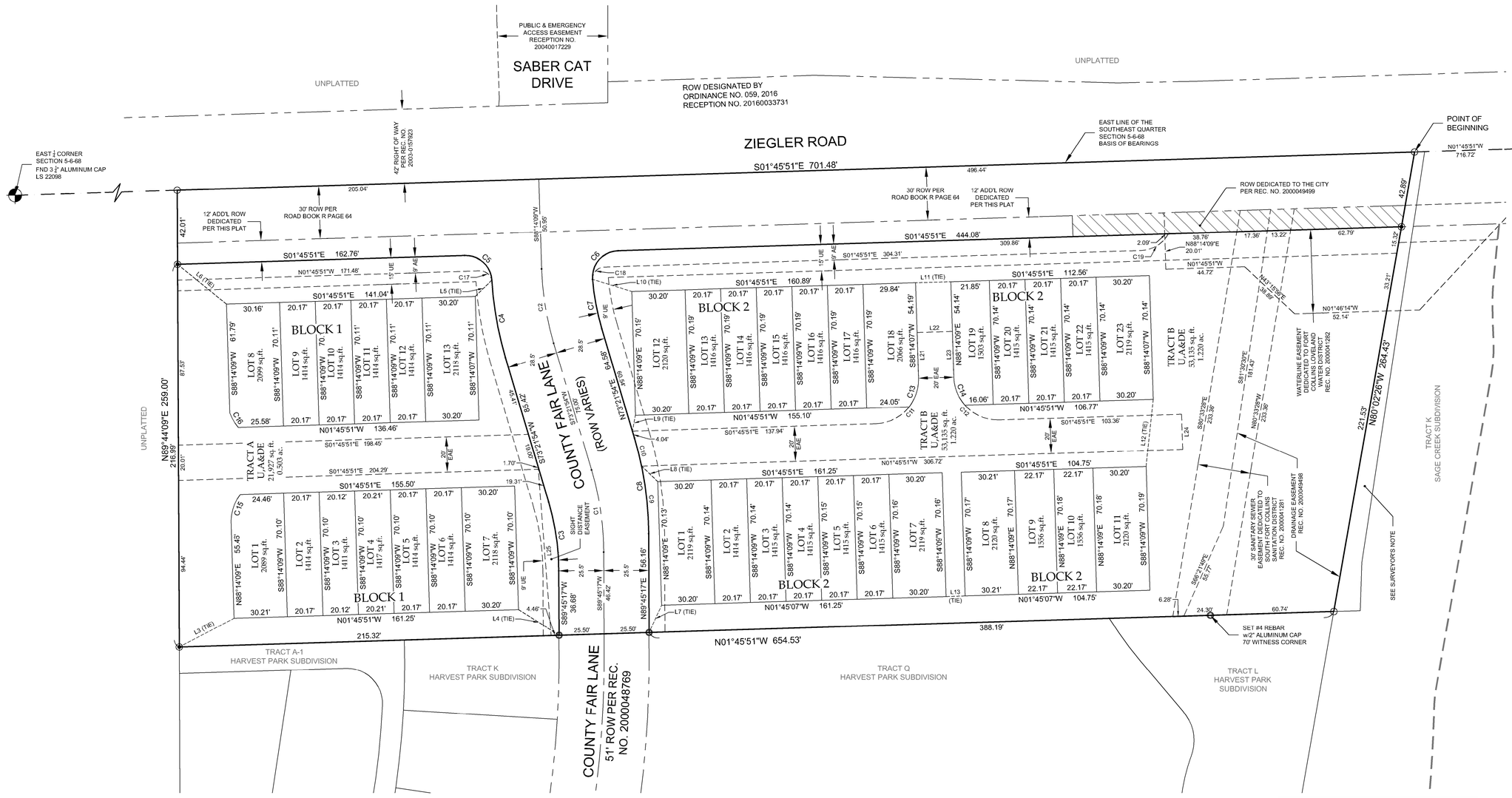
THE PARK TOWNHOMES AT FOSSIL RIDGE

A TRACT OF LAND LOCATED IN THE SOUTHEAST QUARTER OF SECTION 5, TOWNSHIP 6 NORTH, RANGE 68 WEST OF THE 6TH PRINCIPAL MERIDIAN, CITY OF FORT COLLINS, COUNTY OF LARIMER, STATE OF COLORADO



CURVE TABLE					
CURVE	DELTA	RADIUS	LENGTH	BEARING	CHORD
C1	16°23'22"	165.00'	47.20'	S81°33'36"W	47.04'
C2	14°52'14"	165.00'	42.82'	S80°48'02"W	42.70'
C4	13°14'38"	193.50'	44.73'	S80°01'50"W	44.63'
C5	87°51'51"	15.00'	23.00'	S42°10'04"W	20.81'
C6	92°51'10"	15.00'	24.31'	S48°11'26"E	21.73'
C7	12°01'04"	136.50'	28.63'	N79°22'27"E	28.58'
C8	16°23'22"	192.00'	54.92'	N81°33'36"E	54.73'
C9	11°28'12"	192.00'	38.44'	N84°01'11"E	38.37'
C10	4°55'10"	192.00'	16.49'	N75°49'30"E	16.48'
C11	90°00'00"	25.00'	39.27'	S46°45'51"E	35.36'
C12	90°00'00"	25.00'	39.27'	S43°14'09"W	35.36'
C13	39°47'31"	25.00'	17.36'	N71°52'06"W	17.02'
C14	39°47'31"	25.00'	17.36'	N68°20'24"E	17.02'
C15	36°40'56"	25.00'	16.01'	S70°18'49"E	15.73'
C16	21°54'44"	25.00'	9.56'	N59°24'00"E	9.50'
C17	88°07'27"	6.50'	10.00'	N42°17'52"E	9.04'
C18	93°00'10"	6.75'	10.96'	S48°15'56"E	9.79'
C19	59°06'07"	18.50'	19.08'	S31°18'55"E	18.25'

LINE TABLE		
LINE	LENGTH	BEARING
L2	20.17'	N01° 45' 51"W
L3	35.05'	S27° 39' 45"E
L4	27.24'	N32° 25' 10"E
L5	13.19'	S44° 28' 55"E
L6	35.73'	S39° 06' 58"W
L7	17.05'	S65° 26' 20"E
L8	12.65'	N43° 34' 32"E
L9	9.20'	S79° 41' 33"E
L10	23.25'	N17° 12' 55"E
L11	20.00'	S01° 36' 00"E
L12	38.35'	S83° 59' 28"E
L13	10.84'	S01° 45' 07"E

LINE TABLE		
LINE	LENGTH	BEARING
L21	25.90'	N88° 14' 09"E
L22	20.00'	S01° 45' 51"E
L23	25.90'	S88° 14' 09"W
L24	20.00'	S88° 13' 05"W
L25	96.15'	N85° 35' 02"E

NORTH

30 0 30 60 90 Feet

(US SURVEY FEET)
1 inch = 30 ft.

LAND USE TABLE					
PARCEL	DESCRIPTION	DEDICATION	AREA	PERCENT	INTENDED OWNERSHIP/MAINTAINANCE BY
TRACT A	Open Space	Utility, Access & Drainage Easement	21,927 S.F. 0.50 AC.	12.49%	Homesowners Association
TRACT B	Open Space	Utility, Access & Drainage Easement	53,136 S.F. 1.22 AC.	30.27%	Homesowners Association
ROW	Public Use		41,541 S.F. 0.95 AC.	23.66%	City of Fort Collins
LOTS (36)	Private Residence		58,939 S.F. 1.35 AC.	33.58%	Property Owner
TOTAL			175,543 S.F. 4.03 AC.	100.00%	

LEGEND

- EASEMENT LINE
- EXISTING RIGHT-OF-WAY
- BOUNDARY LINE
- LOT LINE
- FND #4 REBAR w/RED PLASTIC CAP, LS 34995
- SET 18" #4 REBAR w/BLUE PLASTIC CAP, LS 38470 OR AS DESCRIBED
- CALCULATED LOCATION
- FOUND SECTION CORNER AS DESCRIBED
- UE UTILITY EASEMENT
- AE ACCESS EASEMENT
- EAE EMERGENCY ACCESS EASEMENT
- U,A&DE UTILITY, ACCESS AND DRAINAGE EASEMENT

PRELIMINARY

Robert Tessely
Registered Professional Land Surveyor
Colorado Registration No. 38470
For and on behalf of Northern Engineering Services, Inc.

NOTICE:
According to Colorado law you mus commence any legal action based upon any defect in this survey within three years after you discover such defect. In no event may any action based upon any defect in this survey be commenced more than ten years after the date of the certificate shown hereon.

SECTION: 5
TOWNSHIP: 6N
RANGE: 68 W of the 6th PM

NORTHERN ENGINEERING
PHONE: 970.221.4158
www.northernengineering.com
301 North Howes Street, Suite 100
Fort Collins, Colorado 80521

PROJECT: 11.124-002
DATE: 2/15/17
DESIGNED BY:
SCALE: 1"=30'
DRAWN BY: L. Smith
REVIEWED BY: R. Tessely

THE PARK TOWNHOMES AT FOSSIL RIDGE
CITY OF FORT COLLINS
STATE OF COLORADO

Sheet
2
Of 2 Sheets

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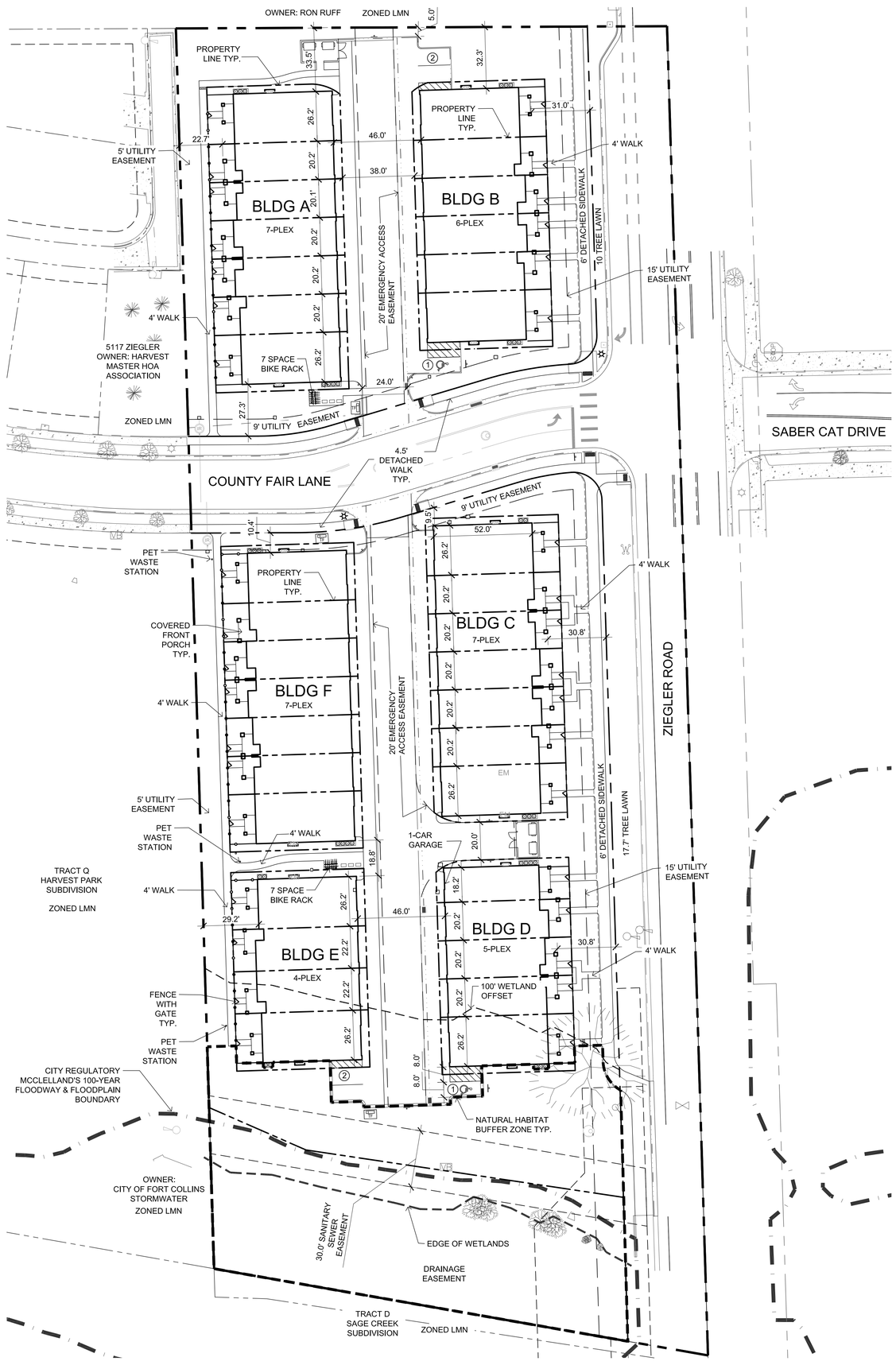


Land-Use Statistics:

EXISTING ZONING:	LMN - LOW DENSITY MIXED-USE	
GROSS LAND AREA:	175,547 S.F.	4.030 AC.
NUMBER OF BUILDINGS:	6	
NUMBER OF UNITS	36	
LAND USE:	SINGLE-FAMILY ATTACHED	
TOTAL STORIES:	2	
GROSS DENSITY	8.93 D.U. / ACRE	

GROSS AREA COVERAGE

	SQUARE FEET	ACRES	% OF
BUILDING FOOTPRINTS	45,329	1.041	26%
LANDSCAPE AREA	91,221	2.094	52%
PAVED DRIVES AND PARKING	24,420	0.560	14%
SIDEWALKS / PATHS	3,692	0.085	2%
RIGHT OF WAY AREA	10,861	0.249	6%
TOTAL AREA:	175,503	4.029	100%

BUILDING A:

UNIT TYPE	UNIT QUANTITY	TOTAL BEDROOMS
THREE BEDROOM	7	21
TOTAL UNITS	7	21

BUILDING B:

UNIT TYPE	UNIT QUANTITY	TOTAL BEDROOMS
THREE BEDROOM	6	18
TOTAL UNITS	6	18

BUILDING C:

UNIT TYPE	UNIT QUANTITY	TOTAL BEDROOMS
THREE BEDROOM	7	21
TOTAL UNITS	7	21

BUILDING D:

UNIT TYPE	UNIT QUANTITY	TOTAL BEDROOMS
THREE BEDROOM	5	15
TOTAL UNITS	5	15

BUILDING E:

UNIT TYPE	UNIT QUANTITY	TOTAL BEDROOMS
THREE BEDROOM	4	12
TOTAL UNITS	4	12

BUILDING F:

UNIT TYPE	UNIT QUANTITY	TOTAL BEDROOMS
THREE BEDROOM	7	21
TOTAL UNITS	7	21

OFF-STREET PARKING

PER LUC SECTION 3.2.2(K)(1)(1)(a)(1.):
36 TOTAL UNITS

36 - 3 BR UNITS X 2.00 = 72 SPACES REQUIRED

SPACES PROVIDED:

71 GARAGE SPACES
4 STANDARD SPACES (9' X 17')
2 ADA SPACES (8' X 17')
77 SPACES PROVIDED

BICYCLE PARKING:

108 TOTAL BEDROOMS

REQUIRED:

1 SPACE PER BEDROOM	108 SPACES
60% ENCLOSED	65 SPACES
40% FIXED	43 SPACES

PROVIDED:

ENCLOSED	94 SPACES (LOCATED IN GARAGES)
FIXED RACKS	14 SPACES
TOTAL	108 SPACES

Legend:

- HANDICAP PARKING STALL
- EASEMENT LINE
- PROPERTY LINE
- MAIL KIOSK
- AC CONDENSER PAD
- GAS / ELECTRIC METER SCREEN WALL
- FIXED BIKE RACKS

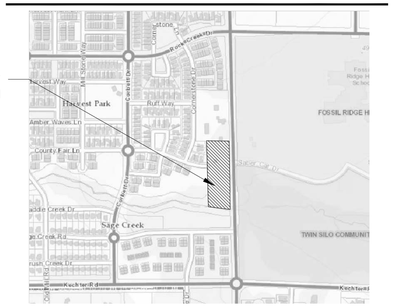
Legal Description:

THE PARK TOWNHOMES AT FOSSIL RIDGE.

Vicinity Map:

NOT TO SCALE NORTH

PROJECT LOCATION



Site Plan Notes:

1. REFER TO FINAL UTILITY PLANS FOR EXACT LOCATIONS OF STORM DRAINAGE STRUCTURES, UTILITY MAINS AND SERVICES.
2. REFER TO THE FINAL CIVIL ENGINEERING PLANS FOR DETAILED INFORMATION REGARDING PROPOSED TOPOGRAPHY, UTILITY AND STREET IMPROVEMENTS.
3. REFER TO THE SUBDIVISION PLAT AND UTILITY PLANS FOR EXACT LOCATIONS, AREAS AND DIMENSIONS OF ALL EASEMENTS, LOTS, TRACTS, STREETS, WALKS AND OTHER SURVEY INFORMATION.
4. ALL CONSTRUCTION WITH THIS DEVELOPMENT PLAN MUST BE COMPLETED IN ONE PHASE UNLESS A PHASING PLAN IS SHOWN WITH THESE PLANS.
5. THIS PDP RECEIVED MODIFICATIONS TO SECTIONS 3.5.2(E)(2) AND 3.5.2(D)(1).
6. ALL ROOFTOP AND GROUND MOUNTED MECHANICAL EQUIPMENT MUST BE SCREENED FROM VIEW FROM ADJACENT PROPERTY AND PUBLIC STREETS. IN CASES WHERE BUILDING PARAPETS DO NOT ACCOMPLISH SUFFICIENT SCREENING, THEN FREE-STANDING SCREEN WALLS MATCHING THE PREDOMINANT COLOR OF THE BUILDING SHALL BE CONSTRUCTED. OTHER MINOR EQUIPMENT SUCH AS CONDUIT, METERS AND PLUMBING VENTS SHALL BE SCREENED OR PAINTED TO MATCH SURROUNDING BUILDING SURFACES.
7. ALL LIGHTING FIXTURE ILLUMINATION LEVELS PROVIDED WITH THE DEVELOPMENT SHALL COMPLY WITH THE FOOT-CANDLE REQUIREMENTS IN SECTION 3.2.4 OF THE LAND USE CODE AND WITH CITY OF FORT COLLINS LIGHT AND POWER UTILITY REQUIREMENTS. ALL LIGHTING FIXTURES PROVIDED WITH THE DEVELOPMENT SHALL USE A CONCEALED, FULLY SHIELDED LIGHT SOURCE AND SHALL FEATURE SHARP CUT-OFF CAPABILITY SO AS TO MINIMIZE UP-LIGHT, SPILL LIGHT, GLARE AND UNNECESSARY DIFFUSION.
8. SIGNAGE AND ADDRESSING ARE NOT PERMITTED WITH THESE FINAL PLANS AND MUST BE APPROVED BY SEPARATE CITY PERMIT PRIOR TO CONSTRUCTION. SIGNS MUST COMPLY WITH CITY SIGN CODE UNLESS A SPECIFIC VARIANCE IS GRANTED BY THE CITY.
9. FIRE HYDRANTS MUST MEET OR EXCEED POUDRE FIRE AUTHORITY STANDARDS. ALL BUILDINGS MUST PROVIDE AN APPROVED FIRE EXTINGUISHING SYSTEM.
10. ALL BIKE RACKS PROVIDED MUST BE PERMANENTLY ANCHORED.
11. ALL SIDEWALKS AND RAMPS MUST CONFORM TO CITY STANDARDS. ACCESSABLE RAMPS MUST BE PROVIDED AT ALL STREET AND DRIVE INTERSECTIONS AND AT ALL DESIGNATED ACCESSABLE PARKING SPACES. ACCESSABLE PARKING SPACES MUST SLOPE NO MORE THAN 1:48 IN ANY DIRECTION. ALL ACCESSIBLE ROUTES MUST SLOPE NO MORE THAN 1:20 IN DIRECTION OF TRAVEL AND WITH NO MORE THAN 1:48 CROSS SLOPE.
12. PRIVATE CONDITIONS, COVENANTS, AND RESTRICTIONS (CC&R'S), OR ANY OTHER PRIVATE RESTRICTIVE COVENANT IMPOSED ON LANDOWNERS WITHIN THE DEVELOPMENT, MAY NOT BE CREATED OR ENFORCED HAVING THE EFFECT OF PROHIBITING OR LIMITING THE INSTALLATION OF XERISCAPE LANDSCAPING, SOLAR/PHOTO-VOLTAIC COLLECTORS (IF MOUNTED FLUSH UPON ANY ESTABLISHED ROOF LINE), CLOTHES LINES (IF LOCATED IN BACK YARDS), ODOR-CONTROLLED COMPOST BINS, OR WHICH HAVE THE EFFECT OF REQUIRING THAT A PORTION OF ANY INDIVIDUAL LOT BE PLANTED IN TURF GRASS.
13. 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.
14. PLEASE SEE SECTION 3.4.1 OF THE LAND USE CODE FOR ALLOWABLE USES WITHIN THE NATURAL HABITAT BUFFER ZONE. THE NATURAL HABITAT BUFFER ZONE IS INTENDED TO BE MAINTAINED IN A NATIVE LANDSCAPE.

Owner's Certification of Approval:

THE UNDERSIGNED DOES/DO HEREBY CERTIFY THAT I/WE ARE THE LAWFUL OWNERS OF REAL PROPERTY DESCRIBED ON THIS SITE PLAN AND DO HEREBY CERTIFY THAT I/WE ACCEPT THE CONDITIONS AND RESTRICTIONS SET FORTH ON SAID SITE PLAN.

IN WITNESS WHEREOF, WE HAVE HEREUNTO SET OUR HANDS AND SEALS THIS THE _____ DAY OF _____ 20_____.

BY:

_____

NOTARIAL CERTIFICATE

STATE OF COLORADO)

COUNTY OF _____)

THE FOREGOING INSTRUMENT WAS ACKNOWLEDGED BEFORE ME BY _____

THIS _____ DAY OF _____ 20_____.

MY COMMISSION EXPIRES:_____ _____
NOTARY PUBLIC

(SEAL)

Planning Approval:

BY THE DIRECTOR OF COMMUNITY DEVELOPMENT AND NEIGHBORHOOD SERVICES OF THE CITY OF FORT COLLINS, COLORADO THIS_____DAY OF _____ A.D., 20_____.

_____
DIRECTOR OF COMMUNITY DEVELOPMENT AND NEIGHBORHOOD SERVICES

Sheet Index:

0 30' 45' 60'
SCALE 1" = 30'-0"

NORTH

TB GROUP
landscape architecture | planning | illustration
444 Mountain Ave.
Berthoud,CO 80513
TEL 970.532.5891
WEB TBGroup.us

SEAL

PROJECT TITLE

THE PARK TOWNHOMES AT FOSSIL RIDGE

Fort Collins, Colorado

PREPARED FOR

Manhattan Land Company, LLC.
772 Whalers Way, Suite 200
Fort Collins CO 80525
Contact: Russell Baker
Phone: 970.267.7721

REVISIONS	DATE
Staff Comments	01-11-17
Staff Comments	02-15-17

DATE

OCTOBER 25, 2016

SHEET TITLE

Site Plan

SHEET INFORMATION

SHEET 1 OF 5

GENERAL LANDSCAPE NOTES

1. PLANT QUALITY: ALL PLANT MATERIAL SHALL BE A-GRADE OR NO. 1 GRADE - FREE OF ANY DEFECTS, OF NORMAL HEALTH, HEIGHT, LEAF DENSITY AND SPREAD APPROPRIATE TO THE SPECIES AS DEFINED BY THE AMERICAN ASSOCIATION OF NURSERYMEN (AAN) STANDARDS. ALL TREES SHALL BE BALL AND BURLAP OR EQUIVALENT.
2. IRRIGATION: ALL LANDSCAPE AREAS WITHIN THE SITE INCLUDING TURF, SHRUB BEDS AND TREE AREAS SHALL BE IRRIGATED WITH AN AUTOMATIC IRRIGATION SYSTEM. THE IRRIGATION PLAN MUST BE REVIEWED AND APPROVED BY THE CITY OF FORT COLLINS WATER UTILITIES DEPARTMENT PRIOR TO THE ISSUANCE OF A BUILDING PERMIT. ALL TURF AREAS SHALL BE IRRIGATED WITH AN AUTOMATIC POP-UP IRRIGATION SYSTEM. ALL SHRUB BEDS AND TREES, INCLUDING IN NATIVE SEED AREAS, SHALL BE IRRIGATED WITH AN AUTOMATIC DRIP (TRICKLE) IRRIGATION SYSTEM, OR WITH AN ACCEPTABLE ALTERNATIVE APPROVED BY THE CITY WITH THE IRRIGATION PLANS. THE IRRIGATION SYSTEM SHALL BE ADJUSTED TO MEET THE WATER REQUIREMENTS OF THE INDIVIDUAL PLANT MATERIAL.
3. TOPSOIL: TO THE MAXIMUM EXTENT FEASIBLE, TOPSOIL THAT IS REMOVED DURING CONSTRUCTION ACTIVITY SHALL BE CONSERVED FOR LATER USE ON AREAS REQUIRING REVEGETATION AND LANDSCAPING.
4. SOIL AMENDMENTS: SOIL AMENDMENTS SHALL BE PROVIDED AND DOCUMENTED IN ACCORDANCE WITH CITY CODE SECTION 12-132. THE SOIL IN ALL LANDSCAPE AREAS, INCLUDING PARKWAYS AND MEDIANS, SHALL BE THOUGHLY 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. PRIOR TO THE ISSUANCE OF ANY CERTIFICATE OF OCCUPANCY, A WRITTEN CERTIFICATION MUST BE SUBMITTED TO THE CITY THAT ALL PLANTED AREAS, OR AREAS TO BE PLANTED, HAVE BEEN THOROUGHLY LOOSENED AND THE SOIL AMENDED, CONSISTENT WITH THE REQUIREMENTS SET FORTH IN SECTION 12-132.
5. INSTALLATION AND GUARANTEE: ALL LANDSCAPING SHALL BE INSTALLED ACCORDING TO SOUND HORTICULTURAL PRACTICES IN A MANNER DESIGNED TO ENCOURAGE QUICK ESTABLISHMENT AND HEALTHY GROWTH. ALL LANDSCAPING FOR EACH PHASE MUST BE EITHER INSTALLED OR THE INSTALLATION MUST BE 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 FOR ANY BUILDING IN SUCH PHASE.
6. MAINTENANCE: TREES AND VEGETATION, IRRIGATION SYSTEMS, FENCES, WALLS AND OTHER LANDSCAPE ELEMENTS WITH THESE FINAL PLANS SHALL BE CONSIDERED AS ELEMENTS OF THE PROJECT IN THE SAME MANNER AS PARKING, BUILDING MATERIALS AND OTHER SITE DETAILS. THE APPLICANT, LANDOWNER OR SUCCESSORS IN INTEREST SHALL BE JOINTLY AND SEVERALLY RESPONSIBLE FOR THE REGULAR MAINTENANCE OF ALL LANDSCAPING ELEMENTS IN GOOD CONDITION. ALL LANDSCAPING SHALL BE MAINTAINED FREE FROM DISEASE, PESTS, WEEDS AND LITTER, AND ALL LANDSCAPE STRUCTURES SUCH AS FENCES AND WALLS SHALL BE REPAIRED AND REPLACED PERIODICALLY TO MAINTAIN A STRUCTURALLY SOUND CONDITION.
7. REPLACEMENT: ANY LANDSCAPE ELEMENT THAT DIES, OR IS OTHERWISE REMOVED, SHALL BE PROMPTLY REPLACED IN ACCORDANCE WITH THE REQUIREMENTS OF THESE PLANS.
8. 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, SANITARY AND STORM SEWER MAIN LINES
   6 FEET BETWEEN TREES AND PUBLIC WATER, SANITARY AND STORM SEWER SERVICE LINES.
   4 FEET BETWEEN SHRUBS AND PUBLIC WATER AND SANITARY AND STORM SEWER LINES
   4 FEET BETWEEN TREES AND GAS LINES
9. ALL STREET TREES SHALL BE PLACED A MINIMUM EIGHT (8) FEET AWAY FROM THE EDGES OF DRIVEWAYS AND ALLEYS PER LUC 3.2.1(D)(2)(A).
10. PLACEMENT OF ALL LANDSCAPING SHALL BE IN ACCORDANCE WITH THE SIGHT DISTANCE CRITERIA AS SPECIFIED BY THE CITY OF FORT COLLINS. NO STRUCTURES OR LANDSCAPE ELEMENTS GREATER THAN 24" SHALL BE ALLOWED WITHIN THE SIGHT DISTANCE TRIANGLE OR EASEMENTS WITH THE EXCEPTION OF DECIDUOUS TREES PROVIDED THAT THE LOWEST BRANCH IS AT LEAST 6' FROM GRADE. ANY FENCES WITHIN THE SIGHT DISTANCE TRIANGLE OR EASEMENT MUST BE NOT MORE THAN 42" IN HEIGHT AND OF AN OPEN DESIGN.
11. COMMON OPEN SPACE AREAS AND LANDSCAPING WITHIN RIGHT OF WAYS, STREET MEDIANS, AND TRAFFIC CIRCLES ADJACENT TO COMMON OPEN SPACE AREAS ARE REQUIRED TO BE MAINTAINED BY A PROPERTY OWNERS ASSOCIATION. THE PROPERTY OWNERS ASSOCIATION IS RESPONSIBLE FOR SNOW REMOVAL ON ALL ADJACENT STREET SIDEWALKS AND ON ALL DRIVEWAYS, PRIVATE DRIVES AND PARKING AREAS WITHIN THE DEVELOPMENT.
12. THE DEVELOPER SHALL ENSURE THAT THE FINAL LANDSCAPE PLAN IS COORDINATED WITH ALL OTHER FINAL PLAN ELEMENTS SO THAT THE PROPOSED GRADING, STORM DRAINAGE, AND OTHER DEVELOPMENT IMPROVEMENTS DO NOT CONFLICT WITH NOR PRECLUDE INSTALLATION AND MAINTENANCE OF LANDSCAPE ELEMENTS ON THIS PLAN.
13. MINOR CHANGES IN SPECIES AND PLANT LOCATIONS MAY BE MADE DURING CONSTRUCTION -- AS REQUIRED BY SITE CONDITIONS OR PLANT AVAILABILITY. OVERALL QUANTITY, QUALITY, AND DESIGN CONCEPT MUST BE CONSISTENT WITH THE APPROVED PLANS. IN THE EVENT OF CONFLICT WITH THE QUANTITIES INCLUDED IN THE PLANT LIST, SPECIES AND QUANTITIES ILLUSTRATED SHALL BE PROVIDED. ALL CHANGES OF PLANT SPECIES AND LOCATION MUST HAVE WRITTEN APPROVAL BY THE CITY PRIOR TO INSTALLATION.
14. ALL PLANTING BEDS SHALL BE MULCHED TO A MINIMUM DEPTH OF THREE INCHES.
15. IRRIGATED TURF SHALL BE TEXAS BLUEGRASS/KENTUCKY BLUEGRASS HYBRID REVEILLE OR APPROVED EQUAL.
16. EDGING BETWEEN GRASS AND SHRUB BEDS SHALL BE 18" X 4" STEEL SET LEVEL WITH TOP OF SOD OR APPROVED EQUAL.
17. LANDSCAPING AND IRRIGATION WITHIN THE BUFFER ZONE ENHANCEMENT AREA SHALL BE ESTABLISHED AND MAINTAINED FOR A PERIOD OF AT LEAST THREE YEARS UNTIL IT REACHES AN AGREED UPON LEVEL OF SUCCESS, AT WHICH POINT THE CONTINUED MAINTENANCE WILL BE TURNED OVER TO STORMWATER. THE ESTABLISHMENT & MAINTENANCE PERIOD MAY BE EXTENDED PAST 3 YEARS BY THE CITY TO ENSURE THE REQUIRED LEVEL OF ESTABLISHMENT HAS OCCURRED. PRIOR TO THE AREA BEING TURNED OVER FOR MAINTENANCE TO STORMWATER THE DEVELOPMENT SHALL CONTACT CITY REPRESENTATIVES FROM STORMWATER, FORESTRY AND ENVIRONMENTAL PLANNING FOR A SITE INSPECTION. THE LEVEL OF ESTABLISHMENT MUST BE APPROVED BY THE CITY PRIOR TO THE MAINTENANCE BEING TRANSFERRED TO STORMWATER. ALL SHADE AND EVERGREEN TREES NEED TO BE IN PLACE AND ESTABLISHED.
18. IRRIGATION PLANS ARE SUBJECT TO REVIEW AND APPROVAL BY THE CITY PRIOR TO ISSUANCE OF ANY BUILDING PERMIT.
19. WITHIN THE BUFFER ZONE ENHANCEMENT AREA SHRUBS SHALL HAVE 3 DRIP EMITTERS AND TREES SHALL HAVE 5 DRIP EMITTERS. MULCH BASINS SHALL BE 5"-6" HIGH.
20. NATURAL HABITAT AREA IS MEANT TO BE MAINTAINED IN A NATIVE LANDSCAPE.
21. REFER TO SECTION 3.4.1 OF THE CITY OF FORT COLLINS LAND USE CODE FOR ALLOWABLE USES WITHIN THE BUFFER ZONE ENHANCEMENT ZONE.

STREET TREE NOTES

1. A PERMIT MUST BE OBTAINED FROM THE CITY FORESTER BEFORE ANY TREES OR SHRUBS AS NOTED ON THIS PLAN ARE PLANTED, PRUNED OR REMOVED IN THE PUBLIC RIGHT-OF-WAY. THIS INCLUDES ZONES BETWEEN THE SIDEWALK AND CURB, MEDIANS AND OTHER CITY PROPERTY. THIS PERMIT SHALL APPROVE THE LOCATION AND SPECIES TO BE PLANTED. FAILURE TO OBTAIN THIS PERMIT IS A VIOLATION OF THE CITY OF FORT COLLINS CODE SUBJECT TO CITATION (SECTION 27-31) AND MAY ALSO RESULT IN REPLACING OR RELOCATING TREES AND A HOLD ON CERTIFICATE OF OCCUPANCY.

2. CONTACT THE CITY FORESTER TO INSPECT ALL STREET TREE PLANTINGS AT THE COMPLETION OF EACH PHASE OF THE DEVELOPMENT. ALL MUST BE INSTALLED AS SHOWN ON THE LANDSCAPE PLAN. APPROVAL OF STREET TREE PLANTING IS REQUIRED BEFORE FINAL APPROVAL OF EACH PHASE.

3. STREET LANDSCAPING, INCLUDING STREET TREES, SHALL BE SELECTED IN ACCORDANCE WITH ALL CITY CODES AND POLICIES. ALL TREE PRUNING AND REMOVAL WORKS SHALL BE PERFORMED BY A CITY OF FORT COLLINS LICENSED ARBORS WHERE REQUIRED BY CODE.STREET TREES SHALL BE SUPPLIED AND PLANTED BY THE DEVELOPER USING A QUALIFIED LANDSCAPE CONTRACTOR.

4. THE DEVELOPER SHALL REPLACE DEAD OR DYING STREET TREES AFTER PLANTING UNTIL FINAL MAINTENANCE INSPECTION AND ACCEPTANCE BY THE CITY OF FORT COLLINS FORESTRY DIVISION. ALL STREET TREES IN THE PROJECT MUST BE ESTABLISHED, WITH AN APPROVED SPECIES AND OF ACCEPTABLE CONDITION PRIOR TO ACCEPTANCE.

5. SUBJECT TO APPROVAL BY THE CITY FORESTER -- STREET TREE LOCATIONS MAY BE ADJUSTED TO ACCOMMODATE DRIVEWAY LOCATIONS, UTILITY SEPARATIONS BETWEEN TREES, STREET SIGNS AND STREET LIGHTS. STREET TREES TO BE CENTERED IN THE MIDDLE OF THE LOT TO THE EXTENT FEASIBLE. QUANTITIES SHOWN ON PLAN MUST BE INSTALLED UNLESS A REDUCTION IS APPROVED BY THE CITY TO MEET SEPARATION STANDARDS.

TREE PROTECTION NOTES

1. ALL EXISTING TREES WITHIN THE LIMITS OF THE DEVELOPMENT AND WITHIN ANY NATURAL AREA BUFFER ZONES SHALL REMAIN AND BE PROTECTED UNLESS NOTED ON THESE PLANS FOR REMOVAL.
2. WITHIN THE DRIP LINE OF ANY PROTECTED EXISTING TREE, THERE SHALL BE NO CUT OR FILL OVER A FOUR-INCH DEPTH UNLESS A QUALIFIED ARBORIST OR FORESTER HAS EVALUATED AND APPROVED THE DISTURBANCE.
3. ALL PROTECTED EXISTING TREES SHALL BE PRUNED TO THE CITY OF FORT COLLINS FORESTRY STANDARDS. TREE PRUNING AND REMOVAL SHALL BE PERFORMED BY A BUSINESS THAT HOLDS A CURRENT CITY OF FORT COLLINS ARBORIST LICENSE WHERE REQUIRED BY CODE.
4. 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-POSTS, NO CLOSER THAN SIX (6) FEET FROM THE TRUNK OR ONE-HALF (½) OF THE DRIP LINE, WHICHEVER IS GREATER. THERE SHALL BE NO STORAGE OR MOVEMENT OF EQUIPMENT, MATERIAL, DEBRIS OR FILL WITHIN THE FENCED TREE PROTECTION ZONE.
5. 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 ANY PROTECTED TREE OR GROUP OF TREES.
6. NO DAMAGING ATTACHMENT, WIRES, SIGNS OR PERMITS MAY BE FASTENED TO ANY PROTECTED TREE.
7. 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 IN SUBSECTION (G)(3) ABOVE. THIS MAY BE ACCOMPLISHED BY PLACING METAL T-POST STAKES A MAXIMUM OF FIFTY (50) FEET APART AND TYING RIBBON OR ROPE FROM STAKE-TO-STAKE ALONG THE OUTSIDE PERIMETERS OF SUCH AREAS BEING CLEARED.
8. THE INSTALLATION OF UTILITIES, 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 MINIMUM DEPTH OF TWENTY-FOUR (24) INCHES. THE AUGER DISTANCE IS ESTABLISHED FROM THE FACE OF THE TREE (OUTER BARK) AND IS SCALED FROM TREE DIAMETER AT BREAST HEIGHT AS DESCRIBED IN THE CHART BELOW:

TREE DIAMETER AT BREAST HEIGHT (INCHES)	AUGER DISTANCE FROM FACE OF TREE (FEET)
0-2	1
3-4	2
5-9	5
10-14	10
15-19	12
OVER 19	15

9. ALL TREE REMOVAL SHOWN SHALL BE COMPLETED OUTSIDE OF THE SONGBIRD NESTING SEASON (FEB 1 - JULY 31) OR CONDUCT A SURVEY OF TREES ENSURING NO ACTIVE NESTS IN THE AREA.

Hydrozone Table

ZONE	AREA		WATER USE	GALLONS
HIGH	0	SF	18 GAL/SF	0 GAL
MODERATE	19,902	SF	10 GAL/SF	199,020 GAL
LOW	5,533	SF	3 GAL/SF	16,599 GAL
VERY LOW	6,909	SF	0 GAL/SF	0 GAL
TOTAL / AVERAGE	32,344	SF	215,619 GAL	6.66 GAL/SF

A PERMIT MUST BE OBTAINED FROM THE CITY FORESTER BEFORE ANY TREES OR SHRUBS AS NOTED ON THIS PLAN ARE PLANTED, PRUNED OR REMOVED IN THE PUBLIC RIGHT-OF-WAY. THIS INCLUDES ZONES BETWEEN THE SIDEWALK AND CURB, MEDIANS AND OTHER CITY PROPERTY. THIS PERMIT SHALL APPROVE THE LOCATION AND SPECIES TO BE PLANTED. FAILURE TO OBTAIN THIS PERMIT IS A VIOLATION OF THE CITY OF FORT COLLINS CODE SUBJECT TO CITATION (SECTION 27-31) AND MAY ALSO RESULT IN REPLACING OR RELOCATING TREES AND A HOLD ON CERTIFICATE OF OCCUPANCY.

Natural Habitat Buffer Zone Statistics

100' OFFSET = 33,620 SF 0.77 AC

THE 100' OFFSET IS THE AREA THAT WOULD TYPICALLY BE THE REQUIRED BUFFER FROM THE EDGE OF WETLANDS.

PROPOSED HABITAT BUFFER = 26,181 SF 0.60 AC

MINIMUM WIDTH OF BUFFER FROM WETLANDS = APPROXIMATELY 45'
MAXIMUM WIDTH OF BUFFER FROM WETLANDS = APPROXIMATELY 121'
AVERAGE WIDTH OF BUFFER FROM WETLANDS = APPROXIMATELY 83'

THE HABITAT BUFFER IS INTENDED TO REPLACE THE AREA DEFINED BY THE 100' OFFSET. THE PROPOSED BUFFER AREA WILL BE EVALUATED BASED ON PERFORMANCE STANDARDS.

NOTES:
1. PROPOSED WETLANDS BUFFER EXCLUDES ALL AREAS OF ENCROACHMENT INCLUDING BUILDINGS, TRASH ENCLOSURES AND PARKING LOTS .
2. PLEASE SEE SECTION 3.4.1 OF THE LAND USE CODE FOR ALLOWABLE USES WITHIN THE NATURAL HABITAT BUFFER ZONE.

Native Grass Seed Mix

NATIVE GRASS - UPLAND CITY OF FORT COLLINS MIX:

1. SEED SHALL BE AS MANUFACTURED BY ARKANSAS VALLEY SEED SOLUTIONS, 4625 COLORADO BOULEVARD, DENVER, CO 80216, (877) 957-3337.
2. SEED SHALL BE A MIXTURE THAT MATCHES THE FOLLOWING:

NON-IRRIGATED UPLAND MIX

COMMON NAME	SEEDING RATE (PLS LBS/ACRE-DRILL RATE)
BEEPLANT	1.08
HAIRY GOLDENASTER	0.36
PURPLE PRAIRIE CLOVER	0.41
WALLFLOWER	0.11
ANNUAL SUNFLOWER	2.07
DOTTED GAYFEATHER	0.73
BLUE FLAX	0.41
PRAIRIE ASTER	0.25
MEXICAN HAT	0.10
AMERICAN VETCH	6.10
SIDEOATS GRAMA	0.96
BUFFALOGRASS	3.27
BLUE GRAMA	0.22
PRAIRIE DROPSEED	0.67
NEEDLE AND THREAD	1.59
SWITCH GRASS	0.47
WESTERN WHEATGRASS	1.66
SAND DROPSEED	0.04
SIX WEEKS FESCUE	0.19

3. NATIVE SEED AREAS: ADEQUATE TEMPORARY IRRIGATION WILL BE PROVIDED FOR THE ESTABLISHMENT AND MAINTENANCE FOR THESE SEEDED AREAS, AND THAT NATIVE GRASSES SHALL BE MAINTAINED IN A CONDITION OF ACCEPTABLE HEIGHT, FREE OF WEEDS, TRASH AND DEBRIS, AND SHALL NOT REPRESENT A FIRE HAZARD NOR BECOME A NUISANCE SITE FOR WATER OR WIND EROSION.

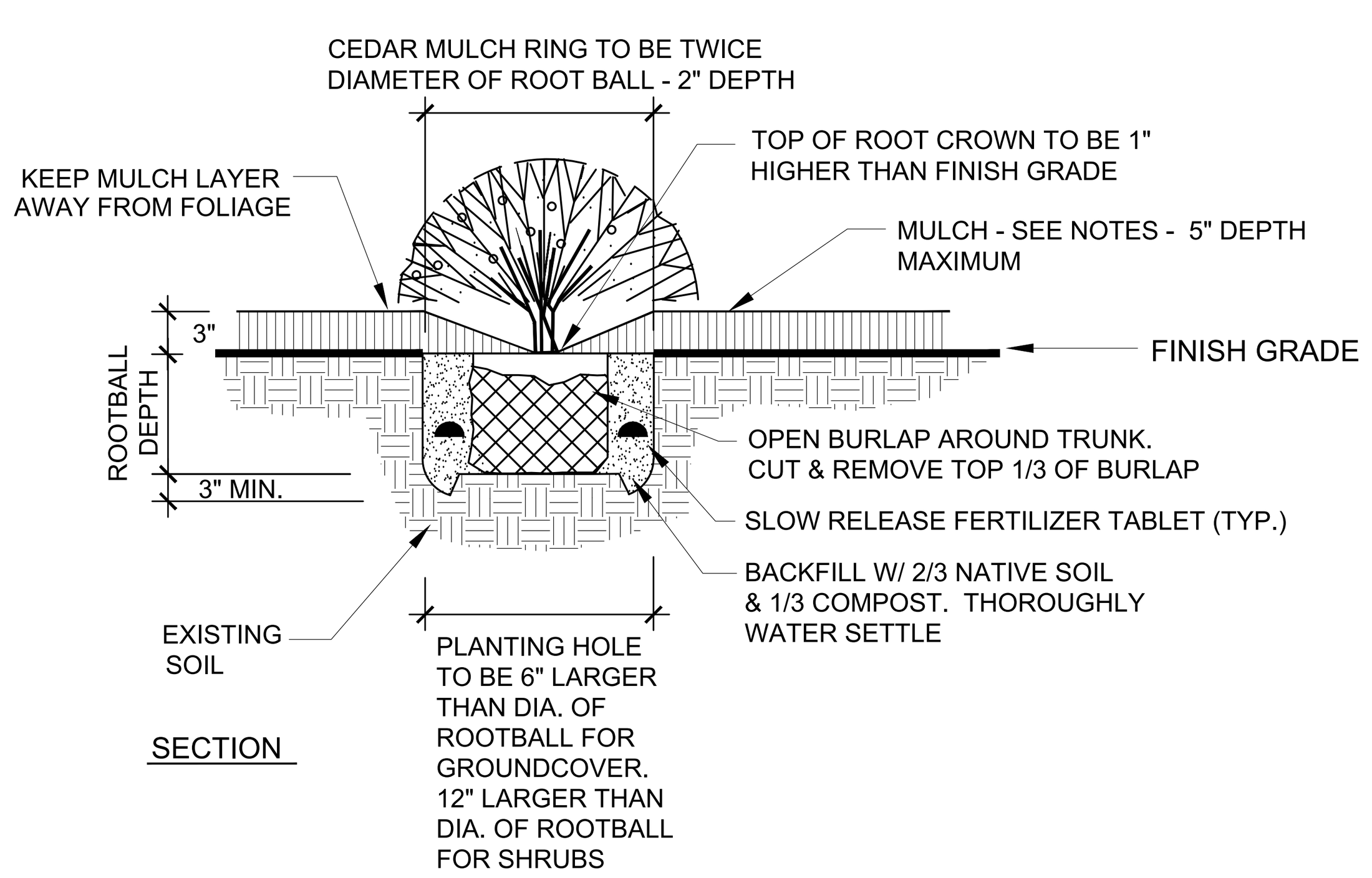
MULCH IN ALL NATIVE SEED AREAS:

1. IMMEDIATELY FOLLOWING THE RAKING OPERATION, ADD STRAW MULCH TO THE SEEDED AREAS.
2. APPLY STRAW MULCH AT A MINIMUM OF 1.5 TONS PER ACRE OF AIR DRY MATERIAL. SPREAD STRAW MULCH UNIFORMLY OVER THE AREA WITH MECHANICAL MULCH SPREADER / CRIMPER. DO NOT MULCH WHEN WIND VELOCITY EXCEEDS 10 MPH.
3. WHEREVER THE USE OF CRIMPING EQUIPMENT IS PRACTICAL, PLACE MULCH IN THE MANNER NOTED ABOVE AND ANCHOR IT INTO THE SOIL. USE A DISC SUCH AS A MULCH TILLER, WITH A FLAT SERRATED DISC AT LEAS ¼ INCH IN THICKNESS, HAVING DULL EDGES, AND SPACE NO MORE THAN 9 INCHES APART, WITH DISCS OF SUFFICIENT DIAMETER TO PREVENT THE FRAME OF THE EQUIPMENT FROM DRAGGING THE MULCH. ANCHOR MULCH A MINIMUM DEPTH OF 2 INCHES AND ACROSS THE SLOPE WHERE PRACTICAL WITH NO MORE THAN TWO PASSES OF THE ANCHORING EQUIPMENT.
4. IMMEDIATELY UPON COMPLETION OF THE MULCHING AND BINDING OPERATION, THE SEEDED AREAS SHALL BE IRRIGATED, KEEPING THE TOP 2 INCHES OF SOIL EVENLY MOIST UNTIL SEED HAS UNIFORMLY GERMINATED AND GROWN TO A HEIGHT OF 2-INCHES.
5. WATERING APPLICATION SHALL BE DONE IN A MANNER WHICH WILL PROVIDE UNIFORM COVERAGE BUT WHICH WILL NOT CAUSE EROSION, MOVEMENT, OR DAMAGE TO THE FINISHED SURFACE.

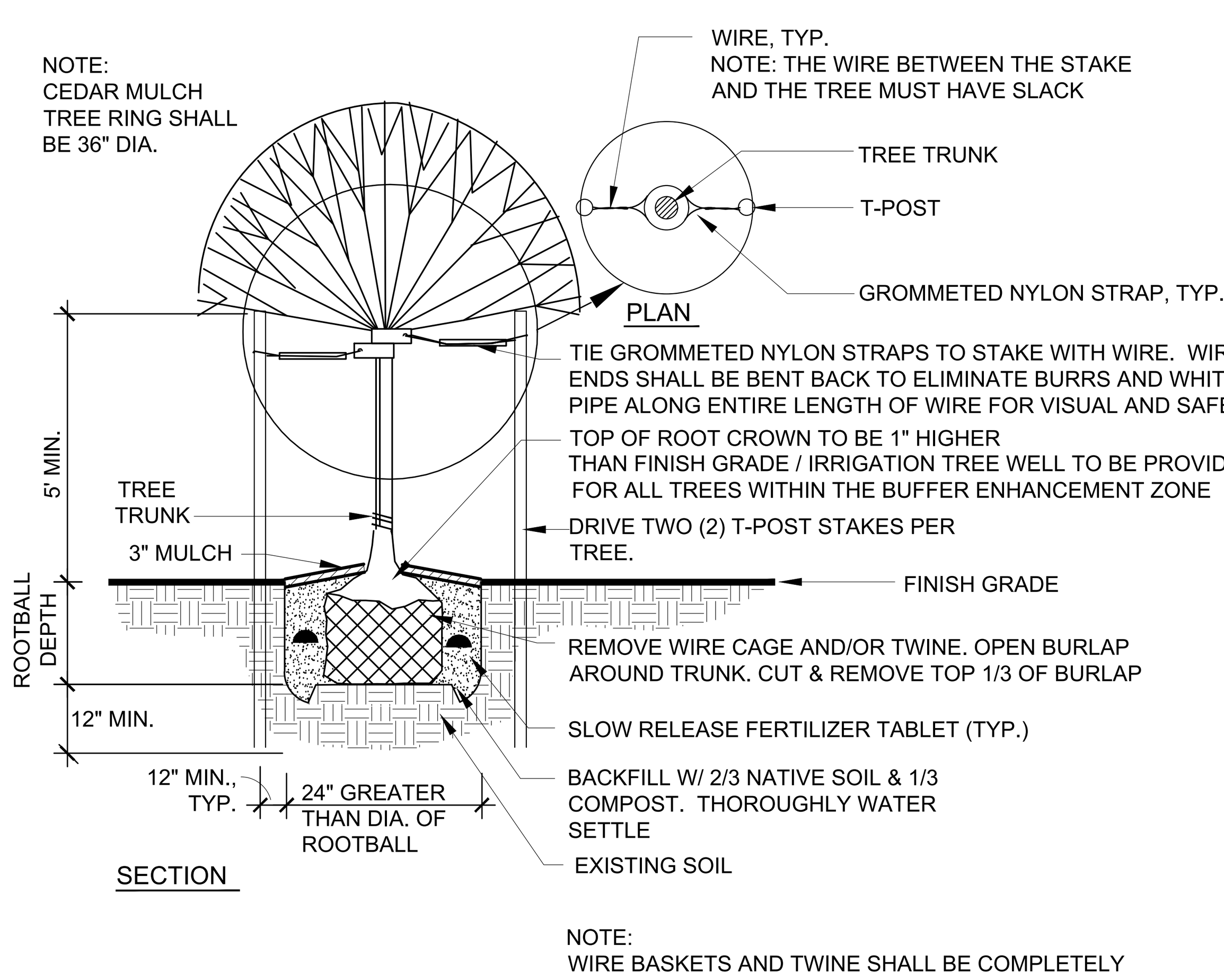
Plant List

KEY	QTY	RATIO	COMMON NAME	BOTANICAL NAME	HEIGHT	WIDTH	SIZE	INSTALLATION NOTES
SHADE / CANOPY TREES -		**33**						
	5	5.2%	CATALPA (mitigation tree)	Catalpa speciosa	60'	50'	3" cal. BB	BALANCED, WELL BRANCHED W/ STRAIGHT TRUNK & CENTRAL LEADER
	5	5.2%	COFFEE TREE, KENTUCY (mitigation tree)	Gymnocladus dioicus	50'	40'	3" cal. BB	BALANCED, WELL BRANCHED W/ STRAIGHT TRUNK & CENTRAL LEADER
	2	2.1%	COTTONWOOD, LANCELEAF (mitigation tree)	Populus x acuminata	50'	35'	3" cal. BB	BALANCED, WELL BRANCHED W/ STRAIGHT TRUNK & CENTRAL LEADER
	2	2.1%	COTTONWOOD, PLAINS (mitigation tree)	Populus sargentii ssp. Monilifera	70'	55'	3" cal. BB	BALANCED, WELL BRANCHED W/ STRAIGHT TRUNK & CENTRAL LEADER
	4	4.1%	HONEYLOCUST, IMPERIAL (mitigation tree)	Gleditsia triacanthos inermis 'Imperial'	40'	40'	3" cal. BB	BALANCED, WELL BRANCHED W/ STRAIGHT TRUNK & CENTRAL LEADER
	6	6.2%	LINDEN, AMERICAN (mitigation tree)	Tilian americana 'Redmond'	50'	40'	3" cal. BB	BALANCED, WELL BRANCHED W/ STRAIGHT TRUNK & CENTRAL LEADER
	9	13.6%	OAK, BUR (mitigation tree)	Quercus macrocarpa	60'	60'	3" cal. BB	BALANCED, WELL BRANCHED W/ STRAIGHT TRUNK & CENTRAL LEADER
EVERGREEN TREES -		**33**						
	9	9.3%	PINE, PONDEROSA	Pinus ponderosa	60'	35'	6' BB	FULL SPECIMEN, EVENLY AND WELL BRANCHED W/ STRAIGHT TRUNK & TOP LEADER
	12	12.4%	PINE, TANNENBAUM MUGO	Pinus mugo 'Tannenbaum	15'	8'	6' BB	FULL SPECIMEN, EVENLY AND WELL BRANCHED W/ STRAIGHT TRUNK & TOP LEADER
	12	12.4%	SPRUCE, FASTIGIATE NORWAY	Picea abies 'Cupessina'	15'	6'	6' BB	FULL SPECIMEN, EVENLY AND WELL BRANCHED W/ STRAIGHT TRUNK & TOP LEADER
ORNAMENTAL TREES -		**31**						
	1	1.0%	CRABAPPLE, PRAIRIEFIRE	Malus 'Prairiefire'	15'	15'	1.5" cal. BB	BALANCED, WELL BRANCHED W/ STRAIGHT TRUNK & CENTRAL LEADER
	10	10.3%	CRABAPPLE, PRAIRIEFIRE (mitigation tree)	Malus 'Prairiefire'	15'	15'	2.5" cal. BB	BALANCED, WELL BRANCHED W/ STRAIGHT TRUNK & CENTRAL LEADER
	11	11.3%	MAPLE, HOT WINGS	Acer tataricum 'Hot Wings'	15'	15'	1.5" cal. BB	BALANCED, WELL BRANCHED W/ STRAIGHT TRUNK & CENTRAL LEADER
	5	5.2%	PEAR, KOREAN WILD (mitigation tree)	Pyrus fauriei Korean Sun	12'	12'	1.5" cal. BB	BALANCED, WELL BRANCHED W/ STRAIGHT TRUNK & CENTRAL LEADER
	1	1.0%	PEAR, KOREAN WILD	Pyrus fauriei Korean Sun	12'	12'	2.5" cal. BB	BALANCED, WELL BRANCHED W/ STRAIGHT TRUNK & CENTRAL LEADER
	3	3.1%	SERVICEBERRY, AUTUMN BRILLANCE	Amelanchier grandiflora 'Autumn Brillance'	20'	20'	1.5" cal. BB	BALANCED, WELL BRANCHED W/ STRAIGHT TRUNK & CENTRAL LEADER
EVERGREENS SHRUBS-		**8**						
	8	-	JUNIPER, ROCKY MOUNTAIN*	Juniperus scopulorum	25'	10'	1 Gallon	FULL SPECIMEN, EVENLY AND WELL BRANCHED W/ STRAIGHT TRUNK & TOP LEADER
DECIDUOUS SHRUBS -		**201**						
	4	-	CHOKEBERRY, BRILLIANT RED	Aronia arbutifolia 'Brilliantissima'	6'	6'	5 Gallon	24" (h) FULL SPECIMEN, EVENLY AND WELL BRANCHED
	6	-	CURRANT, GOLDEN*	Ribes aureum	5'	5'	1 Gallon	12" (h) FULL SPECIMEN, EVENLY AND WELL BRANCHED
	49	-	DOGWOOD, ARCTIC FIRE	Cornus sericea Arctic Fire	4'	4'	5 Gallon	12" (h) FULL SPECIMEN, EVENLY AND WELL BRANCHED
	3	-	DOGWOOD, ARCTIC FIRE*	Cornus sericea Arctic Fire	4'	4'	1 Gallon	12" (h) FULL SPECIMEN, EVENLY AND WELL BRANCHED
	6	-	EUONYMUS, COMPACT BURNING BUSH	Euonymus alatus compacta	7'	7'	5 Gallon	12" (h) FULL SPECIMEN, EVENLY AND WELL BRANCHED
	30	-	LEADPLANT*	Amorpha canescens	3'	3'	5 Gallon	24" (h) FULL SPECIMEN, EVENLY AND WELL BRANCHED
	6	-	LILAC, DWARF KOREAN	Syringa meyeri 'Palibin'	4'	4'	5 Gallon	24" (h) FULL SPECIMEN, EVENLY AND WELL BRANCHED
	30	-	MOCKORANGE, SNOWBELLE	Philadelphus x 'Snowbelle'	4'	4'	5 Gallon	24" (h) FULL SPECIMEN, EVENLY AND WELL BRANCHED
	3	-	PLUM, AMERICAN	Prunus americana	15'	10'	5 Gallon	24" (h) FULL SPECIMEN, EVENLY AND WELL BRANCHED
	7	-	RABBITBRUSH, TALL GREEN*	Ericameria nauseosa spp.nauseosa var. glabrata	4'	4'	1 Gallon	18" (h) FULL SPECIMEN, EVENLY AND WELL BRANCHED
	40	-	SPIREA, BLUE MIST	Caryopteris x clandonensis 'Blue Mist'	4'	3'	5 Gallon	24" (h) FULL SPECIMEN, EVENLY AND WELL BRANCHED
	9	-	SUMAC, THREE LEAF	Rhus trilobata	5'	5'	5 Gallon	24" (h) FULL SPECIMEN, EVENLY AND WELL BRANCHED
	8	-	SUMAC, THREE LEAF*	Rhus trilobata	5'	5'	1 Gallon	24" (h) FULL SPECIMEN, EVENLY AND WELL BRANCHED
PERENNIALS / GRASSES -		**229**						
	8	-	DAYLILY, RED	Hmemerocallis 'Autumn Red'	2'	2'	1 Gallon	WELL ROOTED AND ESTABLISHED
	35	-	GRASS, AVENA	Helichtotrichon sempervirens	2'	2'	1 Gallon	WELL ROOTED AND ESTABLISHED
	95	-	GRASS, GRAMA BLONDE AMBITION GRAMA	Bouteloua gracilis 'Blonde Ambition'	2'	2'	1 Gallon	WELL ROOTED AND ESTABLISHED
	68	-	GRASS, FEATHER REED	Calamagrostis acutiflora 'Karl Foerster'	4'	2'	1 Gallon	WELL ROOTED AND ESTABLISHED
	23	-	GRASS, HEAVY METAL BLUE SWITCH	Panicum virgatum 'Heavy Metal'	3'	18"	1 Gallon	WELL ROOTED AND ESTABLISHED

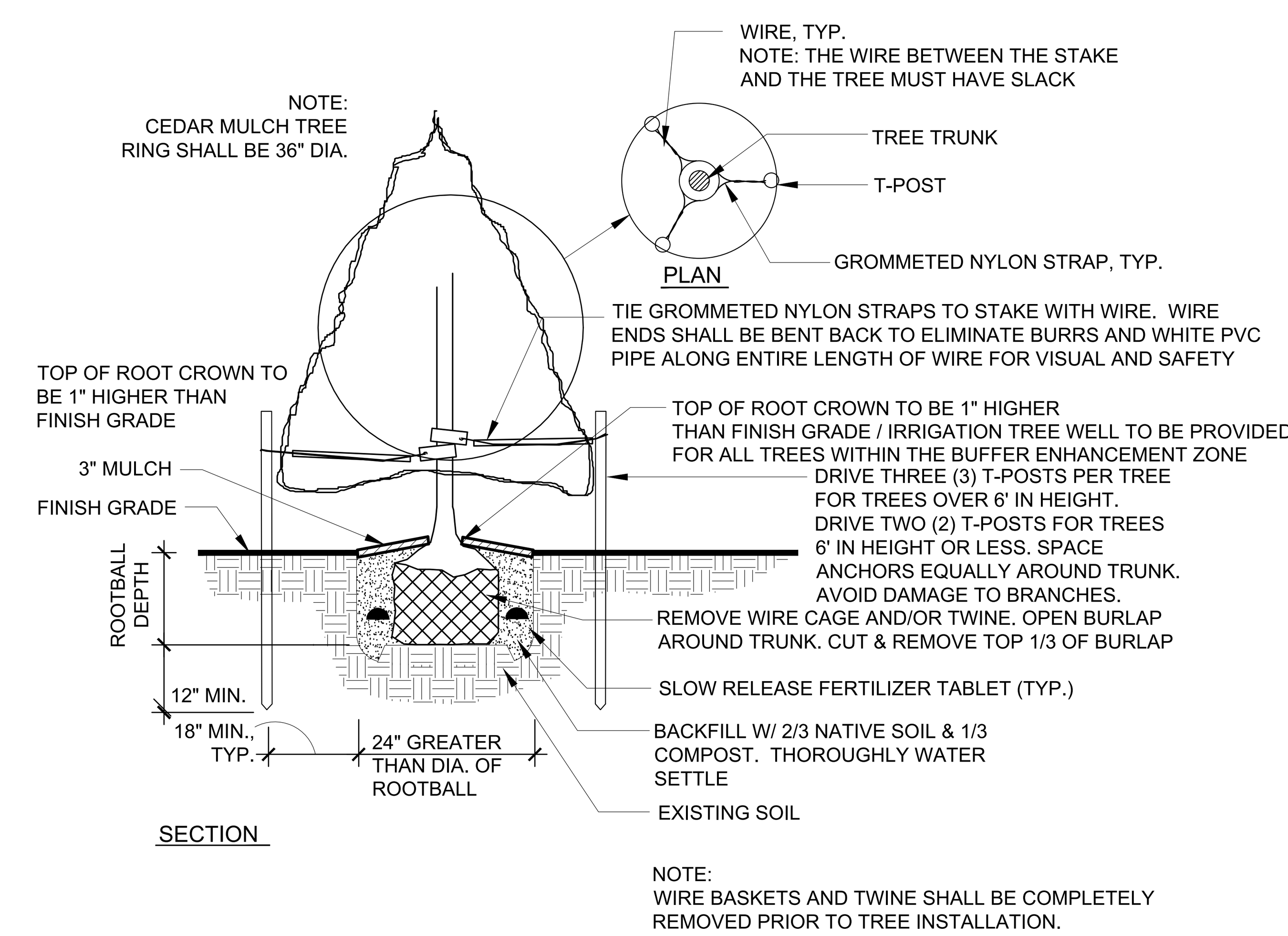
*SHRUBS LOCATED WITHIN THE NATURAL HABITAT ZONE SPECIFIED AT 1 GALLON TO CREATE DIVERSITY IN PLANT MATERIAL SIZES FOR HABITAT FORMATION. TREES WITHIN THIS BOUNDARY TO INCLUDE 'UPSIZED' MITIGATION TREES.



GROUND COVER & SHRUB PLANTING DETAIL



DECIDUOUS TREE PLANTING DETAIL



CONIFER TREE PLANTING DETAIL

TB GROUP
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444 Mountain Ave.
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SEAL

PROJECT TITLE

THE PARK TOWNHOMES AT FOSSIL RIDGE

Fort Collins, Colorado

PREPARED FOR

Manhattan Land Company, LLC.
772 Whalers Way, Suite 200
Fort Collins CO 80525
Contact: Russell Baker
Phone: 970.267.7721

REVISIONS	DATE
Staff Comments	01-11-17
Staff Comments	02-15-17

DATE

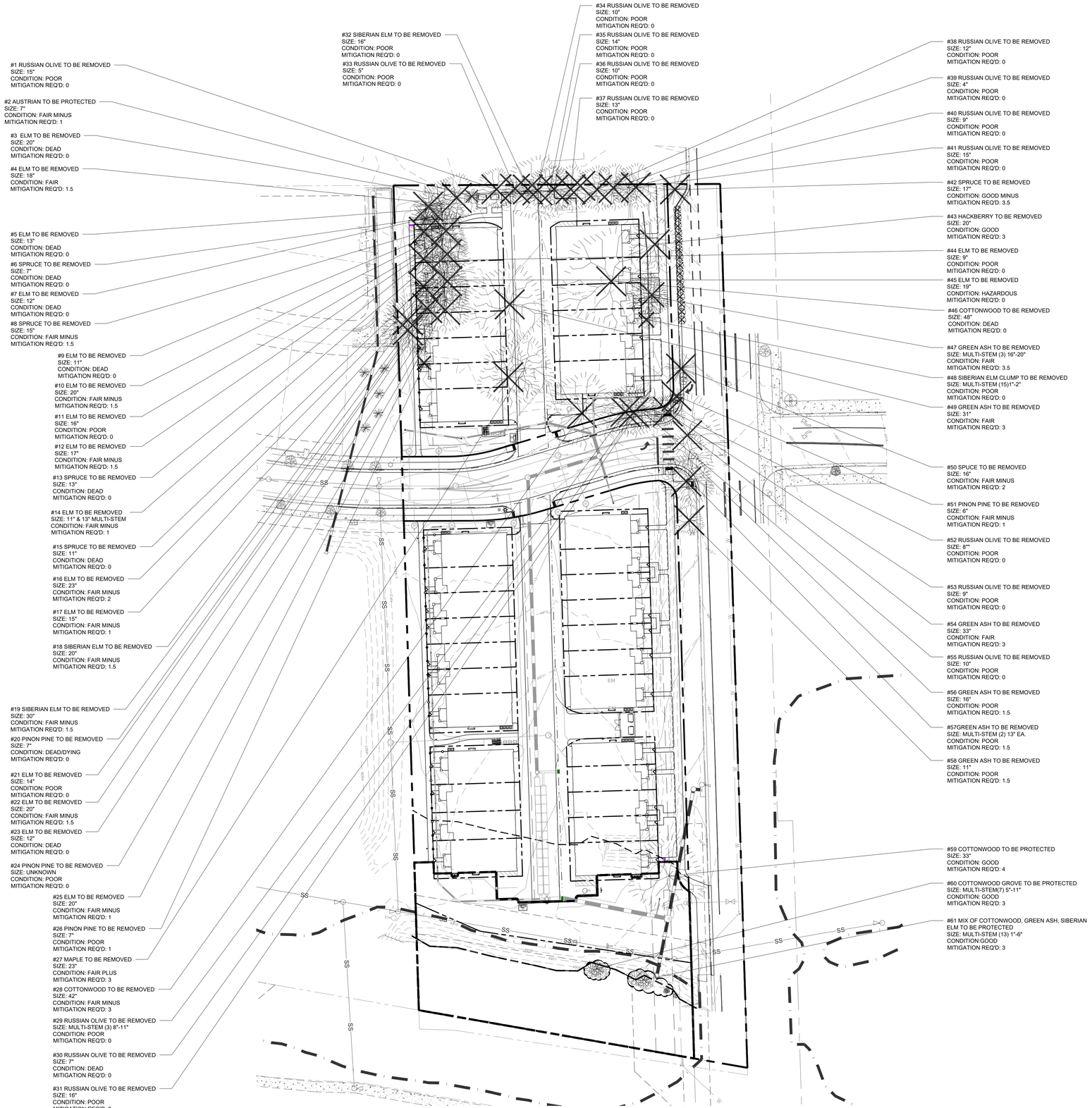
OCTOBER 25, 2016

SHEET TITLE

Landscape Notes, Details & Schedules

SHEET INFORMATION

SHEET 2 OF 5



Existing Tree Schedule

COMMON NAME	SIZE	CONDITION	TO BE REMOVED	MITIGATION REQUIRED	REASON FOR REMOVAL
1. RUSSIAN OLIVE	15"	POOR	YES	NO - 0	NUISANCE TREE
2. AUSTRIAN	7"	FAIR MINUS	NO	NO - 0	N/A
3. SIBERIAN ELM	20"	DEAD	YES	NO - 0	CONFLICT WITH BUILDING
4. SIBERIAN ELM	18"	FAIR	YES	YES - 1.5	CONFLICT WITH BUILDING
5. SIBERIAN ELM	13"	DEAD	YES	NO -0	CONFLICT WITH BUILDING
6. SRUCE	7"	DEAD	YES	NO - 0	CONFLICT WITH BUILDING
7. SIBERIAN ELM	12"	DEAD	YES	NO - 0	CONFLICT WITH BUILDING
8. SPRUCE	15"	FAIR MINUS	YES	YES - 1.5	CONFLICT WITH BUILDING
9. SIBERIAN ELM	11"	DEAD	YES	NO - 0	CONFLICT WITH BUILDING
10. SIBERIAN ELM	20"	FAIR MINUS	YES	YES - 1.5	CONFLICT WITH BUILDING
11. SIBERIAN ELM	16"	POOR	YES	NO - 0	CONFLICT WITH BUILDING
12. SIBERIAN ELM	17"	FAIR MINUS	YES	YES - 1.5	CONFLICT WITH BUILDING
13. SPRUCE	13"	DEAD	YES	NO - 0	CONFLICT WITH BUILDING
14. SIBERIAN ELM	11" & 13"	FAIR MINUS	YES	YES - 1	CONFLICT WITH BUILDING
15. SPRUCE	11"	DEAD	YES	NO - 0	CONFLICT WITH BUILDING
16. SIBERIAN ELM	23"	FAIR MINUS	YES	YES - 2	CONFLICT WITH BUILDING
17. SIBERIAN ELM	15"	FAIR MINUS	YES	YES - 1	CONFLICT WITH BUILDING
18. SIBERIAN ELM	20"	FAIR MINUS	YES	YES - 1.5	CONFLICT WITH WALK
19. SIBERIAN ELM	30"	FAIR MINUS	YES	YES - 1.5	CONFLICT WITH WALK
20. PINON PINE	7"	DEAD/DYING	YES	NO - 0	CONFLICT WITH BUILDING
21. ELM	14"	POOR	YES	NO - 0	CONFLICT WITH BUILDING
22. ELM	20"	FAIR MINUS	YES	YES - 1.5	CONFLICT WITH BUILDING
23. ELM	12"	DEAD	YES	NO - 0	CONFLICT WITH BUILDING
24. PINON PINE	UNKNOWN	POOR	YES	NO - 0	CONFLICT WITH BUILDING
25. ELM	20"	FAIR MINUS	YES	YES - 1	CONFLICT WITH WALK
26. PINON PINE	7"	POOR	YES	YES - 1	CONFLICT WITH WALK
27. MAPLE	23"	FAIR PLUS	YES	YES - 3	CONFLICT WITH DRIVE
28. COTTONWOOD	42"	FAIR MINUS	YES	YES - 3	CONFLICT WITH WALK
29. RUSSIAN OLIVE	MULIT STEM (8-11")	POOR	YES	NO - 0	CONFLICT WITH WALK
30. RUSSIAN OLIVE	7"	DEAD	YES	NO - 0	CONFLICT WITH WALK
31. RUSSIAN OLIVE	16"	POOR	YES	NO - 0	CONFLICT WITH WALK
32. SIBERIAN ELM	16"	POOR	YES	NO - 0	NUISANCE TREE
33. RUSSIAN OLIVE	5"	POOR	YES	NO - 0	NUISANCE TREE
34. RUSSIAN OLIVE	10"	POOR	YES	NO - 0	NUISANCE TREE
35. RUSSIAN OLIVE	14"	POOR	YES	NO - 0	NUISANCE TREE
36. RUSSIAN OLIVE	10"	POOR	YES	NO - 0	NUISANCE TREE
37. RUSSIAN OLIVE	13"	POOR	YES	NO - 0	NUISANCE TREE
38. RUSSIAN OLIVE	12"	POOR	YES	NO - 0	NUISANCE TREE
39. RUSSIAN OLIVE	4"	POOR	YES	NO - 0	NUISANCE TREE
40. RUSSIAN OLIVE	9"	POOR	YES	NO - 0	NUISANCE TREE
41. RUSSIAN OLIVE	15"	POOR	YES	NO - 0	CONFLICT WITH WALK
42. SPRUCE	17"	GOOD MINUS	YES	YES - 3.5	SEE NOTES
43. HACKBERRY	20"	GOOD	YES	YES - 3	CONFLICT WITH WALK
44. ELM	9"	POOR	YES	NO - 0	CONFLICT WITH BUILDING
45. ELM	19"	HAZARDOUS	YES	NO - 0	HAZARDOUS
46. COTTONWOOD	48"	DEAD	YES	NO - 0	DEAD
47. GREEN ASH	MULTI STEM (16-20")	FAIR	YES	YES - 3.5	CONFLICT WITH WALK
48. SIBERIAN ELM	MULTI-STEM (1-2")	POOR	YES	NO - 0	CONFLICT WITH WALK
49. GREEN ASH	31"	FAIR	YES	YES - 3	CONFLICT WITH DRIVE
50. SPRUCE	16"	FAIR MINUS	YES	YES - 2	CONFLICT WITH WALK
51. PINON PINE	6"	FAIR MINUS	YES	YES - 1	CONFLICT WITH WALK
52. RUSSIAN OLIVE	8"	POOR	YES	NO - 0	CONFLICT WITH WALK
53. RUSSIAN OLIVE	9"	POOR	YES	NO - 0	CONFLICT WITH WALK
54. GREEN ASH	33"	FAIR	YES	YES - 3	CONFLICT WITH WALK
55. RUSSIAN OLIVE	10"	POOR	YES	NO - 0	CONFLICT WITH WALK
56. GREEN ASH	16"	POOR	YES	YES - 1.5	CONFLICT WITH WALK
57. GREEN ASH	MULTI-STEM (13")	POOR	YES	YES - 1.5	CONFLICT WITH WALK
58. GREEN ASH	11"	POOR	YES	YES - 1.5	HAZARDOUS
59. COTTONWOOD	33"	GOOD	NO	NO - 0	N/A
60. COTTONWOOD	MULTI-STEM (5-11")	GOOD	NO	NO - 0	N/A
61. MIX	MULTI-STEM (1-6")	GOOD	NO	NO - 0	N/A
			TOTAL MITIGATION	46 TREES	

NOTES:

1. CURB AND GUTTER CONSTRUCTION WILL INEVITABLY IMPACT TREE ROOTS
2. FUTURE WIDENING OF ZIEGLER ROAD AND EXTENSION OF LEFT TURN LANE (DURING DEVELOPMENT OF ADJACENT PROPERTY) WILL REQUIRE THIS TREE TO BE REMOVED
3. THE EXTENSIVE PRUNING NECESSARY FOR CLEARANCE WILL LEAVE THIS TREE WEAK IN STRUCTURE AND MISSHAPEN. THE TREE IS ALREADY IN PRETTY ROUGH SHAPE DUE TO UTILITY CLEARANCE.

TB GROUP
landscape architecture | planning | illustration
444 Mountain Ave.
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SEAL

PROJECT TITLE

THE PARK TOWNHOMES AT FOSSIL RIDGE

Fort Collins, Colorado

PREPARED FOR

Manhattan Land Company, LLC.
772 Whalers Way, Suite 200
Fort Collins CO 80525
Contact: Russell Baker
Phone: 970.267.7721

REVISIONS	DATE
Staff Comments	01-11-17
Staff Comments	02-15-17

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OCTOBER 25, 2016

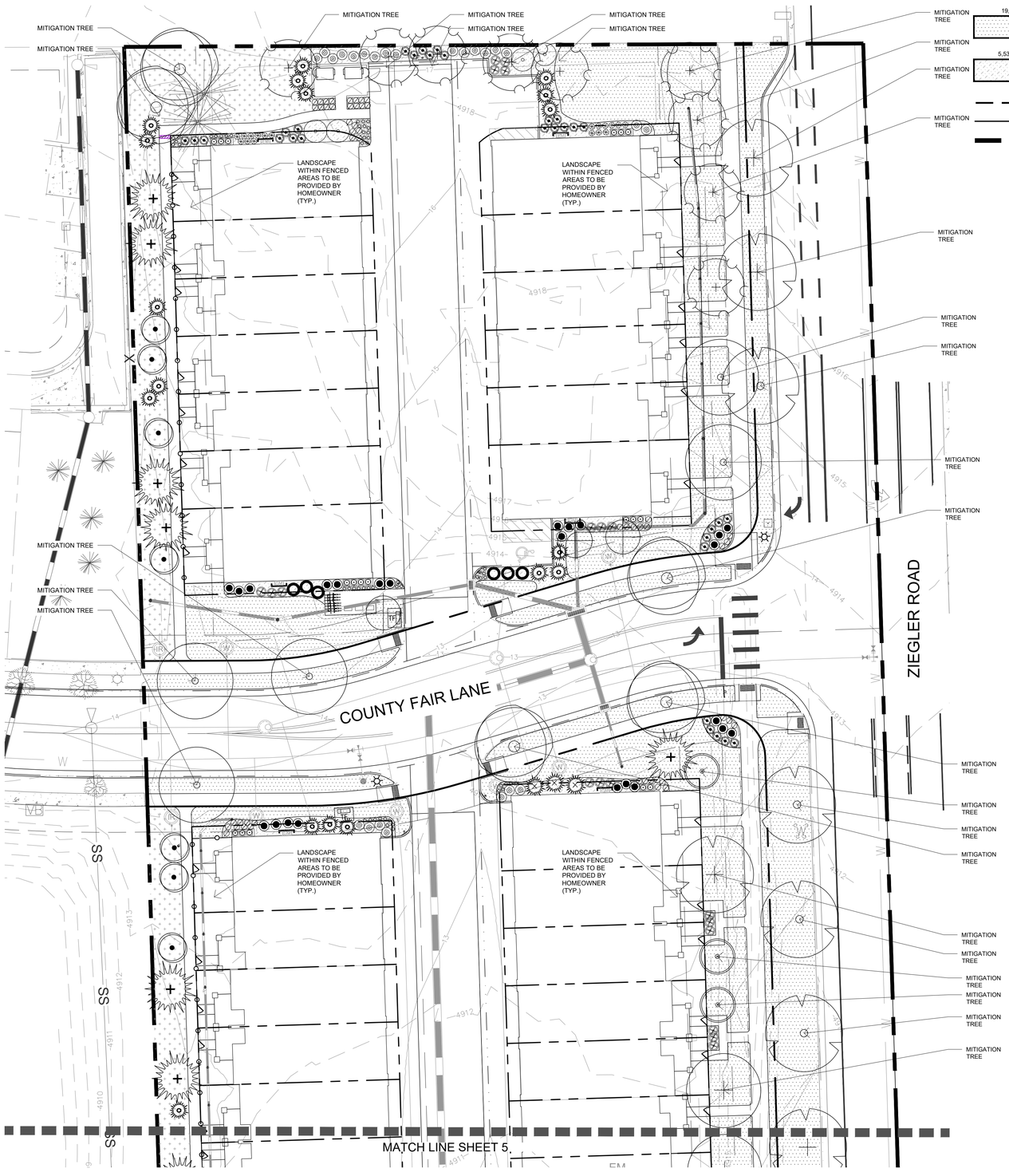
SHEET TITLE

Tree Inventory & Mitigation Plan

SHEET INFORMATION

SHEET 3 OF 5

LANDSCAPE PLAN



LANDSCAPE LEGEND

19,902 S.F.	IRRIGATED TURF DURA-TURF FESCUE BLEND SOD
5,533 S.F.	SHREDDED CEDAR MULCH ALL SHRUB BEDS TO RECEIVE A MINIMUM 4"-6" DEPTH SHREDDED CEDAR WOOD MULCH
	EDGE OF WETLANDS
	100' WETLAND OFFSET
	NATURAL HABITAT BUFFER PLEASE SEE SECTION 3.4.1 OF THE LAND USE CODE FOR ALLOWABLE USES WITHIN THE NATURAL HABITAT BUFFER ZONE.
6,909 S.F.	CITY OF FORT COLLINS DETENTION BASIN MIX 2015 SEE NOTES OR APPROVED EQUAL
	STEEL EDGER, ROUNDED TOP
	EXISTING TREE

PLANT LIST

KEY	QTY	RATIO	COMMON NAME
SHADE/CANOPY TREES -	**33**		
	5	5.2%	CATALPA (mitigation tree)
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	2	2.1%	COTTONWOOD, PLAINS (mitigation tree)
	4	4.1%	HONEYLOCUST, IMPERIAL (mitigation tree)
	6	6.2%	LINDEN, AMERICAN (mitigation tree)
	9	13.6%	OAK, BUR (mitigation tree)
EVERGREEN TREES -	**33**		
	9	9.3%	PINE, PONDEROSA
	12	12.4%	PINE, TANNENBAUM MUGO
	12	12.4%	SPRUCE, FASTIGIATE NORWAY
ORNAMENTAL TREES -	**31**		
	1	1.0%	CRABAPPLE, PRAIRIEFIRE
	10	10.3%	CRABAPPLE, PRAIRIEFIRE (mitigation tree)
	11	11.3%	MAPLE, HOT WINGS
	5	5.2%	PEAR, KOREAN WILD (mitigation tree)
	1	1.0%	PEAR, KOREAN WILD
	3	3.1%	SERVICEBERRY, AUTUMN BRILLIANCE
EVERGREENS SHRUBS-	**8**		
	8	-	JUNIPER, ROCKY MOUNTAIN*
DECIDUOUS SHRUBS -	**201**		
	4	-	CHOKEBERRY, BRILLIANT RED
	6	-	CURRANT, GOLDEN*
	49	-	DOGWOOD, ARCTIC FIRE
	3	-	DOGWOOD, ARCTIC FIRE*
	6	-	EUONYMUS, COMPACT BURNING BUSH
	30	-	LEADPLANT*
	6	-	LILAC, DWARF KOREAN
	30	-	MOCKORANGE, SNOWBELLE
	3	-	PLUM, AMERICAN
	7	-	RABBITBRUSH, TALL GREEN*
	40	-	SPIREA, BLUE MIST
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PERENNIALS / GRASSES -	**229**		
	8	-	DAYLILY, RED
	35	-	GRASS, AVENA
	95	-	GRASS, CRAMA BLONDE AMBITION GRAMA
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	23	-	GRASS, HEAVY METAL BLUE SWITCH

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0 20' 30' 40'

SCALE 1" = 20'-0"

NORTH

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Contact: Russell Baker
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OCTOBER 25, 2016

SHEET TITLE

Landscape Plan

SHEET INFORMATION

SHEET 4 OF 5

LANDSCAPE PLAN

LANDSCAPE LEGEND

19,902 S.F. — IRRIGATED TURF
DURA-TURF FESCUE BLEND SOD

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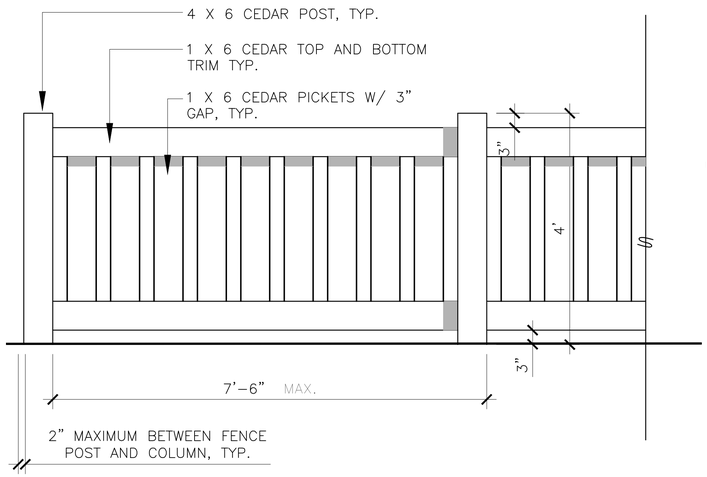
6,909 S.F. — CITY OF FORT COLLINS DETENTION BASIN MIX 2015
SEE NOTES OR APPROVED EQUAL

STEEL EDGER, ROUNDED TOP

EXISTING TREE

4 FOOT PICKET FENCE DETAIL



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NOTES:
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0 20' 30' 40'
SCALE 1" = 20'-0"

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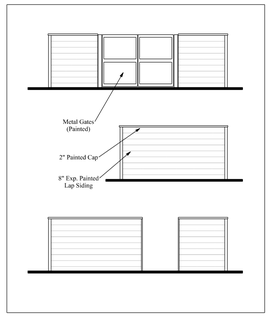
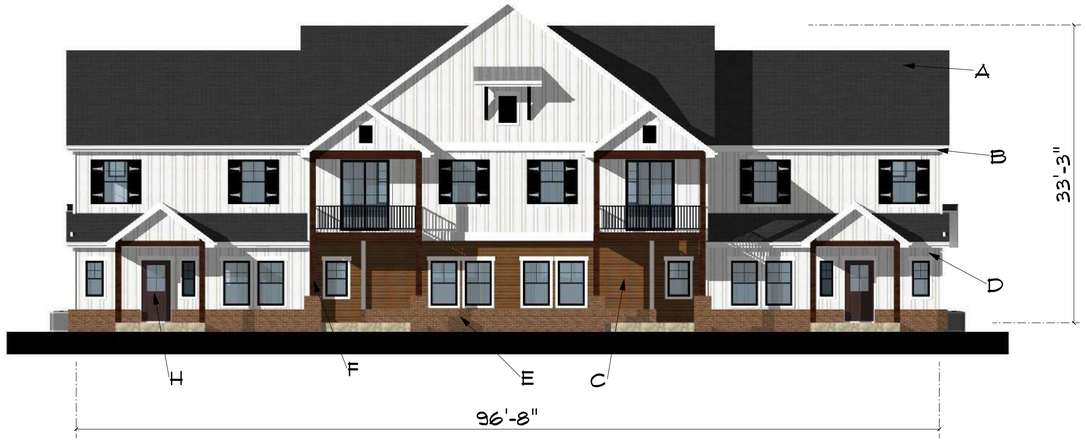
Landscape Plan

SHEET INFORMATION

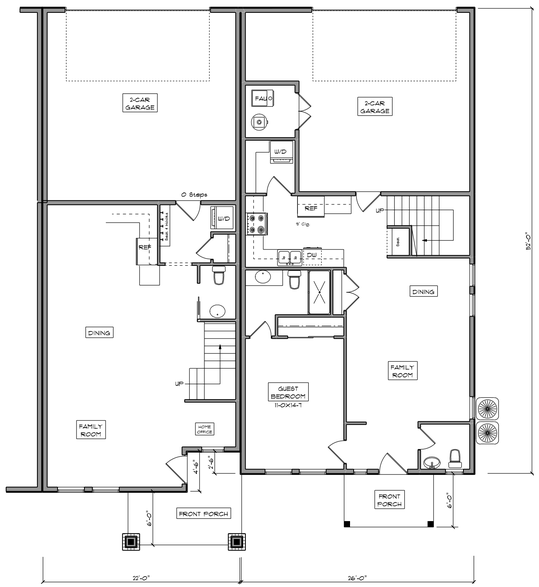
SHEET 5 OF 5

TRASH ENCLOSURE ELEVATIONS





FRONT ELEVATION



TYPICAL FOOTPRINT- PROJECTIONS

A	Asphalt Shingles
B	8" Painted Fascia
C	6" Exposed Painted Lap Siding
D	1x2 Battens @ 24" OC (Painted)
E	Brick Veneer
F	8" Sq Painted Posts
G	A/C Unit(s)
H	Painted Entry Door
I	Stained Entry Door
J	Painted OHD

SIDE ELEVATION

BACK ELEVATION

Revisions
2-13-17

AI BD

THE PARK TOWNHOMES AT FOSSIL RIDGE

4-Plex

Scale 1/8"=1'-0"

Job Number
2821

Jon R. Renfrow

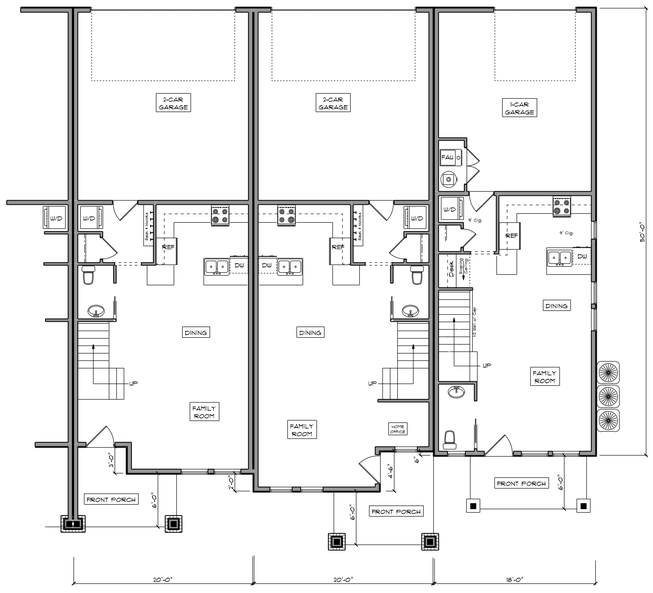
RENFROW Design, LLC

209 Allen Steet
Ft. Collins, CO 80525

(970) 412-2400
RenfrowAS@gmail.com

FRONT ELEVATION

A	Asphalt Shingles
B	8" Painted Fascia
C	6" Exposed Lap Siding (Painted)
D	1x2 Battens @ 24" OC (Painted)
E	Brick Veneer
F	8" Sq Painted Posts
G	8" Vertical Siding (Painted)
H	Painted OHD
I	A/C Unit(s)
J	Painted Entry Door
K	Stained Entry Door



TYPICAL FOOTPRINT- PROJECTIONS

SIDE ELEVATION

BACK ELEVATION

Revisions
2-13-17

AI BD

THE PARK TOWNHOMES AT FOSSIL RIDGE

5-Plex

Scale 1/8"=1'-0"

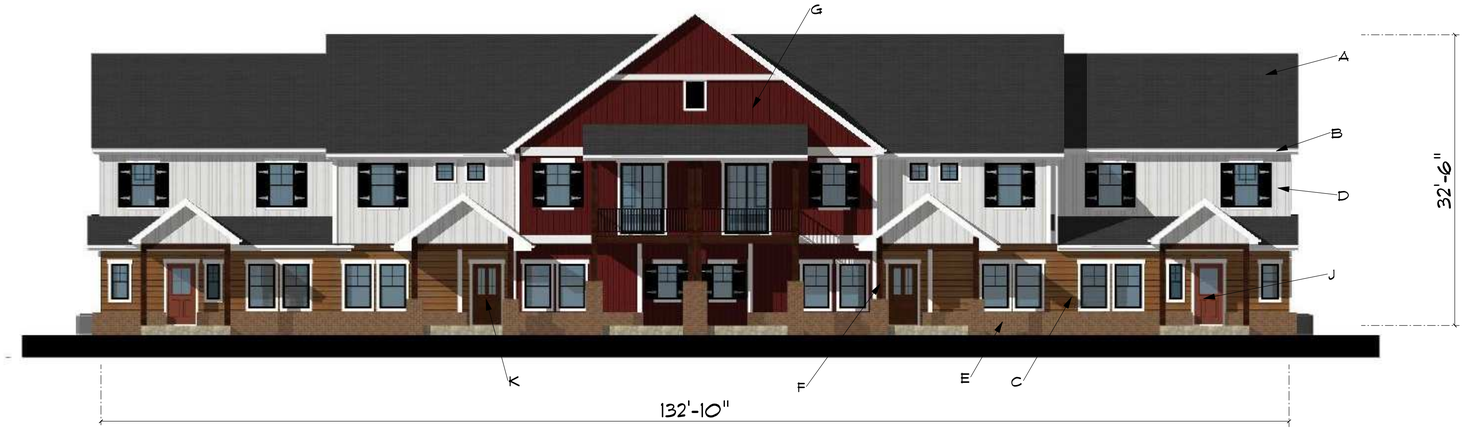
Job Number
2821

Jon R. Rentfrow

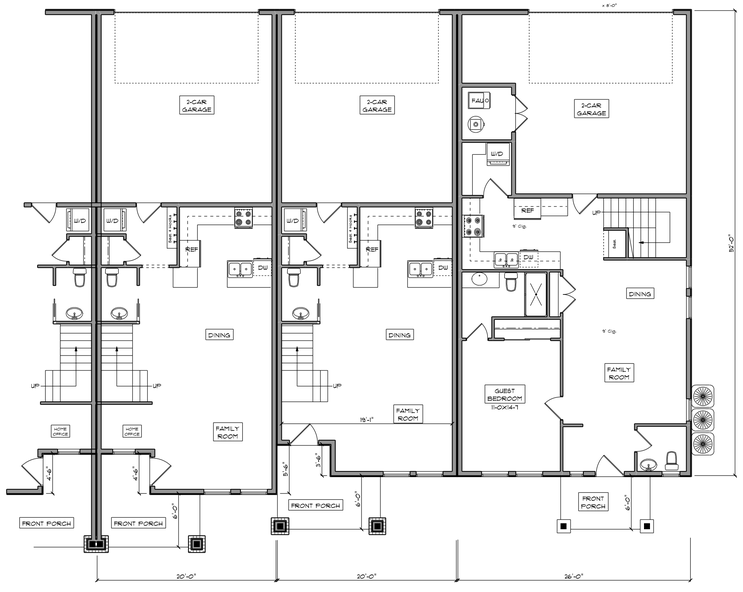
RENTFROW Design, LLC

705 Allen Street
Ft. Collins, CO 80525

(970) 412-3400
Rentfrow Design.com



FRONT ELEVATION



TYPICAL FOOTPRINT- PROJECTIONS

A	Asphalt Shingles
B	8" Painted Fascia
C	6" Exposed Lap Siding (Painted)
D	1x2 Battens @ 24" OC (Painted)
E	Brick Veneer
F	8" Sq Painted Posts
G	8" Vertical Siding (Painted)
H	Painted OHD
I	A/C Unit(s)
J	Painted Entry Door
K	Stained Entry Door

SIDE ELEVATION

BACK ELEVATION

Revisions:
2-13-17

AIBD

THE PARK TOWNHOMES AT FOSSIL RIDGE

6-Plex

Scale 1/8"=1'-0"

Job Number
2021

Jon R. Renfrow

RENFROW Design, LLC

295 Allen Steet
Ft. Collins, CO 80525

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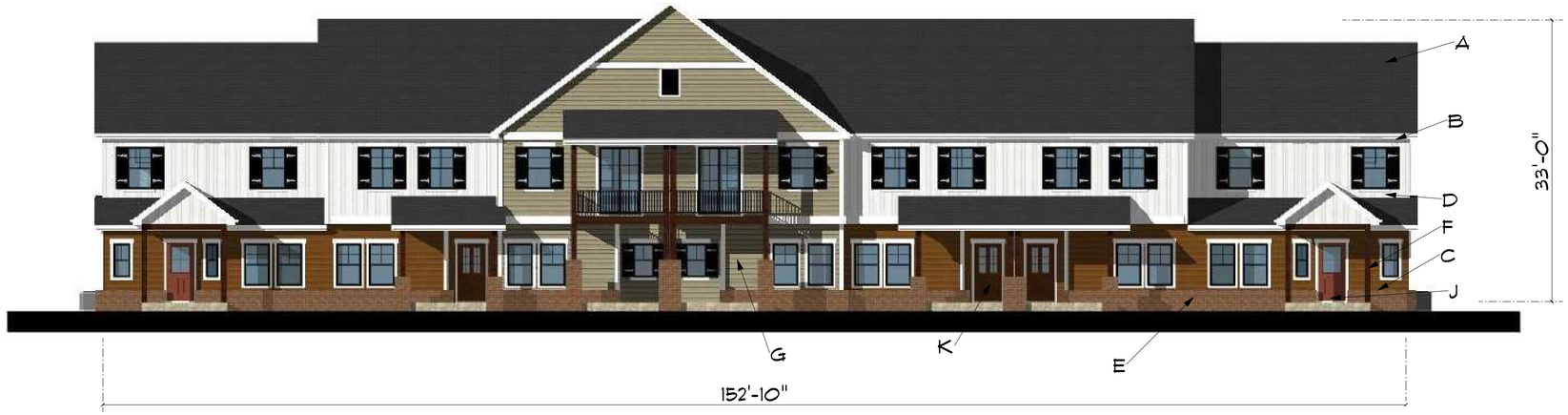
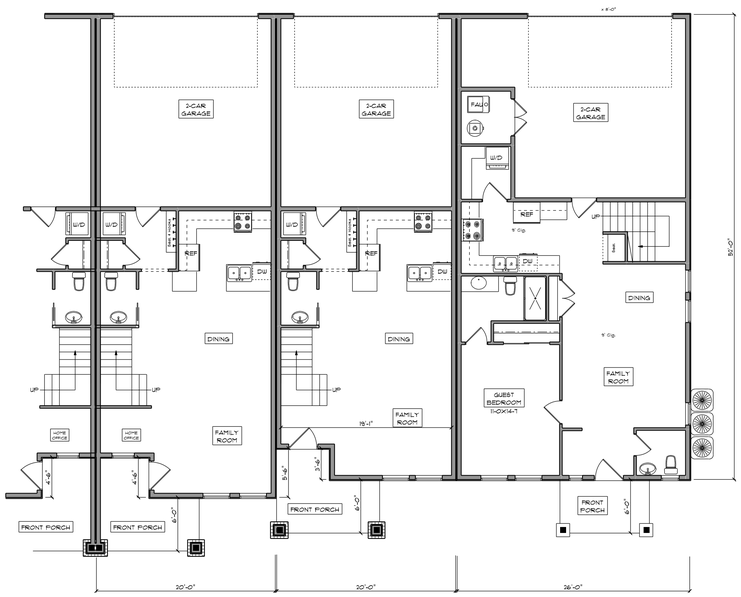
RenfrowDesign.com



FRONT ELEVATION



TYPICAL FOOTPRINT- PROJECTIONS

A	Asphalt Shingles
B	8" Painted Fascia
C	6" Exposed Lap Siding (Painted)
D	1x2 Battens @ 24" OC (Painted)
E	Brick Veneer
F	8" Sq Painted Posts
G	4" Exposed Lap Siding (Painted)
H	Painted OHD
I	A/C Unit(s)
J	Painted Entry Door
K	Stained Entry Door

SIDE ELEVATION

BACK ELEVATION

Revisions:
2-13-17

AI BD

THE PARK TOWNHOMES AT FOSSIL RIDGE

7-Plex

Job Number 2821

Scale 1/8"=1'-0"

Jon R. Rentfrow

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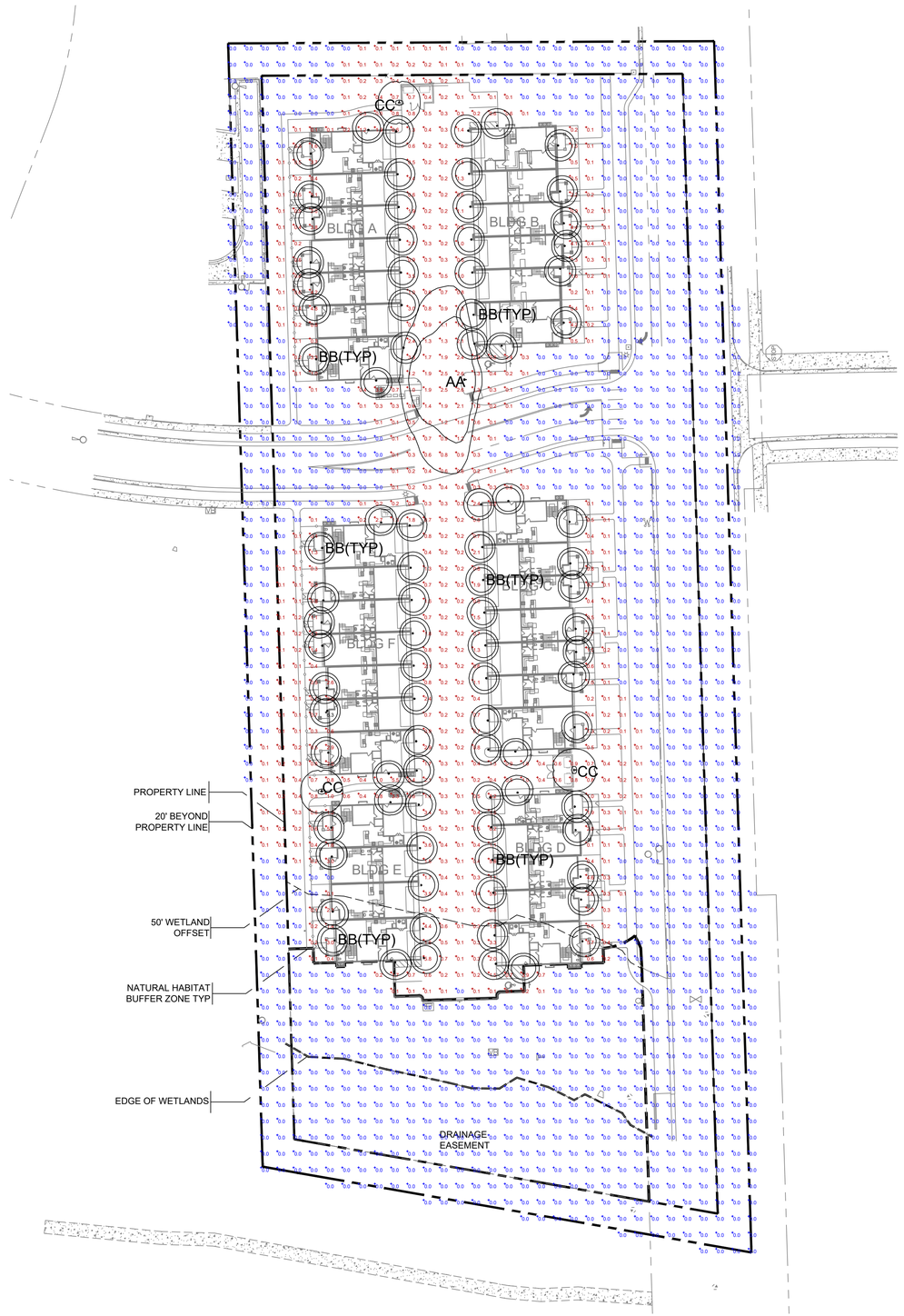


1 PHOTOMETRIC SITE PLAN

1" = 40'-0"

Luminaire Schedule

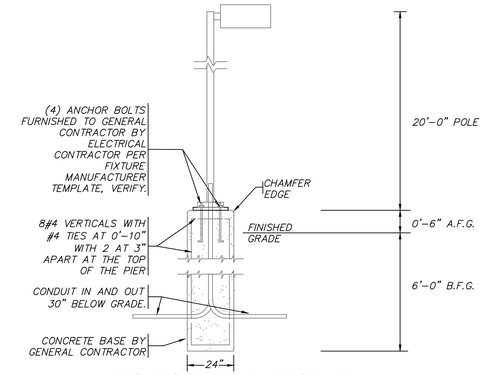
Symbol	Label	Quantity	Manufacturer	Catalog Number	Description	Lamp	Number Lamps	Filename	Lumens Per Lamp	Light Loss Factor	Wattage
	AA	1	Lithonia Lighting	KAD LED 40C 530 30K R2 MVOLT HS	KAD LED, 40 LED, 530mA MVOLT DRIVER, 3000K, TYPE 2 OPTICS WITH HOUSE SIDE SHIELDS.	LED	1	KAD_LED_40C_530_30K_R2_MVOLT_HS.ies	6822.583	1	69
	BB	89	Lithonia Lighting	WSTM LED 1A 30K 120 DIFS	WSTM LED WITH 1 BOARD, 3000K CCT, 120 VOLT, DIFFUSE GLASS LENS	3000K LED. ALL VALUES PER 1000 LMS.	1	WSTM_LED_1A_30K_120_DIFS.ies	673.2339	1	8.9
	CC	3	Lithonia Lighting	DSXWPM LED 10C 350 30K T5A MVOLT	DSXWPM LED WITH (1) 10 LED LIGHT ENGINES, TYPE T5A OPTIC, 3000K, @ 350mA.	LED	1	DSXWPM_LED_10C_350_30K_T5A_MVOLT.ies	1425.223	1	13.3

Luminaire Locations

		Location						Aim		
No.	Label	X	Y	Z	MH	Orientation	Tilt	X	Y	Z
13	AA	437.37	693.74	20.00	20.00	269.21	0.00	436.30	693.73	0.00
37	BB	503.79	479.91	6.50	6.50	88.38	0.00	503.99	479.92	0.00
39	BB	503.41	512.77	6.50	6.50	175.04	0.00	503.43	512.57	0.00
40	BB	504.75	526.18	6.50	6.50	88.38	0.00	504.95	526.18	0.00
41	BB	504.42	540.39	6.50	6.50	88.38	0.00	504.62	540.39	0.00
42	BB	501.61	566.53	6.50	6.50	88.38	0.00	501.81	566.53	0.00
43	BB	501.20	580.66	6.50	6.50	88.38	0.00	501.40	580.67	0.00
44	BB	500.65	606.23	6.50	6.50	88.38	0.00	500.85	606.24	0.00
45	BB	508.61	348.24	6.50	6.50	88.38	0.00	508.81	348.25	0.00
46	BB	507.74	373.88	6.50	6.50	88.38	0.00	507.94	373.89	0.00
47	BB	507.44	387.95	6.50	6.50	88.38	0.00	507.64	387.96	0.00
48	BB	504.41	416.62	6.50	6.50	88.38	0.00	504.61	416.62	0.00
49	BB	503.92	431.03	6.50	6.50	88.38	0.00	504.12	431.04	0.00
50	BB	349.08	590.20	6.50	6.50	269.35	0.00	348.88	590.19	0.00
51	BB	349.53	557.61	6.50	6.50	358.56	0.00	349.53	557.81	0.00
52	BB	348.71	544.34	6.50	6.50	269.35	0.00	348.51	544.34	0.00
53	BB	349.16	530.06	6.50	6.50	269.35	0.00	348.96	530.06	0.00
54	BB	351.94	504.11	6.50	6.50	269.35	0.00	351.74	504.11	0.00
55	BB	352.26	490.02	6.50	6.50	269.35	0.00	352.06	490.02	0.00
56	BB	352.90	464.25	6.50	6.50	269.35	0.00	352.70	464.25	0.00
57	BB	354.66	418.16	6.50	6.50	269.35	0.00	354.46	418.16	0.00
58	BB	354.74	400.01	6.50	6.50	359.35	0.00	354.73	400.21	0.00
59	BB	355.30	366.74	6.50	6.50	179.73	0.00	355.30	366.54	0.00
60	BB	356.74	348.79	6.50	6.50	269.35	0.00	356.54	348.78	0.00
61	BB	451.32	466.16	6.50	6.50	269.35	0.00	451.12	466.16	0.00
62	BB	450.95	484.03	6.50	6.50	269.35	0.00	450.75	484.03	0.00
63	BB	467.65	465.26	6.50	6.50	176.15	0.00	467.66	465.06	0.00
64	BB	450.04	510.06	6.50	6.50	269.35	0.00	449.84	510.06	0.00
65	BB	449.51	530.26	6.50	6.50	269.35	0.00	449.31	530.26	0.00
66	BB	448.83	550.45	6.50	6.50	269.35	0.00	448.63	550.44	0.00
67	BB	448.13	570.48	6.50	6.50	269.35	0.00	447.93	570.48	0.00
68	BB	447.56	590.73	6.50	6.50	269.35	0.00	447.36	590.73	0.00
69	BB	446.84	617.01	6.50	6.50	269.35	0.00	446.64	617.01	0.00
70	BB	411.02	337.94	6.50	6.50	86.42	0.00	411.22	337.95	0.00
71	BB	393.75	335.63	6.50	6.50	176.15	0.00	393.77	335.43	0.00
72	BB	410.55	355.90	6.50	6.50	86.42	0.00	410.75	355.91	0.00
73	BB	409.41	382.73	6.50	6.50	86.42	0.00	409.61	382.74	0.00
74	BB	408.67	405.50	6.50	6.50	86.42	0.00	408.87	405.51	0.00
75	BB	407.91	432.25	6.50	6.50	86.42	0.00	408.11	432.26	0.00
76	BB	390.84	433.49	6.50	6.50	355.12	0.00	390.82	433.69	0.00
77	BB	389.70	451.62	6.50	6.50	178.17	0.00	389.71	451.42	0.00
78	BB	463.37	618.78	6.50	6.50	355.12	0.00	463.35	618.98	0.00
79	BB	472.65	333.19	6.50	6.50	178.17	0.00	472.66	332.99	0.00
80	BB	469.03	439.39	6.50	6.50	355.12	0.00	469.02	439.59	0.00
81	BB	385.09	605.56	6.50	6.50	355.12	0.00	385.07	605.76	0.00
83	BB	377.25	847.11	6.50	6.50	355.12	0.00	377.24	847.31	0.00
85	BB	382.02	693.52	6.50	6.50	178.17	0.00	382.02	693.32	0.00
86	BB	345.39	706.32	6.50	6.50	269.35	0.00	345.19	706.32	0.00
87	BB	344.19	738.83	6.50	6.50	181.11	0.00	344.19	738.63	0.00
88	BB	342.38	752.22	6.50	6.50	269.35	0.00	342.18	752.21	0.00
89	BB	342.00	765.78	6.50	6.50	269.35	0.00	341.80	765.78	0.00
90	BB	343.15	792.57	6.50	6.50	269.35	0.00	342.95	792.57	0.00
91	BB	342.68	806.44	6.50	6.50	269.35	0.00	342.48	806.44	0.00
92	BB	341.98	832.75	6.50	6.50	269.35	0.00	341.78	832.75	0.00
108	BB	398.62	713.33	6.50	6.50	88.38	0.00	398.82	713.34	0.00
109	BB	397.47	739.58	6.50	6.50	88.38	0.00	397.67	739.59	0.00
110	BB	397.02	759.63	6.50	6.50	88.38	0.00	397.22	759.63	0.00
111	BB	396.36	779.77	6.50	6.50	88.38	0.00	396.56	779.78	0.00
112	BB	395.60	799.90	6.50	6.50	88.38	0.00	395.80	799.91	0.00
113	BB	394.93	820.07	6.50	6.50	88.38	0.00	395.13	820.08	0.00
114	BB	394.07	846.39	6.50	6.50	88.38	0.00	394.27	846.39	0.00
115	BB	452.47	436.75	6.50	6.50	269.35	0.00	452.27	436.74	0.00
116	BB	453.06	418.42	6.50	6.50	269.35	0.00	452.86	418.42	0.00
117	BB	453.83	398.33	6.50	6.50	269.35	0.00	453.63	398.33	0.00
118	BB	454.40	378.10	6.50	6.50	269.35	0.00	454.20	378.10	0.00
119	BB	455.20	351.88	6.50	6.50	269.35	0.00	455.00	351.88	0.00
120	BB	455.93	334.36	6.50	6.50	269.35	0.00	455.73	334.36	0.00
121	BB	406.68	453.25	6.50	6.50	86.42	0.00	406.88	453.26	0.00
122	BB	406.37	471.25	6.50	6.50	86.42	0.00	406.57	471.26	0.00
123	BB	405.30	497.43	6.50	6.50	86.42	0.00	405.50	497.44	0.00
124	BB	404.81	517.75	6.50	6.50	86.42	0.00	405.01	517.76	0.00
125	BB	404.25	537.64	6.50	6.50	86.42	0.00	404.45	537.65	0.00
126	BB	403.60	558.15	6.50	6.50	86.42	0.00	403.80	558.16	0.00
127	BB	402.95	577.99	6.50	6.50	86.42	0.00	403.15	578.00	0.00
128	BB	402.34	604.00	6.50	6.50	86.42	0.00	402.54	604.02	0.00
129	BB	456.44	849.55	6.50	6.50	355.12	0.00	456.43	849.75	0.00
130	BB	459.22	714.90	6.50	6.50	178.17	0.00	459.23	714.70	0.00
131	BB	497.10	728.76	6.50	6.50	88.38	0.00	497.30	728.76	0.00
132	BB	495.23	762.25	6.50	6.50	179.81	0.00	495.23	762.05	0.00
133	BB	497.69	776.01	6.50	6.50	88.38	0.00	497.89	776.01	0.00
134	BB	497.16	789.91	6.50	6.50	88.38	0.00	497.36	789.91	0.00
135	BB	494.83	809.49	6.50	6.50	88.38	0.00	495.03	809.50	0.00
136	BB	493.63	837.76	6.50	6.50	88.38	0.00	493.83	837.77	0.00
138	BB	442.77	715.84	6.50	6.50	269.35	0.00	442.57	715.84	0.00
139	BB	442.27	733.62	6.50	6.50	269.35	0.00	442.07	733.61	0.00
140	BB	441.46	759.65	6.50	6.50	269.35	0.00	441.26	759.65	0.00
141	BB	440.87	779.92	6.50	6.50	269.35	0.00	440.67	779.92	0.00
142	BB	440.24	800.11	6.50	6.50	269.35	0.00	440.04	800.11	0.00
143	BB	439.55	820.34	6.50	6.50	269.35	0.00	439.35	820.33	0.00
144	BB	438.99	846.92	6.50	6.50	269.35	0.00	438.79	846.91	0.00
1	CC	504.70	453.62	10.00	10.00	268.38	0.00	503.83	453.59	0.00
2	CC	348.51	441.18	10.00	10.00	177.73	0.00	348.55	440.32	0.00
3	CC	396.22	864.95	10.00	10.00	179.99	0.00	396.22	864.08	0.00

Statistics

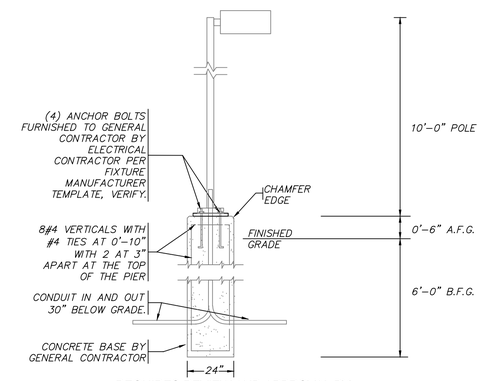
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min	Avg/Max
Calc Zone #2	+	0.3 fc	6.3 fc	0.0 fc	N/A	N/A	0.0:1



REQUIRES REVIEW AND APPROVAL BY STRUCTURAL ENGINEER

2 POLE BASE DETAIL AA

N.T.S.



REQUIRES REVIEW AND APPROVAL BY STRUCTURAL ENGINEER

3 POLE BASE DETAIL CC

N.T.S.

TB GROUP
landscape architecture | planning | illustration
444 Mountain Ave.
Berthoud,CO 80513
TEL 970.532.5891
WEB TBGroup.us

SEAL

PROJECT TITLE

THE PARK TOWNHOMES AT FOSSIL RIDGE

Fort Collins, Colorado

PREPARED FOR

Manhattan Land Company, LLC.
772 Whalers Way, Suite 200
Fort Collins CO 80525
Contact: Russell Baker
Phone: 970.267.7721

REVISIONS | DATE

DATE

February 14, 2017

SHEET TITLE

Photometric Site Plan

SHEET INFORMATION

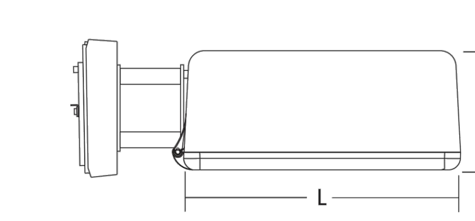
SHEET P1 OF 2

KAD LED
LED Area Luminaire

TYPE AA

Specifications

EPA:	1.2 ft² (0.11 m²)
Length:	17-1/2” (44.5 cm)
Width:	17-1/2” (44.5 cm)
Height:	7-1/8” (18.1 cm)
Weight (max):	36 lbs. (16.4 kg)



Introduction

The Contour® Series luminaires offer traditional square dayforms with softened edges for a versatile look that complements many applications. The KAD LED combines the latest in LED technology with the familiar aesthetic of the Contour® Series for stylish, high-performance illumination that lasts. It is ideal for replacing 100- 400W metal halide in area lighting applications with typical energy savings of 70% and expected service life of over 100,000 hours.

Ordering Information

EXAMPLE: KAD LED 40C 1000 40K R5 MVOLT PUMBAK04 DDBXD

KAD LED

Series	LEDs	Drive current	CCT	Distribution	Voltage	Mounting[3]
KAD LED	20C 20 LEDs 30C 30 LEDs 40C 40 LEDs 60C 60 LEDs	530 530 mA 700 700 mA 1000 1000 mA	30K 3000 K 40K 4000 K 50K 5000 K	R2 Type II R3 Type III R4 Type IV R5 Type V	MVOLT 120 [1] 208 [1] 240 [1] 277 [1] 347 480	**Shipped included** PUMBAK__ Universal mounting adaptor [3] SPD__ Square pole RPD__ Round pole WBD__ Wall bracket WWD__ Wood pole or wall 04 4" arm 06 6" arm 09 9" arm 12 12" arm **Shipped separately** DAD12P Degree arm (pole) DAD12WB Degree arm (wall)

Options	Finish *(required)*
Shipped installed PER7 NEMA twist-lock receptacle only (no controls) SF Single fuse (120, 277, 347V) [1] DF Double fuse (208, 240, 480V) [1] PIR Motion sensor, 8-15’ mounting height [4,5] PIRH Motion sensor, 15-30’ mounting height [4,5] BL30 Bi-level switched dimming, 30% [5,6,7] BL50 Bi-level switched dimming, 50% [5,6,7] PNMTDD3 Part night, dim till dawn [5,6] PNMT5D3 Part night, dim 5 hrs [5,6] PNMT6D3 Part night, dim 6 hrs [5,6] PNMT7D3 Part night, dim 7 hrs [5,6] HS Houseside shield [7] **Shipped separately** [8] WG Wire guard KMA Mast arm external fitter	DDBXD Dark bronze DBLXD Black DNAXD Natural aluminum DWHXD White DDBTXD Textured dark bronze DBLBXD Textured black DNATXD Textured natural aluminum DWHGXD Textured white

Stock configurations are offered for shorter lead times:

Standard Part Number	Stock Part Number
KAD LED 30C 1000 40K R3 MVOLT PUMBAK09 DDBXD	KADL 30C 40K R3
KAD LED 30C 1000 40K R5 MVOLT PUMBAK09 DDBXD	KADL 30C 40K R5
KAD LED 40C 1000 40K R3 MVOLT PUMBAK09 DDBXD	KADL 40C 40K R3
KAD LED 40C 1000 40K R5 MVOLT PUMBAK09 DDBXD	KADL 40C 40K R5
KAD LED 30C 1000 40K R3 MVOLT PUMBAK09 PIRH DDBXD	KADL 30C 40K R3 PIRH
KAD LED 30C 1000 40K R5 MVOLT PUMBAK09 PIRH DDBXD	KADL 30C 40K R5 PIRH
KAD LED 40C 1000 40K R3 MVOLT PUMBAK09 PIRH DDBXD	KADL 40C 40K R3 PIRH
KAD LED 40C 1000 40K R5 MVOLT PUMBAK09 PIRH DDBXD	KADL 40C 40K R5 PIRH

Accessories

Ordered and shipped separately.

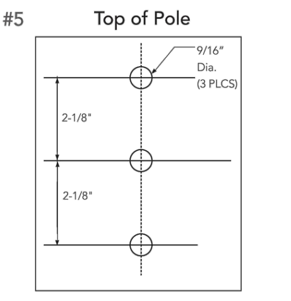
DLL127F 1.5 JU	Photocell - SSL twist-lock (120-277V) [9]
DLL347F 1.5 CUL JU	Photocell - SSL twist-lock (347V) [9]
DLL480F 1.5 CUL JU	Photocell - SSL twist-lock (480V) [9]
SC U	Shorting cap [9]
KADLEDHS 20C U	Houseside shield for 20 LED unit
KADLEDHS 30C U	Houseside shield for 30 LED unit
KADLEDHS 40C U	Houseside shield for 40 LED unit
KADLEDHS 60C U	Houseside shield for 60 LED unit
KMA DDBXD U	Mast arm adapter (specify finish)
KADWG U	Wire guard accessory
PUMBAK DDBXD U*	Square and round pole universal mounting bracket adaptor (specify finish)

For more control options, visit DTL and ROAM online.
**Round pole top must be 3.25” O.D. minimum.*

NOTES
1 MVOLT driver operates on any line voltage from 120-277V (50/60 Hz). Single fuse (SF) requires 120, 277 or 347 voltage option. Double fuse (DF) requires 208, 240 or 480 voltage option.
2 9” or 12” arm is required when two or more luminaires are oriented on a 90° drilling pattern.
3 Available as a separate combination accessory: PUMBAK (finish) U.
4 PIR specifies the SensorSwitch SBGR-10-ODP control; PIRH specifies the SensorSwitch SBGR-6-ODP control; see Motion Sensor Guide for details. Dimming driver standard.
5 Maximum ambient temperature with 347V or 480V is 30°C.
6 Requires an additional switched circuit with same phase as main luminaire power. Supply circuit and control circuit are required to be in the same phase.
7 Dimming driver standard. MVOLT only.
8 Also available as a separate accessory; see Accessories information at left.
9 Requires luminaire to be specified with PER option. Ordered and shipped as a separate line item.

Drilling

Template #5 Top of Pole



Tenon Mounting Slipfitter **

Tenon O.D.	Single Unit	2 at 180°	2 at 90°†	3 at 120°	3 at 90°†	4 at 90°†
2-3/8"	T20-190	T20-280	T20-290	T20-320†	T20-390	T20-490
2-7/8"	T25-190	T25-280	T25-290	T25-320	T25-390	T25-490
4"	T35-190	T35-280	T35-290	T35-320	T35-390	T35-490

*** For round pole mounting (RPDXX) only. † Requires 9” or 12” arm.*

Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts. Contact factory for performance data on any configurations not shown here.

LEDs	Drive Current (mA)	System Watts	Dist. Type	30K (3000 K, 70 CRI) Lumens	B	U	G	LPW	40K (4000 K, 70 CRI) Lumens	B	U	G	LPW	50K (5000 K, 70 CRI) Lumens	B	U	G	LPW
20C (20 LEDs)	530 mA	35 W	R2	3,615	1	0	1	95	3,846	1	0	1	101	3,860	1	0	1	102
			R3	3,600	1	0	1	95	3,830	1	0	1	101	3,844	1	0	1	101
			R4	3,605	1	0	1	95	3,835	1	0	1	101	3,849	1	0	1	101
			R5	3,826	2	0	1	101	4,070	3	0	1	107	4,084	3	0	1	107
	700 mA	46 W	R2	4,537	1	0	1	95	4,827	1	0	1	101	4,844	1	0	2	101
			R3	4,519	1	0	2	94	4,807	1	0	2	100	4,825	1	0	2	101
			R4	4,524	1	0	2	94	4,813	1	0	2	100	4,830	1	0	2	101
			R5	4,802	3	0	1	100	5,108	3	0	1	106	5,126	3	0	1	107
	1000 mA	73 W	R2	6,203	1	0	2	86	6,598	2	0	2	92	6,622	2	0	2	92
			R3	6,177	1	0	2	86	6,571	1	0	2	91	6,595	1	0	2	92
			R4	6,185	1	0	2	86	6,579	1	0	2	91	6,603	1	0	2	92
			R5	6,564	3	0	1	91	6,983	3	0	1	97	7,008	3	0	1	97
30C (30 LEDs)	530 mA	53 W	R2	5,328	1	0	2	99	5,669	1	0	2	105	5,689	1	0	2	105
			R3	5,307	1	0	2	98	5,645	1	0	2	105	5,666	1	0	2	105
			R4	5,313	1	0	2	98	5,652	1	0	2	105	5,672	1	0	2	105
			R5	5,639	3	0	1	104	5,999	3	0	1	111	6,020	3	0	1	111
	700 mA	69 W	R2	6,674	2	0	2	95	7,100	2	0	2	101	7,126	2	0	2	102
			R3	6,647	1	0	2	95	7,071	2	0	2	101	7,097	2	0	2	101
			R4	6,655	1	0	2	95	7,080	1	0	2	101	7,105	1	0	2	102
			R5	7,063	3	0	2	101	7,514	3	0	2	107	7,541	3	0	2	108
	1000 mA	108 W	R2	8,881	2	0	2	84	9,448	2	0	2	89	9,482	2	0	2	89
			R3	8,844	2	0	2	83	9,409	2	0	2	89	9,443	2	0	2	89
			R4	8,855	2	0	2	84	9,420	2	0	2	89	9,454	2	0	2	89
			R5	9,398	3	0	2	89	9,998	4	0	2	94	10,034	4	0	2	95
40C (40 LEDs)	530 mA	71 W	R2	7,034	2	0	2	102	7,483	2	0	2	108	7,510	2	0	2	109
			R3	7,005	2	0	2	102	7,453	2	0	2	108	7,479	2	0	2	108
			R4	7,014	1	0	2	102	7,462	1	0	2	108	7,488	1	0	2	109
			R5	7,444	3	0	2	108	7,919	3	0	2	115	7,947	3	0	2	115
	700 mA	94 W	R2	8,737	2	0	2	96	9,295	2	0	2	102	9,329	2	0	2	103
			R3	8,701	2	0	2	96	9,257	2	0	2	102	9,290	2	0	2	102
			R4	8,712	2	0	2	96	9,268	2	0	2	102	9,301	2	0	2	102
			R5	9,246	3	0	2	102	9,836	4	0	2	108	9,871	4	0	2	108
	1000 mA	141 W	R2	11,537	2	0	2	82	12,273	2	0	2	88	12,322	2	0	2	88
			R3	11,489	2	0	3	82	12,223	2	0	3	87	12,272	2	0	3	88
			R4	11,503	2	0	3	82	12,237	2	0	3	87	12,286	2	0	3	88
			R5	12,208	4	0	2	87	12,988	4	0	2	93	13,039	4	0	2	93
60C (60 LEDs)	530 mA	103 W	R2	10,334	2	0	2	102	10,993	2	0	2	109	11,033	2	0	2	109
			R3	10,291	2	0	2	102	10,948	2	0	2	108	10,988	2	0	2	109
			R4	10,304	2	0	2	102	10,961	2	0	2	109	11,001	2	0	2	109
			R5	10,935	4	0	2	108	11,633	4	0	2	115	11,675	4	0	2	116
	700 mA	137 W	R2	12,871	2	0	2	96	13,692	3	0	3	102	13,742	3	0	3	103
			R3	12,818	2	0	3	96	13,636	2	0	3	102	13,685	2	0	3	102
			R4	12,833	2	0	3	96	13,653	2	0	3	102	13,702	2	0	3	102
			R5	13,620	4	0	2	102	14,489	4	0	2	108	14,541	4	0	2	109
	1000 mA	216 W	R2	16,336	3	0	3	76	17,379	3	0	3	80	17,440	3	0	3	81
			R3	16,268	3	0	3	75	17,307	3	0	4	80	17,368	3	0	4	80
			R4	16,288	3	0	3	75	17,328	3	0	4	80	17,389	3	0	4	81
			R5	17,286	4	0	2	80	18,390	4	0	2	85	18,455	4	0	2	85

Performance Data

Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Ambient		Lumen Multiplier
0°C	32°F	1.02
10°C	50°F	1.01
20°C	68°F	1.00
25°C	**77°F**	**1.00**
30°C	86°F	1.00
40°C	104°F	0.99

Projected LED Lumen Maintenance

Data references the extrapolated performance projections for the **KAD LED** platform in a **25°C ambient**, based on 10,000 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

Operating Hours	0	25,000	50,000	100,000
Lumen Maintenance Factor	KAD LED 60C 1000			
	1.0	0.91	0.86	0.76
	KAD LED 40C 1000			
	1.0	0.93	0.88	0.79
	KAD LED 60C 700			
	1.0	0.98	0.97	0.94

Electrical Load

Number of LEDs	Drive Current (mA)	System Watts	Current (A) 120	208	240	277	347	480
20	530	35	0.30	0.18	0.16	0.15	-	-
	700	46	0.39	0.23	0.20	0.18	0.15	0.12
	1000	73	0.61	0.35	0.31	0.27	0.22	0.17
30	530	53	0.44	0.26	0.23	0.20	-	-
	700	69	0.58	0.34	0.29	0.26	0.21	0.16
	1000	108	0.90	0.52	0.46	0.40	0.32	0.24
40	530	71	0.60	0.35	0.32	0.29	0.21	0.16
	700	94	0.79	0.46	0.41	0.36	0.27	0.20
	1000	141	1.18	0.68	0.59	0.52	0.42	0.30
60	530	103	0.87	0.50	0.44	0.39	0.29	0.22
	700	137	1.15	0.66	0.58	0.51	0.40	0.29
	1000	216	1.81	1.04	0.92	0.81	0.63	0.47

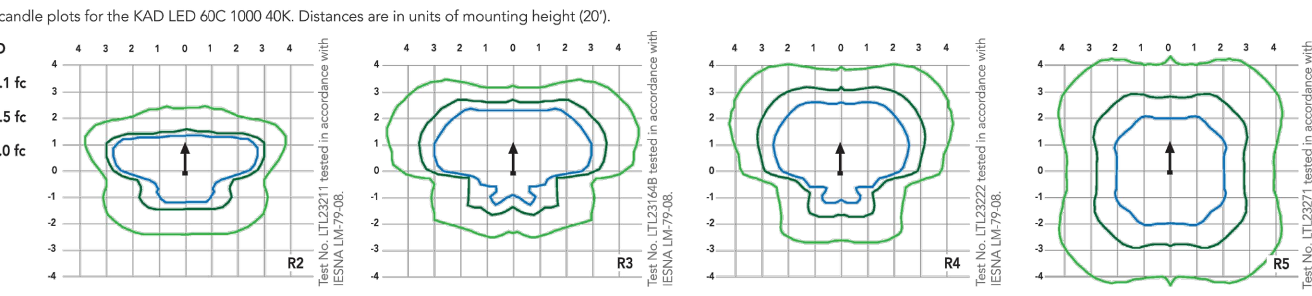
NOTE: All ratings in this table are for a nominal system operated at 25°C ambient temperature. Current and power specifications in this table do not include branch circuit derating specified in the National Electrical Code. Please observe all applicable electrical codes and ratings.

Photometric Diagrams

To see complete photometric reports or download .ies files for this product, visit Lithonia Lighting’s KAD LED homepage.

Isofootcandle plots for the KAD LED 60C 1000 40K. Distances are in units of mounting height (20’).

LEGEND
🟩 0.1 fc
🟩 0.5 fc
🟦 1.0 fc



FEATURES & SPECIFICATIONS

INTENDED USE
The energy savings and long life of the KAD LED area luminaire make it a reliable choice for illuminating streets, walkways, parking lots, and surrounding areas.

CONSTRUCTION
Single-piece die-cast, aluminum housing with contoured edges has a 0.12” nominal wall thickness. Die-cast door frame has an impact-resistant, tempered glass lens that is fully gasketed with one piece tubular silicone.

FINISH
Exterior parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering. A tightly controlled multi-stage process ensures a minimum 3 mils thickness for a finish that can withstand extreme climate changes without cracking or peeling.

OPTICS
Precision-molded refractive acrylic lenses are available in four distributions. Light engines are available in standard 4000K, 3000K or 5000K (70 CRI) configurations.

ELECTRICAL
Light engine consists of high-efficacy LEDs mounted to a metal-core circuit board and aluminum heat sink, ensuring optimal thermal management and long life. Class 1 electronic driver has a power factor >90%, THD <20%, and has an expected life of 100,000 hours with <1% failure rate. Easily-serviceable surge protection device meets a minimum Category C Low (per ANSI/IEEE C62.41.2).

INSTALLATION
Included universal mounting block and extruded aluminum arm facilitate quick and easy installation using nearly any existing drilling pattern. Stainless steel bolts fasten the luminaire to the mounting block securing it to poles or walls. The KAD LED can withstand up to a 1.5 G vibration load rating per ANSI C136.31. The KAD LED also utilizes the standard K-Series (Template #5) for pole drilling.

LISTINGS
CSA certified to U.S. and Canadian standards. Luminaire is IP65 rated. Rated for -40°C minimum ambient. DesignLights Consortium® (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at www.designlights.org to confirm which versions are qualified.

WARRANTY
5-year limited warranty. Complete warranty terms located at www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx.

Note: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25°C. Specifications subject to change without notice.

WSTM LED
LED Mini Wall Sconce

TYPE BB

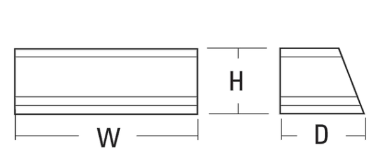
Introduction

The Architectural WSTM Mini-Wall Sconce is now available with the latest in LED technology. The result is a long-life, maintenance-free product with typical energy savings of 87% over metal halide versions. The diffuse lens eliminates harsh glare while producing comfortable illumination.

The WSTM LED is ideal for replacing existing 50-100W metal halide or 26-42W compact fluorescent wall-mounted products and can be mounted in either lens up or lens down orientation. The expected service life is over 10 years of nighttime use.

Specifications
Luminaire

Height:	5-3/4” (14.6 cm)
Width:	12-1/2” (31.8 cm)
Depth:	7-1/2” (19.1 cm)
Weight:	6 lbs. (2.7 kg)



Ordering Information

EXAMPLE: WSTM LED 2A 40K 120 DDBTXD

WSTM LED

Series	LEDs	Color temperature	Voltage	Mounting	Control options	Other options	Finish *(required)*
WSTM LED	1A One engine 2A Two engines	30K 3000K 40K 4000K	120 277 [1]	**Shipped included** (blank) Surface mount **Shipped separately** [2] UT5 Uplift 5 degrees	**Shipped installed** PE Photoelectric cell, button type	**Shipped installed** (blank) Diffusing glass lens CGL Clear glass lens **Shipped separately** [2] WG Wire guard [3]	DDBXD Dark bronze DBLXD Black DNAXD Natural aluminum DWHXD White DDBTXD Textured dark bronze DBLBXD Textured black DNATXD Textured natural aluminum DWHGXD Textured white DSSTXD Textured sandstone

Stock configurations are offered for shorter lead times:

Stock Part Number
WSTM LED 1A 40K 120 DDBTXD
WSTM LED 2A 40K 120 DDBTXD

Accessories

Ordered and shipped separately.

WSTMUT5 DDBXD U	5 degree uptilt accessory (specify finish)
WSTMWG U	Wire guard accessory

NOTES
1. Includes step-down transformer; see page 2 for more information.
2. Also available as a separate accessory; see Accessories information at left.
3. Not for inverted mounting.

Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts.

LEDs	Performance Package	System Watts[1]	30K (3000K, 80 CRI) Nominal Lumens	B	U	G	LPW	40K (4000K, 80 CRI) Nominal Lumens	B	U	G	LPW
1A	1A--K	9	673	0	0	0	75	733	0	0	1	81
2A	2A--K	17	1,308	1	0	0	77	1,277	1	0	0	75

1 See electrical load chart for 277V system watts.

Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Ambient		Lumen Multiplier
0°C	32°F	1.05
10°C	50°F	1.03
20°C	68°F	1.01
25°C	**77°F**	**1.00**
30°C	86°F	0.99
40°C	104°F	0.97

Projected LED Lumen Maintenance

Data references the extrapolated performance projections for the **WSTM LED** platform in a **25°C ambient**, based on 10,000 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

Operating Hours	0	25,000	50,000	100,000
Lumen Maintenance Factor	1.0	0.86	0.74	0.54

Electrical Load

LEDs	System Watts	Current (A) 120	277
1A	9W	0.08	–
	13W[1]	–	0.06
2A	17W	0.15	–
	22W[1]	–	0.09

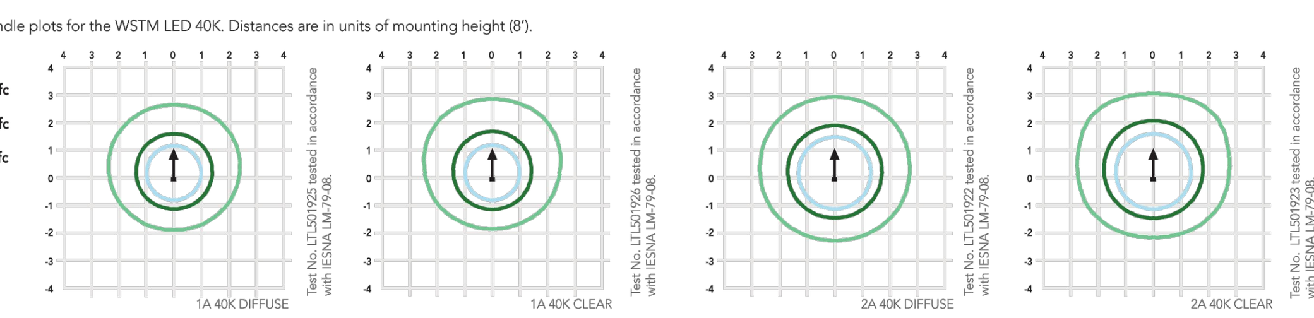
1 Higher wattage is due to electrical losses from step-down transformer.

Photometric Diagrams

To see complete photometric reports or download .ies files for this product, visit Lithonia Lighting’s WSTM LED homepage.

Isofootcandle plots for the WSTM LED 40K. Distances are in units of mounting height (8’).

LEGEND
🟩 0.1 fc
🟩 0.5 fc
🟦 1.0 fc



FEATURES & SPECIFICATIONS

INTENDED USE
The classic architectural shape of the WSTM LED was designed for applications such as hospitals, schools, malls, restaurants, and commercial buildings. The long-life LEDs make this luminaire nearly maintenance-free.

CONSTRUCTION
The single-piece die-cast aluminum housing integrates a heat sink to optimize thermal transfer from the internal light engine and promote long life. The die-cast door frame is fully gasketed with a one-piece solid silicone gasket to keep out moisture and dust, providing an IP65 rating for the luminaire.

FINISH
Exterior parts are protected by a zinc-infused Super Durable TGIC thermoset powder-coat finish that provides superior resistance to corrosion and weathering. A tightly controlled multi-stage process ensures a minimum 3 mils thickness for a finish that can withstand extreme climate changes without cracking or peeling. Standard Super Durable colors include dark bronze, black, natural aluminum, sandstone and white. Available in textured and non-textured finishes.

OPTICS
Light engines are 3000K (>80 CRI) or 4000K (>80 CRI). The WSTM LED has zero uplight and qualifies as a Nighttime Friendly™ product, meaning it is consistent with the LEED® and Green Globes™ criteria for eliminating wasteful uplight.

ELECTRICAL
Light engine(s) consist of 42 high-efficacy LEDs mounted to a circuit board and integral aluminum heat sink to maximize heat dissipation and promote long life (50,000 hrs at 25°C, L74).

INSTALLATION
Easily installed using provided mounting strap. Mount to any non-combustible vertical surface, over a 4” round or square recessed outlet box (by others). Back access through slotted gasket.

LISTINGS
CSA certified to U.S. standards. Luminaire is IP65 rated and suitable for wet locations when mounted with the lens down. Rated for -30°C minimum ambient.

DesignLights Consortium® (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at www.designlights.org to confirm which versions are qualified.

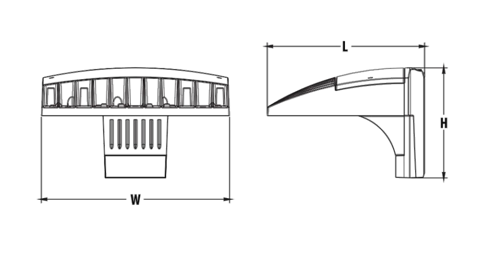
WARRANTY
Five-year limited warranty. Complete warranty terms located at www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx.
Actual performance may differ as a result of end-user environment and application.
All values are design or typical values, measured under laboratory conditions at 25 °C.
Note: Specifications subject to change without notice.

D-Series Pole Mount
LED Area Luminaire

TYPE CC

Specifications
Luminaire

EPA:	0.8 ft² (.07 m²)
Width:	13-3/4” (34.9 cm)
Length:	11.5” (29.2 cm)
Height:	8” (20.3 cm)
Weight:	16.03 lbs (7.3 kg)



Introduction

The D-Series Pole Mount luminaire is a stylish, fully integrated LED solution for area and site applications. It features a sleek, modern design and is carefully engineered to provide long-lasting, energy-efficient lighting with a variety of optical and control options for customized performance.

With an expected service life of over 20 years of nighttime use and up to 74% in energy savings over comparable 250W metal halide luminaires, the D-Series Pole Mount is a reliable, low-maintenance lighting solution that produces sites that are exceptionally illuminated.

Ordering Information

EXAMPLE: DSXWPM LED 20C 1000 40K T5M MVOLT SPUMBA DDBXD

DSXWPM LED

Series	LEDs	Drive current	Color temperature	Distribution	Voltage	Mounting[3]
DSXWPM LED	10C 10 LEDs (one engine) 20C 20 LEDs (two engines)	350 350 mA 530 530 mA 700 700 mA 1000 1000 mA (1 A)	30K 3000K 40K 4000K 50K 5000K AMBPC Amber phosphor converted	T2S Type II short T2M Type II medium T3S Type III short T3M Type III medium T4M Type IV medium TFTM Forward throw medium T5M Type V medium T5S Type V short T5A Type V area T5W Type V wide ASYDF Asymmetric diffuse SYMDF Symmetric diffuse	MVOLT [1] 120 [1] 208 [1] 240 [1] 277 [1] 347 [2] 480 [2]	**Shipped included** SPUMBA Square pole universal mounting adapter RPUMBA Round pole universal mounting adapter PUMBA Square and round universal mounting adapters

Control Options	Other Options	Finish *(required)*
Shipped installed PE Photoelectric cell, button type [4] DMG 0-10V dimming driver (no controls) PIR Motion/ambient light sensor, <15' mtg ht [5,6] PIRH Motion/ambient light sensor, 15-30' mtg ht [5,6] PIR1FC3V Motion/ambient sensor, 8-15' mounting height, ambient sensor enabled at 1fc [7] PIRH1FC3V Motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 1fc [7]	**Shipped installed** SF Single fuse (120, 277, 347V) [8] DF Double fuse (208, 240, 480 V) [8] HS House-side shield [8] **Shipped separately** [9] BSW Bird-deterrent spikes WG Wire guard VG Vandal guard DDL Diffused drop lens	DDBXD Dark bronze DBLXD Black DNAXD Natural aluminum DWHXD White DSSXD Sandstone DDBTXD Textured dark bronze DBLBXD Textured black DNATXD Textured natural aluminum DWHGXD Textured white DSSTXD Textured sandstone

NOTES
1 MVOLT driver operates on any line voltage from 120-277V (50/60 Hz). Specify 120, 208, 240 or 277 options only when ordering with fusing (SF, DF options), or photocontrol (PE option).
2 Only available with 20C, 700mA or 1000mA. Not available with PIR, PIRH.
3 Not available with 90 degree mounting. Not recommended for 3” poles.
4 Photocontrol (PE) requires 120, 208, 240, 277 or 347 voltage option. Not available with motion/ambient light sensors (PIR or PIRH).
5 PIR specifies the SensorSwitch SBGR-10-ODP control; PIRH specifies the SensorSwitch SBGR-6-ODP control; see Motion Sensor Guide for details. Dimming driver standard. Includes ambient light sensor. Not available with “PE”option (button type photocell).
6 Not available with 20 LED/1000 mA configuration (DSXWPM LED 20C 1000).
7 PIR and PIR1FC3V specify the SensorSwitch SBGR-10-ODP control; PIRH and PIRH1FC3V specify the SensorSwitch SBGR-6-ODP control; see Motion Sensor Guide for details. Dimming driver standard. Not available with PER5 or PER7. Ambient sensor disabled when ordered with DCR. Separate on/off required.
8 Single fuse (SF) requires 120, 277, or 347 voltage option. Double fuse (DF) requires 208, 240, or 480 voltage option.
9 Also available as a separate accessory; see Accessories information.

Accessories

Ordered and shipped separately.

DSXWHS U	House-side shield (one per light engine)
DSXWBSW U	Bird-deterrent spikes
DSXW1WG U	Wire guard accessory
DSXW1VG U	Vandal guard accessory
DSXWDDL U	Diffused drop lens

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SEAL

PROJECT TITLE

THE PARK TOWNHOMES AT FOSSIL RIDGE

Fort Collins, Colorado

PREPARED FOR

Manhattan Land Company, LLC.
772 Whalers Way, Suite 200
Fort Collins CO 80525
Contact: Russell Baker
Phone: 970.267.7721

REVISIONS	DATE

DATE

February 14, 2017

SHEET TITLE

Photometric Cut Sheet

SHEET INFORMATION

SHEET P2 OF 2

DELICH ASSOCIATES Traffic & Transportation Engineering
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MEMORANDUM

TO: Russell Baker, Cushman & Wakefield
Cathy Mathis, TB Group
Nicole Hahn, City of Fort Collins

FROM: Matt Delich

DATE: November 14, 2016

SUBJECT: Ziegler Townhomes Transportation Impact Study
(File: 1687ME01)

This memorandum constitutes a transportation impact study (TIS) for the proposed Ziegler Townhomes. The Ziegler Townhomes site is located west of Ziegler Road, across from the Ziegler/Saber Cat intersection. The site location is shown in Figure 1. The site plan for the Ziegler Townhomes is shown in Figure 2. The Ziegler Townhomes are north and south of the future west leg of County Fair Lane. County Fair Lane is built west of the Ziegler Townhomes site. A TIS (dated November 2012) was prepared for a proposed development on this property. The land uses in the previous TIS were more intensive than the current Ziegler Townhomes proposal. The scope of this memorandum was discussed with Nicole Hahn, City of Fort Collins Traffic Operations. Since the trip generation is expected to be low, a memorandum analyzing impacts was requested.

Existing Streets

The existing geometry at the Ziegler/Saber Cat intersection is shown in Figure 3. Ziegler Road is classified as a four-lane arterial street, north of Rock Creek Drive and a two-lane arterial street, south of Rock Creek Drive on the Fort Collins Master Street Plan. Currently, Ziegler Road has a four-lane cross section with auxiliary lanes north of Rock Creek Drive and has a two-lane cross section with auxiliary lanes south of Rock Creek Drive. At the Ziegler/Saber Cat intersection, Ziegler Road has a southbound left-turn lane, one southbound through lane, and a combined northbound through/right-turn lane. The Ziegler/Saber Cat intersection has stop sign control on Saber Cat Drive. The existing speed limit in this area is 40 mph.

Saber Cat Drive and County Fair Lane (extended) are classified as local streets. At the Ziegler/Saber Cat intersection, Saber Cat Drive has a westbound left-turn lane and a westbound right-turn lane. County Fair Lane is built west of the Ziegler Townhomes site. The development of the Ziegler Townhomes site will connect County Fair Lane with Ziegler Road.

Existing Traffic/Operation

The peak hour traffic at the Ziegler/Saber Car intersection from the previous TIS is provided in Appendix A. The turning volumes reflect Fossil Ridge High School in session, which is the primary land use served by Saber Cat Drive. Saber Car Drive will also serve the new SE Community Park. The graphic in Appendix A also shows afternoon peak hour traffic counts that were obtained in 2014 for the SE Community Park TIS. In addition to this, Appendix A contains recent peak hour counts at the Ziegler/Rock Creek intersection (May 2015). The south leg of the Ziegler/Rock Creek intersection is also the north leg of the Ziegler/Saber Cat intersection. Figure 4 shows the 2015 synthesized peak hour traffic at the Ziegler/Saber Cat intersection.

Using the volumes shown in Figure 4, the current peak hour operation at the Ziegler/Saber Cat intersection is shown in Table 1. Calculation forms for these analyses are provided in Appendix B. The Ziegler/Saber Cat intersection was analyzed using the unsignalized intersection techniques from the 2010 Highway Capacity Manual (2010 HCM). A description of level of service for unsignalized intersections from the 2010 Highway Capacity Manual is provided in Appendix B. Table 4-3 showing the Fort Collins Motor Vehicle LOS Standards (Intersections) is also provided in Appendix B. This site is in an area termed "Low Density Mixed-Use Residential." At unsignalized intersections in areas termed "Low Density Mixed-Use Residential," acceptable operation during the peak hours is defined as level of service D overall and level of service F for any approach leg for an arterial/collector, arterial/local, collector/local, and local/local intersection. In such areas, it is expected that there would be substantial delays to the minor street movements at unsignalized intersections along arterial streets during the peak hours. As can be seen in Table 1, the Ziegler/Saber Cat intersection is currently operating acceptably with existing control and geometry.

Trip Generation/Trip Distribution/Trip Assignment

Trip Generation, 9th Edition, ITE was used to estimate the daily and peak hour trip generation for the Ziegler Townhomes development. From this reference, the equations for Townhome (Code 230) were used to estimate the daily and peak hour trip generation as shown in Table 2. The trip generation resulted in 270 daily trip ends, 23 morning peak hour trip ends, and 27 afternoon peak hour trip ends. The trip distribution for the Ziegler Townhomes is shown in Figure 5. Figure 6 shows the site generated peak hour traffic at the Ziegler/Saber Cat intersection.

Background/Total Traffic Projections

Background traffic projections for the short range (2021) future horizon were obtained by factoring the Figure 4 traffic volumes on Ziegler Road by two percent per year, reviewing traffic studies for other developments, and reviewing historic count data for this area of Fort Collins. Other developments include: various parcels within the

Harmony Tech Park. It is assumed that the existing traffic on Saber Cat Drive will remain the same. For analysis purposes, the connection of County Fair Lane to Ziegler Road was assumed to be built for the short range (2021) background traffic. Therefore, a reassignment of the site generated traffic from dwelling units west of the Ziegler Townhome site was performed. This reassignment utilized a minimum path analysis within a trip shed area. Figure 7 shows the short range (2021) background peak hour traffic at the Ziegler/Saber Cat intersection.

The traffic volumes generated by the proposed Ziegler Townhomes were added to the background traffic volumes to produce the total traffic volume forecasts. Figure 8 shows the short range (2021) total peak hour traffic at the key intersection.

Operation Analysis

Table 3 shows the short range (2021) background morning and afternoon peak hour operation at the Ziegler/Saber Cat intersection. The Ziegler/Saber Cat intersection will operate at acceptable levels of service. Calculation forms for these analyses are provided in Appendix C. In Table 3, the calculated delay is provided for LOS E/F.

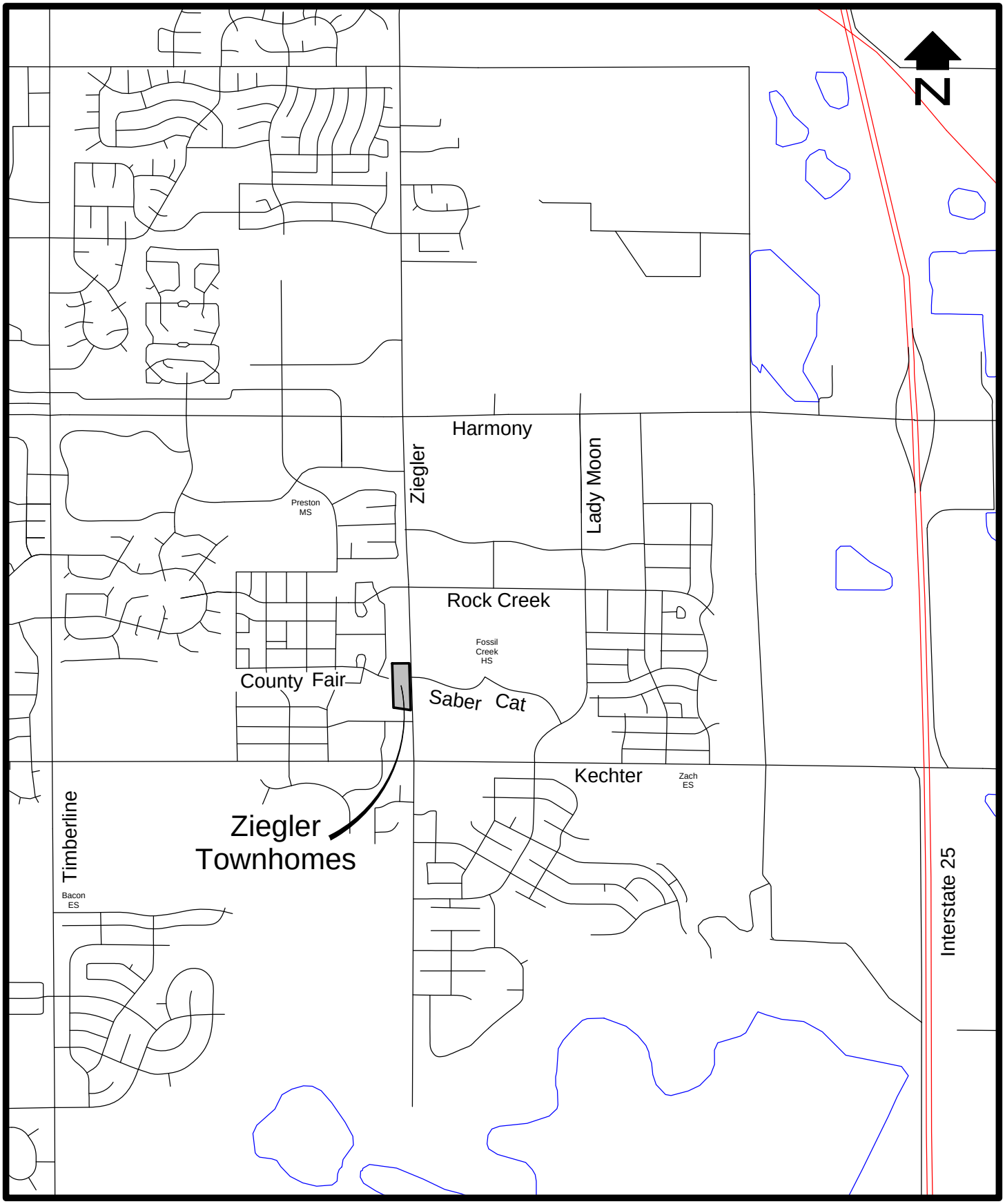
Table 4 shows the short range (2021) total morning and afternoon peak hour operation at the Ziegler/Saber Cat intersection. The Ziegler/Saber Cat intersection will operate at acceptable levels of service. Calculation forms for these analyses are provided in Appendix D. In Table 4, the calculated delay is provided for LOS E/F.

Geometry

Figure 9 shows a schematic of the short range (2021) geometry. According to Figure 8-4, LCUASS, a southbound right-turn deceleration lane will not be required at the Ziegler/Saber Cat intersection using the short range (2021) total traffic forecasts.

Conclusions

The Ziegler Townhomes project will provide the County Fair Lane connection to Ziegler Road. It is concluded that the Ziegler Townhomes project will have minimal impact at the Ziegler/Saber Cat-County Fair intersection. It is respectfully requested that no further transportation analyses be required.



SCALE: 1"=2000'

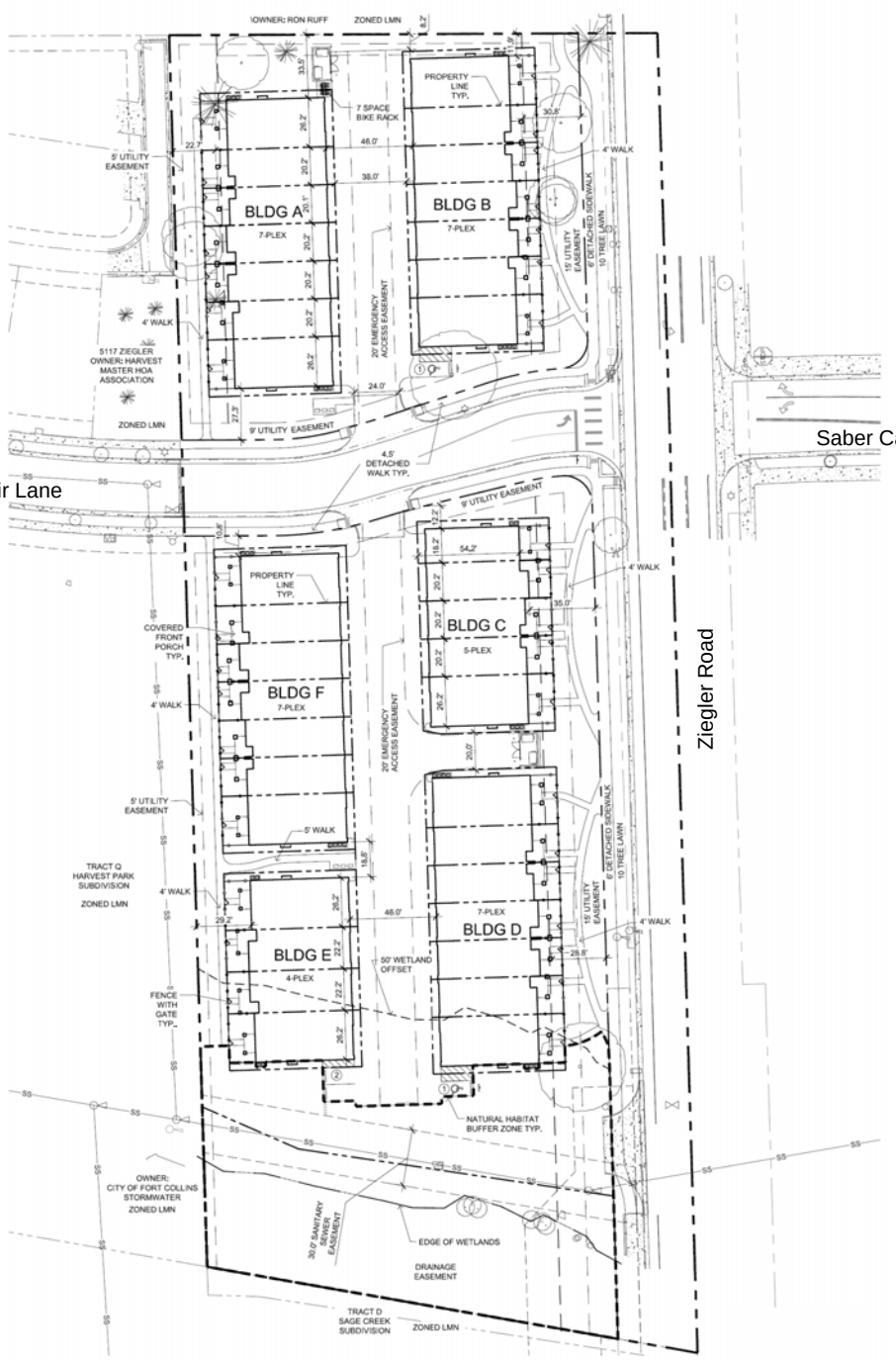
SITE LOCATION

Figure 1

DELICH ASSOCIATES

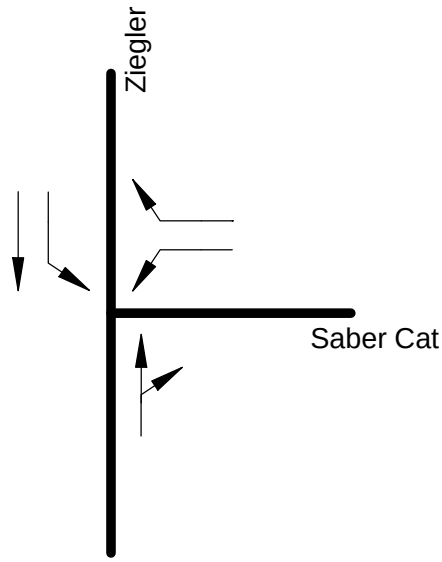
N

SCALE: 1"=100'

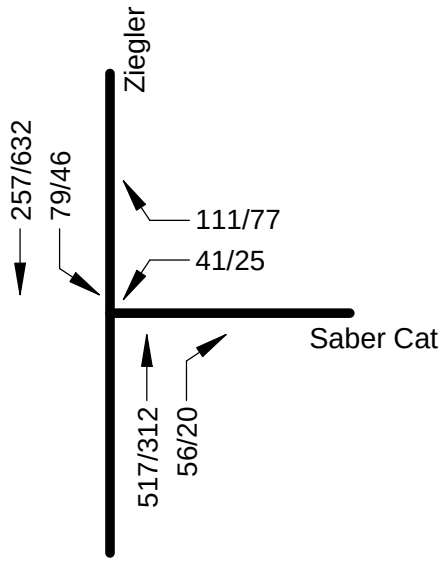


SITE PLAN

Figure 2



EXISTING INTERSECTION GEOMETRY Figure 3

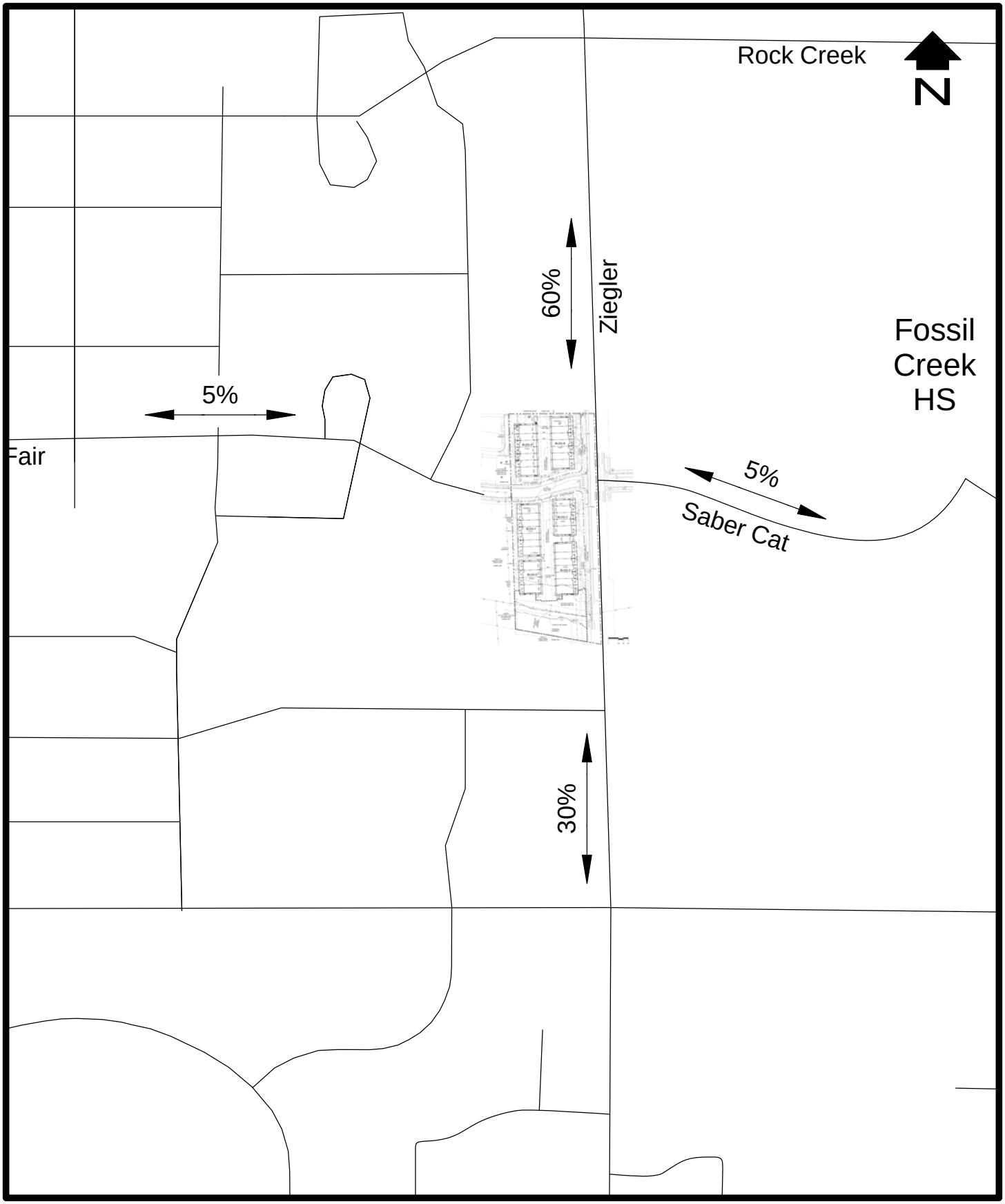


2015 SYNTHESIZED PEAK HOUR TRAFFIC

Figure 4

TABLE 1 Current Peak Hour Operation			
Intersection	**Movement**	**Level of Service**	
		AM	**PM**
Ziegler/Saber Cat (stop sign)	WB LT	D	D
	WB RT	B	B
	WB APPROACH	C	B
	SB LT	A	A
	OVERALL	A	A

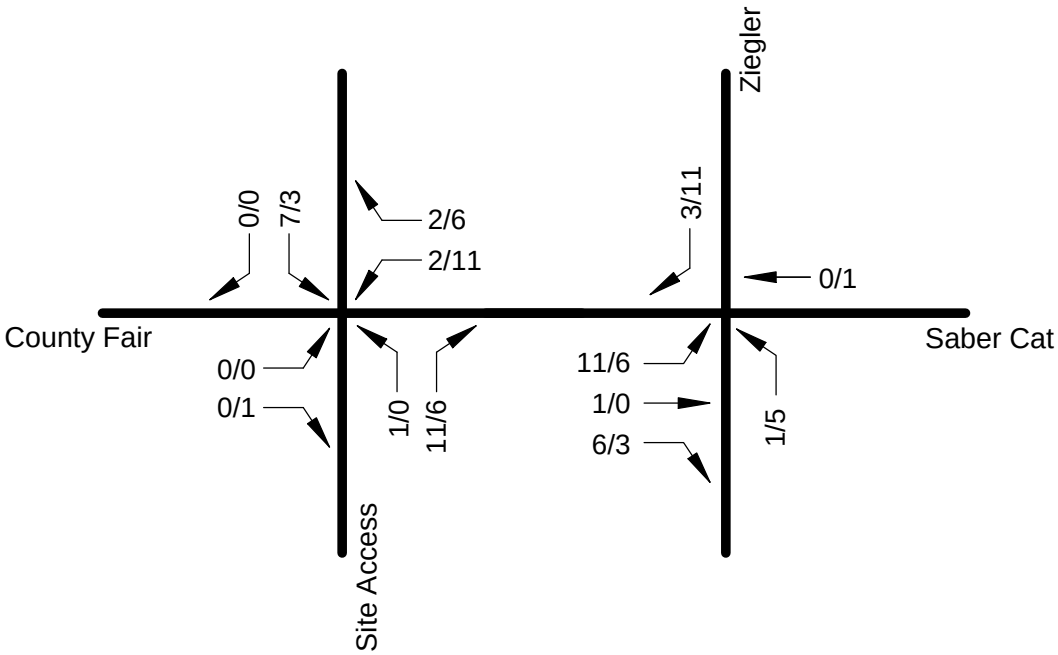
TABLE 2 Trip Generation for the Ziegler Townhomes												
Code	**Use**	**Size**	**AWDTE**		**AM Peak Hour**				**PM Peak Hour**			
			Rate	**Trips**	**Rate**	**In**	**Rate**	**Out**	**Rate**	**In**	**Rate**	**Out**
230	Townhome	37 D.U.	EQ	270	EQ	4	EQ	19	EQ	18	EQ	9



SCALE: 1"=400'

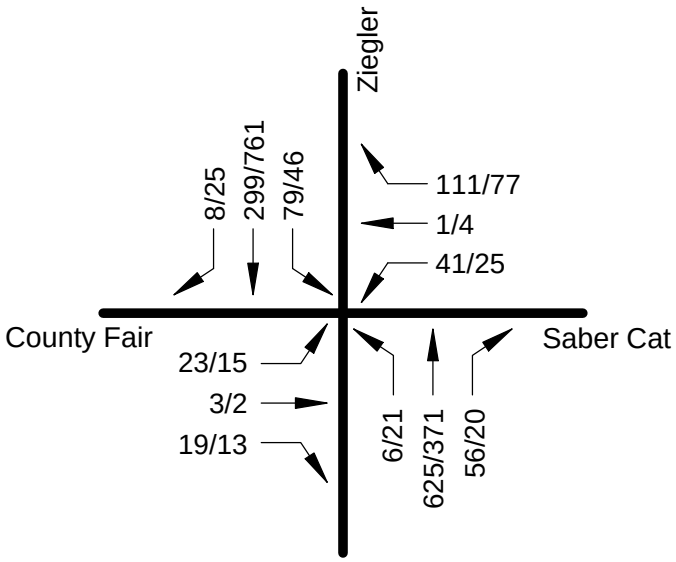
TRIP DISTRIBUTION

Figure 5



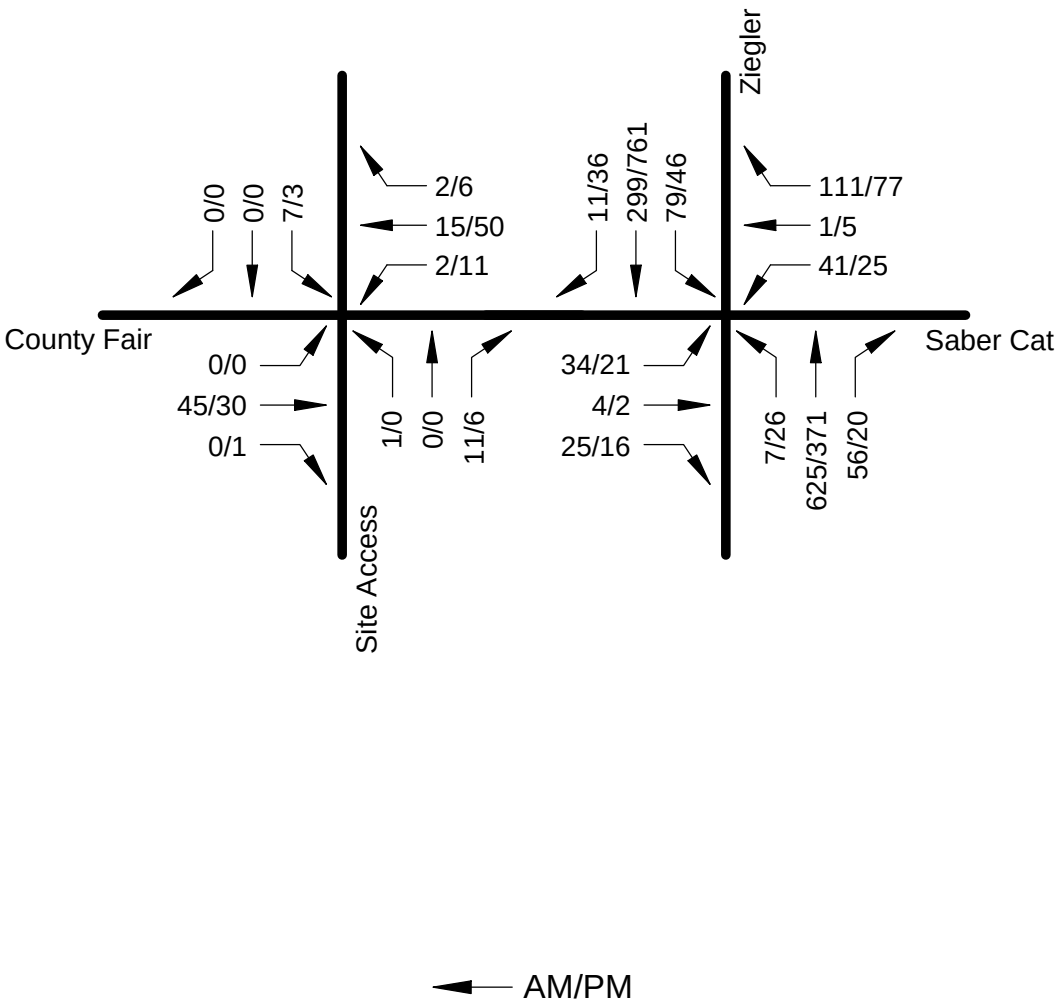
SITE GENERATED PEAK HOUR TRAFFIC

Figure 6



SHORT RANGE (2021) BACKGROUND PEAK HOUR TRAFFIC

Figure 7

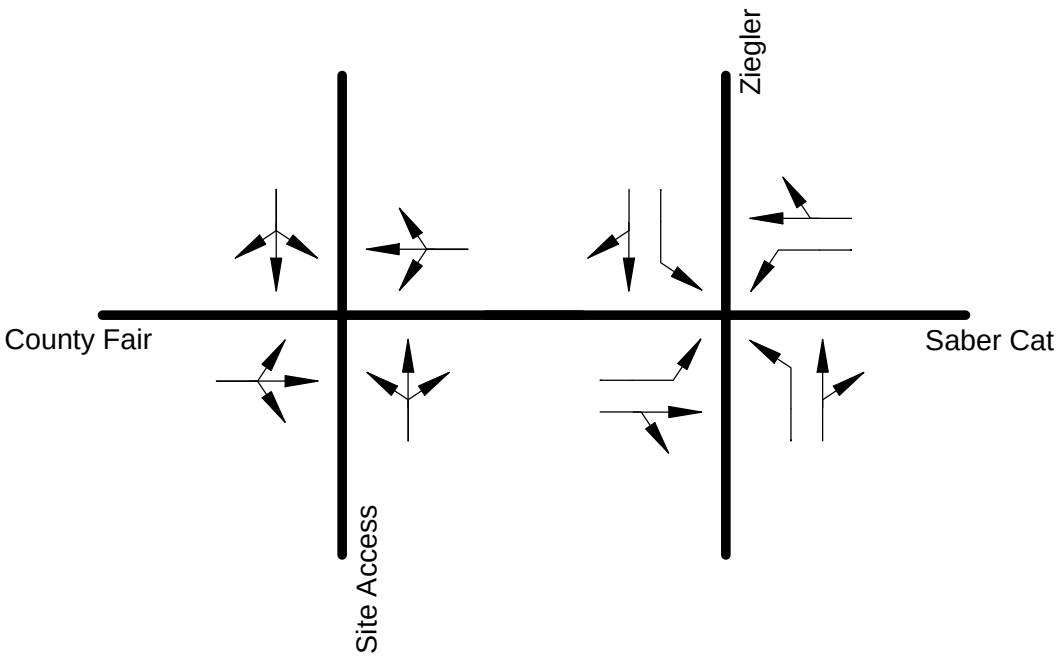


SHORT RANGE (2021) TOTAL PEAK HOUR TRAFFIC

Figure 8

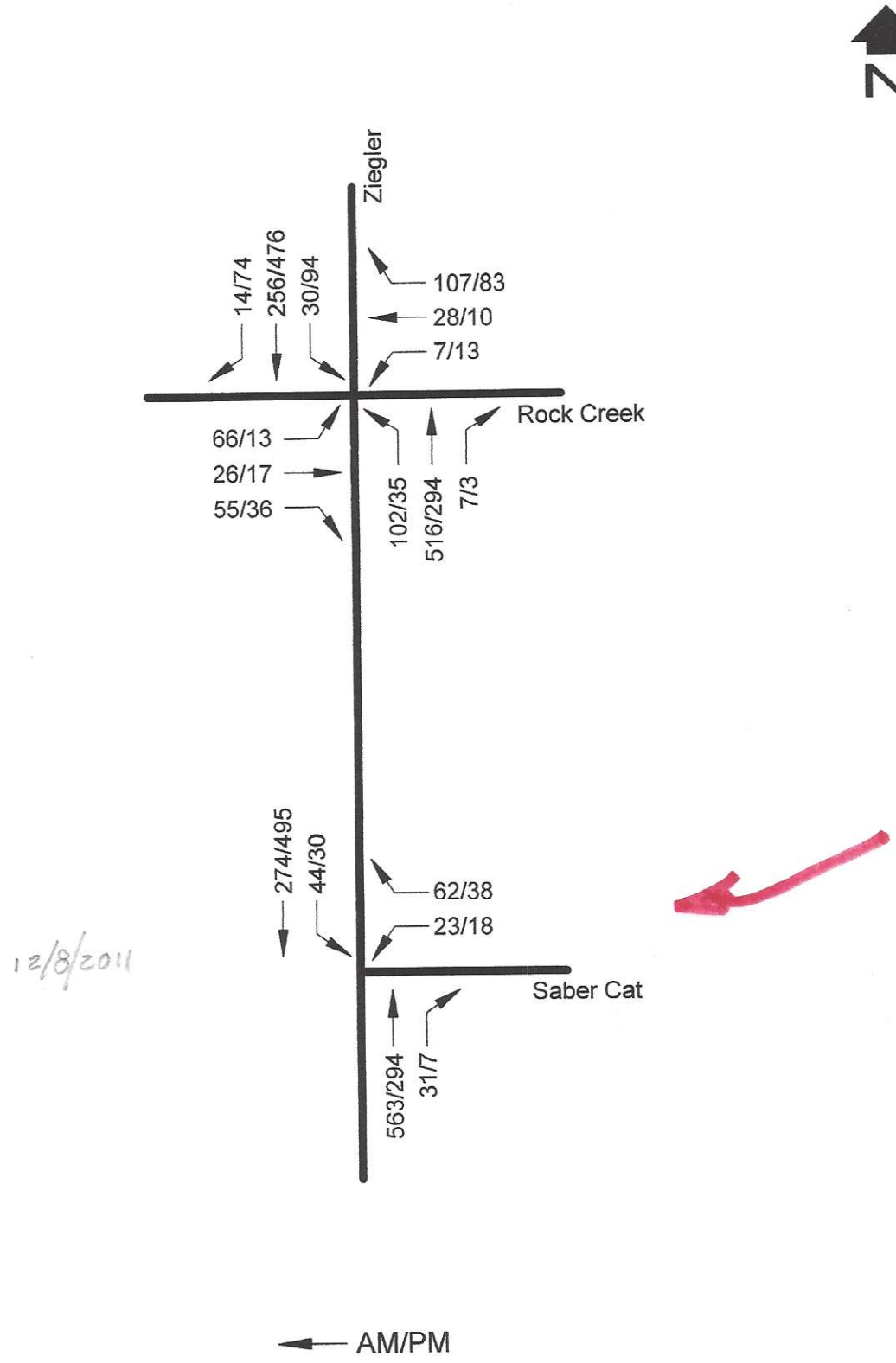
TABLE 3 Short Range (2021) Background Peak Hour Operation			
Intersection	**Movement**	**Level of Service**	
		AM	**PM**
Ziegler/Saber Cat-County Fair (stop sign)	EB LT	F (64.1 secs)	F (66.1 secs)
	EB T/RT	B	C
	EB APPROACH	E (39.3 secs)	E (42.6 secs)
	WB LT	E (49.2 secs)	F (60.7 secs)
	WB T/RT	C	B
	WB APPROACH	D	C
	NB LT	A	A
	SB LT	A	A
	OVERALL	A	A

TABLE 4 Short Range (2021) Total Peak Hour Operation			
Intersection	**Movement**	**Level of Service**	
		AM	**PM**
Ziegler/Saber Cat-County Fair (stop sign)	EB LT	F (79.0 secs)	F (76.3 secs)
	EB T/RT	B	C
	EB APPROACH	E (48.8 secs)	E (49.8 secs)
	WB LT	F (51.4 secs)	F (64.2 secs)
	WB T/RT	C	B
	WB APPROACH	D	D
	NB LT	A	A
	SB LT	A	A
	OVERALL	A	A



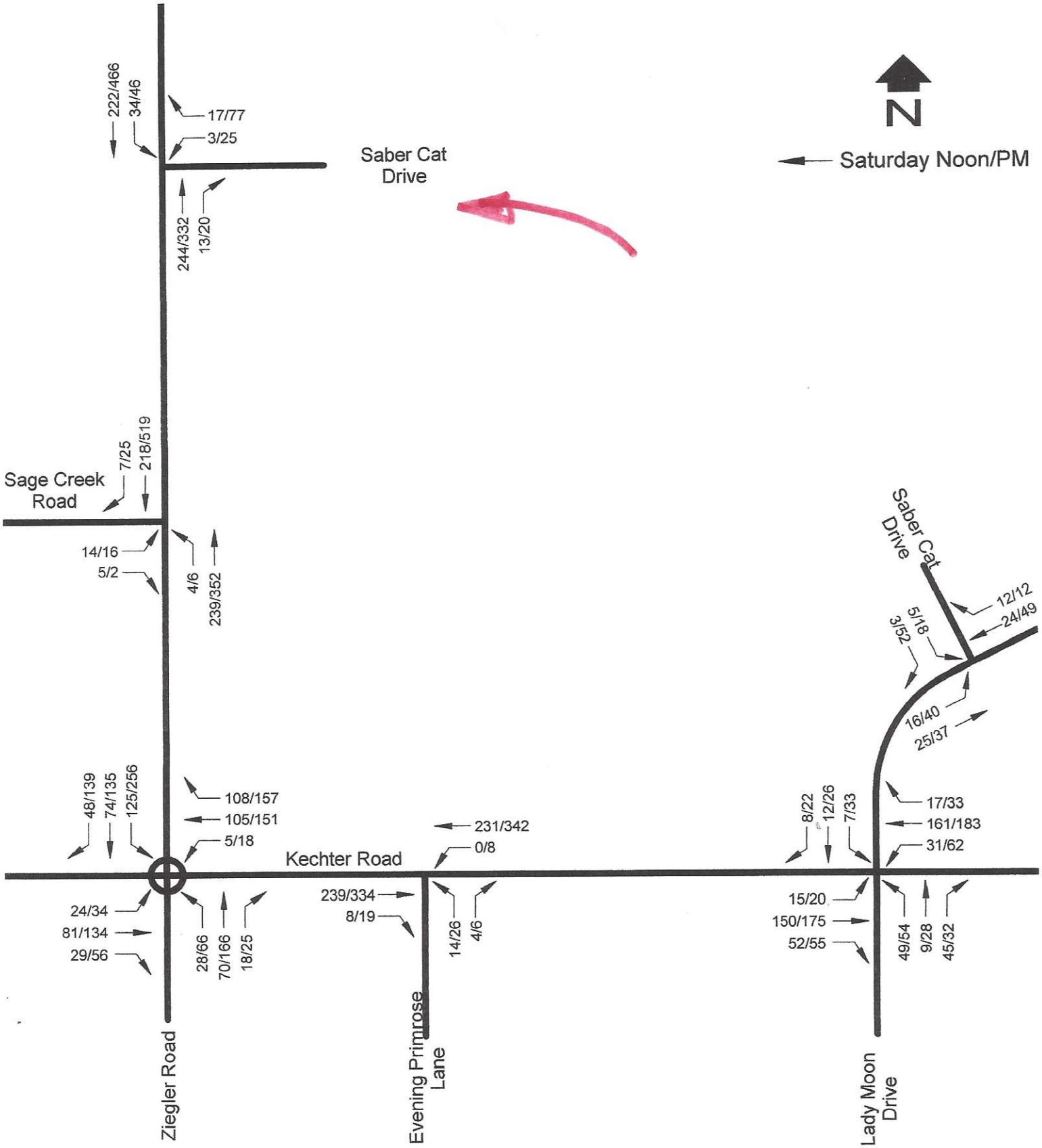
SHORT RANGE (2021) GEOMETRY Figure 9

APPENDIX A



RECENT PEAK HOUR TRAFFIC

Figure 2



RECENT SATURDAY NOON AND WEEKDAY AFTERNOON PEAK HOUR TRAFFIC

Figure 3

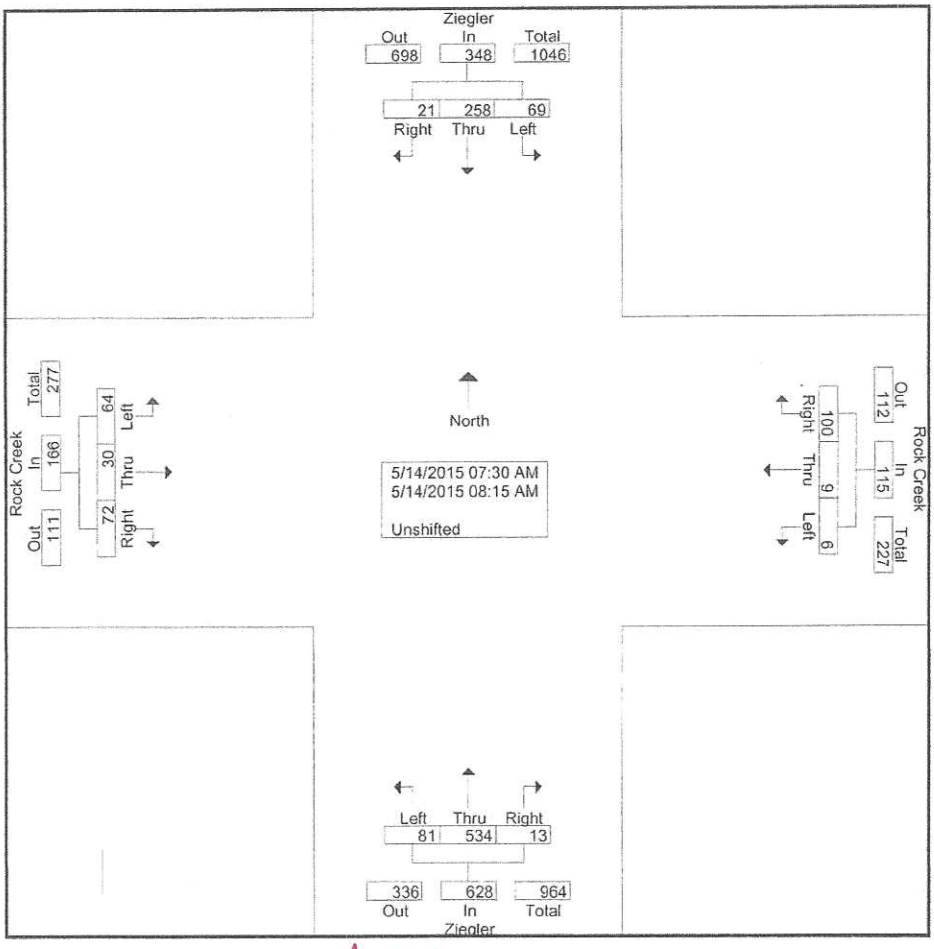
City of Fort Collins Traffic Operations
626 Linden Street, PO Box 580
Fort Collins, CO 80522-0580
Peak Hour Turning Movement Study

North/South Street: Ziegler
East/West Street: Rock Creek
Time: AM
ICU Number: 168

File Name : Ziegler & Rock Creek 5-12-15
Site Code : 00000168
Start Date : 5/14/2015
Page No : 1

Groups Printed- Unshifted

	Ziegler Southbound				Rock Creek Westbound				Ziegler Northbound				Rock Creek 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	6	66	11	83	33	4	0	37	4	135	25	164	33	18	34	85	369
07:45 AM	3	84	21	108	29	3	2	34	3	151	12	166	18	10	11	39	347
Total	9	150	32	191	62	7	2	71	7	286	37	330	51	28	45	124	716
08:00 AM	6	63	22	91	21	0	1	22	1	140	26	167	9	2	6	17	297
08:15 AM	6	45	15	66	17	2	3	22	5	108	18	131	12	0	13	25	244
Grand Total	21	258	69	348	100	9	6	115	13	534	81	628	72	30	64	166	1257
Apprch %	6	74.1	19.8		87	7.8	5.2		2.1	85	12.9		43.4	18.1	38.6		
Total %	1.7	20.5	5.5	27.7	8	0.7	0.5	9.1	1	42.5	6.4	50	5.7	2.4	5.1	13.2	



AM

336 ↓ ↑ 628

City of Fort Collins Traffic Operations

626 Linden Street, PO Box 580
Fort Collins, CO 80522-0580

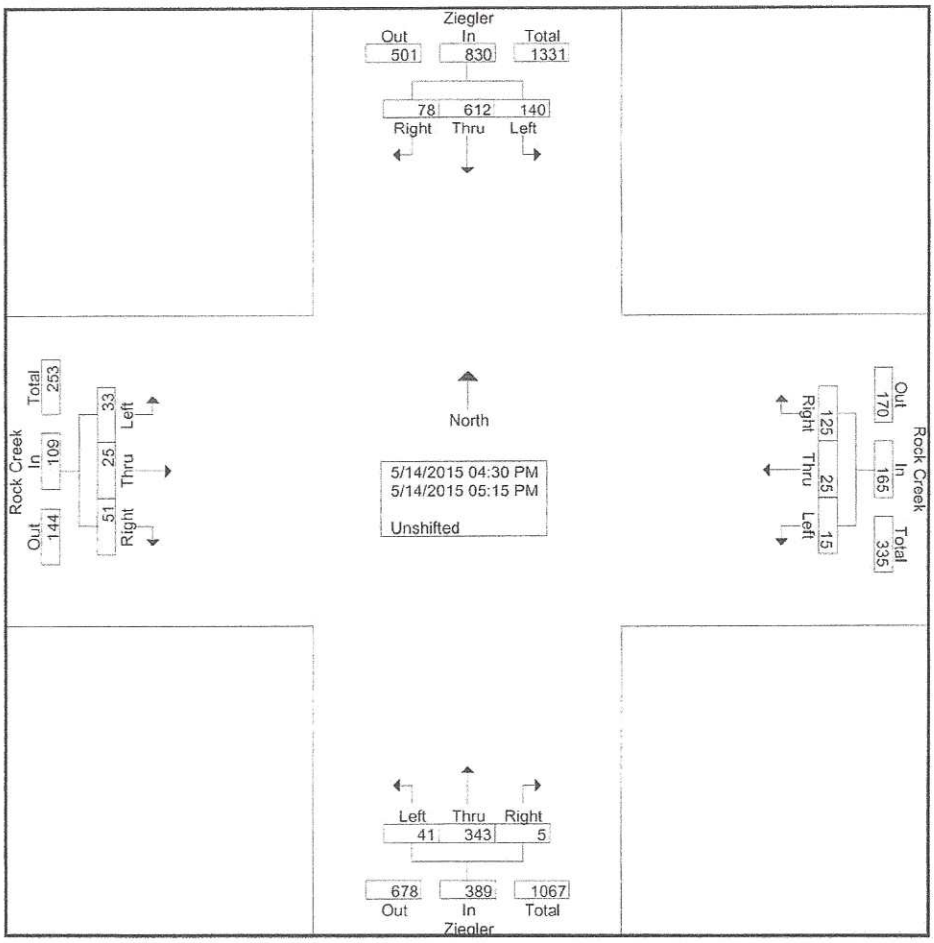
Peak Hour Turning Movement Study

North/South Street: Ziegler
East/West Street: Rock Creek
Time: PM
ICU Number: 168

File Name : Ziegler & Rock Creek 5-12-15
Site Code : 00000168
Start Date : 5/14/2015
Page No : 1

Groups Printed- Unshifted

	Ziegler Southbound				Rock Creek Westbound				Ziegler Northbound				Rock Creek 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	20	141	30	191	32	5	4	41	1	77	11	89	9	6	6	21	342
04:45 PM	18	143	39	200	36	5	4	45	0	80	8	88	16	5	14	35	368
Total	38	284	69	391	68	10	8	86	1	157	19	177	25	11	20	56	710
05:00 PM	15	148	41	204	29	9	4	42	4	90	8	102	12	7	9	28	376
05:15 PM	25	180	30	235	28	6	3	37	0	96	14	110	14	7	4	25	407
Grand Total	78	612	140	830	125	25	15	165	5	343	41	389	51	25	33	109	1493
Apprch %	9.4	73.7	16.9		75.8	15.2	9.1		1.3	88.2	10.5		46.8	22.9	30.3		
Total %	5.2	41	9.4	55.6	8.4	1.7	1	11.1	0.3	23	2.7	26.1	3.4	1.7	2.2	7.3	



PM

678 ↓ ↑ 389

APPENDIX B

Intersection	
Int Delay, s/veh	3.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	41	111	517	56	79	257
Future Vol, veh/h	41	111	517	56	79	257
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	75	0	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	85	85	94	94	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	48	131	550	60	93	302

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1068	580	0	0	610	0
Stage 1	580	-	-	-	-	-
Stage 2	488	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	245	514	-	-	969	-
Stage 1	560	-	-	-	-	-
Stage 2	617	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	221	514	-	-	969	-
Mov Cap-2 Maneuver	221	-	-	-	-	-
Stage 1	560	-	-	-	-	-
Stage 2	558	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	17.5	0	2.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	221	514	969	-
HCM Lane V/C Ratio	-	-	0.218	0.254	0.096	-
HCM Control Delay (s)	-	-	25.8	14.4	9.1	-
HCM Lane LOS	-	-	D	B	A	-
HCM 95th %tile Q(veh)	-	-	0.8	1	0.3	-

Intersection	
Int Delay, s/veh	1.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	25	77	312	20	46	632
Future Vol, veh/h	25	77	312	20	46	632
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	75	0	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	85	85	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	29	91	355	23	52	718

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1189	366	0	0	377	0
Stage 1	366	-	-	-	-	-
Stage 2	823	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	208	679	-	-	1181	-
Stage 1	702	-	-	-	-	-
Stage 2	431	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	199	679	-	-	1181	-
Mov Cap-2 Maneuver	199	-	-	-	-	-
Stage 1	702	-	-	-	-	-
Stage 2	412	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.8	0	0.6
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	199	679	1181	-
HCM Lane V/C Ratio	-	-	0.148	0.133	0.044	-
HCM Control Delay (s)	-	-	26.2	11.1	8.2	-
HCM Lane LOS	-	-	D	B	A	-
HCM 95th %tile Q(veh)	-	-	0.5	0.5	0.1	-

UNSIGNALIZED INTERSECTIONS

Level-of-Service	Average Total Delay sec/veh
A	$\leq$ 10
B	> 10 and $\leq$ 15
C	> 15 and $\leq$ 25
D	> 25 and $\leq$ 35
E	> 35 and $\leq$ 50
F	> 50

Table 4-3
Fort Collins (GMA and City Limits)
Motor Vehicle LOS Standards (Intersections)

	Overall	Any Approach Leg	Any Movement
Signalized	D[1]	E	E[2]
Unsignalized Arterial/Arterial Collector/Collector	E[3]	F[4]	
Unsignalized Arterial/Collector Arterial/Local Collector/Local Local/Local	D[3]	F[4]	
Roundabout	E[3,5]	E[5,4]	E[5]

[1] In mixed use district including downtown as defined by structure plan, overall LOS E is acceptable
[2] Applicable with at least 5% of total entering volume
[3] Use weighed average to identify overall delay
[4] Mitigation may be required
[5] Apply unsignalized delay value thresholds to determine LOS

APPENDIX C

Intersection

Int Delay, s/veh 5.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	23	3	19	41	1	111	6	625	56	79	299	8
Future Vol, veh/h	23	3	19	41	1	111	6	625	56	79	299	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	75	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	94	94	94	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	27	4	22	48	1	131	6	665	60	93	352	9

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1315	1279	356	1262	1254	695	361	0	0	724	0	0
Stage 1	542	542	-	707	707	-	-	-	-	-	-	-
Stage 2	773	737	-	555	547	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	135	166	688	147	172	442	1198	-	-	879	-	-
Stage 1	525	520	-	426	438	-	-	-	-	-	-	-
Stage 2	392	425	-	516	517	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	87	148	688	128	153	442	1198	-	-	879	-	-
Mov Cap-2 Maneuver	87	148	-	128	153	-	-	-	-	-	-	-
Stage 1	522	465	-	424	436	-	-	-	-	-	-	-
Stage 2	274	423	-	443	462	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	39.3	25.5	0.1	2
HCM LOS	E	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1198	-	-	87	459	128	435	879	-	-
HCM Lane V/C Ratio	0.005	-	-	0.311	0.056	0.377	0.303	0.106	-	-
HCM Control Delay (s)	8	-	-	64.1	13.3	49.2	16.8	9.6	-	-
HCM Lane LOS	A	-	-	F	B	E	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	1.2	0.2	1.6	1.3	0.4	-	-

Intersection

Int Delay, s/veh 3.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	2	13	25	4	77	21	371	20	46	761	25
Future Vol, veh/h	15	2	13	25	4	77	21	371	20	46	761	25
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	75	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	18	2	15	29	5	91	24	422	23	52	865	28

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1512	1476	879	1473	1479	433	893	0	0	444	0	0
Stage 1	984	984	-	481	481	-	-	-	-	-	-	-
Stage 2	528	492	-	992	998	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	98	126	347	105	126	623	759	-	-	1116	-	-
Stage 1	299	327	-	566	554	-	-	-	-	-	-	-
Stage 2	534	548	-	296	322	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	76	116	347	93	116	623	759	-	-	1116	-	-
Mov Cap-2 Maneuver	76	116	-	93	116	-	-	-	-	-	-	-
Stage 1	290	312	-	548	536	-	-	-	-	-	-	-
Stage 2	438	531	-	268	307	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	42.6	24.7	0.5	0.5
HCM LOS	E	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	759	-	-	76	274	93	512	1116	-	-
HCM Lane V/C Ratio	0.031	-	-	0.232	0.064	0.316	0.186	0.047	-	-
HCM Control Delay (s)	9.9	-	-	66.1	19	60.7	13.6	8.4	-	-
HCM Lane LOS	A	-	-	F	C	F	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.8	0.2	1.2	0.7	0.1	-	-

APPENDIX D

Intersection

Int Delay, s/veh 6.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	34	4	25	41	1	111	7	625	56	79	299	11
Future Vol, veh/h	34	4	25	41	1	111	7	625	56	79	299	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	75	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	94	94	94	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	40	5	29	48	1	131	7	665	60	93	352	13

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1319	1283	358	1271	1261	695	365	0	0	724	0	0
Stage 1	544	544	-	710	710	-	-	-	-	-	-	-
Stage 2	775	739	-	561	551	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	134	165	686	145	170	442	1194	-	-	879	-	-
Stage 1	523	519	-	424	437	-	-	-	-	-	-	-
Stage 2	391	424	-	512	515	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	86	147	686	124	151	442	1194	-	-	879	-	-
Mov Cap-2 Maneuver	86	147	-	124	151	-	-	-	-	-	-	-
Stage 1	520	464	-	422	434	-	-	-	-	-	-	-
Stage 2	273	422	-	434	461	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	48.8	26.1	0.1	1.9
HCM LOS	E	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1194	-	-	86	456	124	435	879	-	-
HCM Lane V/C Ratio	0.006	-	-	0.465	0.075	0.389	0.303	0.106	-	-
HCM Control Delay (s)	8	-	-	79	13.5	51.4	16.8	9.6	-	-
HCM Lane LOS	A	-	-	F	B	F	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	1.9	0.2	1.6	1.3	0.4	-	-

Intersection

Int Delay, s/veh 3.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	21	2	16	25	5	77	26	371	20	46	761	36
Future Vol, veh/h	21	2	16	25	5	77	26	371	20	46	761	36
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	75	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	25	2	19	29	6	91	30	422	23	52	865	41

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1530	1493	885	1492	1502	433	906	0	0	444	0	0
Stage 1	990	990	-	492	492	-	-	-	-	-	-	-
Stage 2	540	503	-	1000	1010	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	96	123	344	102	122	623	751	-	-	1116	-	-
Stage 1	297	324	-	558	548	-	-	-	-	-	-	-
Stage 2	526	541	-	293	317	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	74	113	344	89	112	623	751	-	-	1116	-	-
Mov Cap-2 Maneuver	74	113	-	89	112	-	-	-	-	-	-	-
Stage 1	285	309	-	536	526	-	-	-	-	-	-	-
Stage 2	427	519	-	262	302	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	49.8	25.9	0.6	0.5
HCM LOS	E	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	751	-	-	74	280	89	487	1116	-	-
HCM Lane V/C Ratio	0.039	-	-	0.334	0.076	0.33	0.198	0.047	-	-
HCM Control Delay (s)	10	-	-	76.3	18.9	64.2	14.2	8.4	-	-
HCM Lane LOS	A	-	-	F	C	F	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	1.2	0.2	1.3	0.7	0.1	-	-