Planning Commission Agenda Report Meeting Date 07/19/2018

Files: AR 18-01, UP 18-01, GPA/RZ 16-02

DATE: June 21, 2018

TO: PLANNING COMMISSION

FROM: Shannon Costa, Assistant Planner, 879-6807 (shannon.costa@chicoca.gov)
Community Development Department

RE: General Plan Amendment, Rezone and Use Permit for Enloe Medical Office Building; located on West East Avenue, APN 006-530-026 and -025

SUMMARY

Enloe Medical Center is proposing to construct a 126,000-square-foot medical office building on the north side of W. East Avenue, located easterly of the existing Enloe Rehabilitation Center. The project involves several components: A General Plan amendment and rezone to change the respective land use designation and zoning of the property from Residential Mixed Use and RMU (Residential Mixed Use) to Office Mixed Use and OR (Office Residential), and a use permit to allow: 1) Business hours that extend beyond Monday through Friday, 8 a.m. to 6 p.m., 2) Perimeter fencing that exceeds 6-feet in height, and 3) To allow off-site parking on the adjacent rehabilitation center parcel. The Planning Commission will forward a recommendation to the City Council for final consideration of the General Plan amendment, rezone, and use permit, including the final architectural design approval.

Recommendation:

Planning staff recommends adoption of Resolution No. 18-15 (**Attachment A**, Resolution 18-15, Enloe Medical Office Building), recommending that the City Council adopt the negative declaration and approve the General Plan amendment, rezone, use permit and architectural design for the Enloe Medical Office Building project, subject to the attached conditions.

Proposed Motion:

I move that the Planning Commission adopt Resolution No. 18-15, recommending that the City Council adopt the negative declaration and approve the General Plan amendment, rezone, use permit and architectural design for the Enloe Medical Office Building project, subject to the attached conditions.

BACKGROUND

The proposed project is located on a vacant 6.67-acre parcel on the north side of W. East Avenue, easterly of the existing Enloe Rehabilitation Center, approximately 0.25-miles west of the intersection at East Avenue and Esplanade (see **Attachment B**, Location Map). The project includes several components:

1. A General Plan Land Use Diagram amendment to change the land use designation of the property from Residential Mixed Use to Office Mixed Use (see **Exhibit II**, GPA Plats);

2. Rezone of the property from RMU (Residential Mixed Use) to OR (Office Residential) (see **Exhibit III**, Rezone Plats); and

3. A use permit to allow: 1) Extended business beyond Monday through Friday, 8 a.m. to 6 p.m., 2) Perimeter fencing that exceeds 6-feet in height, and 3) To allow off-site parking on the adjacent rehabilitation center parcel.

The project site is an unimproved, disturbed, and vacant property. The property is bordered by residential development including a mobile home park to the north, Chico Town and Country Shopping Center to the east, Enloe Rehabilitation Center to the west, and vacant land to the south. The surrounding area is generally developed.

PROJECT DESCRIPTION

The project involves a new 3-story medical office building with a footprint of approximately 45,000 square feet (126,000 square feet total). Interior floor spaces will accommodate a primary care clinic, prompt care services, radiology/imaging department, physical and cardiac therapy space, hyperbaric clinic, cardiology clinic, spine and joint clinic, Gastroenterology/Urology clinic and associated support services. Other improvements to the site include new parking, lighting, landscaping and a trash enclosure. Construction of the new office building would allow Enloe Medical Center to consolidate and expand many of its outpatient services while reducing outpatient and non-emergency volume at its main Esplanade campus (see **Attachment C**, Project Description and **Attachment D**, Site Plan).

DISCUSSION AND ANALYSIS

The project includes four main components:

1. General Plan Amendment

The existing Residential Mixed-Use designation is characterized by predominantly office uses, but allows the integration of commercial and/or residential uses on the same site. The proposed Office-Mixed Use designation, while also characterized by predominantly office uses integrated with residential uses, would allow a broader range of primary uses or with approval of a use permit as outlined in the Chico Municipal Code. Re-designating the site to Office Mixed Use would result in land use designation consistency with the adjacent rehabilitation facility site (designated Office Mixed Use).

2. Rezone

The existing RMU (Residential Mixed Use) zoning allows for medium to high residential densities with low intensity commercial and office uses on the same site. The proposed OR (Office Residential) zoning district is applied to areas of existing and future office and residential development where community commercial uses are not appropriate. Rezoning the site to OR (Office Residential) would result in zoning consistency with the adjacent rehabilitation facility site (zoned OR) and would allow for medical office uses that include clinics and laboratories. The existing Corridor Opportunity Site (-COS) overlay on the site would remain unchanged.

The Office Mixed Use designation and OR zoning is applied to all properties on the north side of W. East Avenue, west of the project site for an approximate 0.3-mile stretch (see **Attachment E,** W. East Avenue Zoning Districts) The proposed change in zoning and land use designation would support construction of the medical office building and would maintain a transitional zone from residential uses to the north to the existing commercial uses along the W. East Avenue corridor and would not result in a substantial conflict with the established character, aesthetics or functioning of the surrounding neighborhood. There are a variety of compatible medical office and commercial uses near the project site.

3. Use Permit

A use permit is necessary for several aspects of the project including extended business hours, approval of a seven-foot tall perimeter fence, and to allow required parking to be located off-site on the adjacent rehabilitation center site. Each of these requests is discussed below:

Pursuant to Chico Municipal Code (CMC) 19.44.010, Table 4-6 (Commercial/office zone land uses and permit requirements), a use permit is necessary to allow business hours that extend beyond Monday through Friday, 8 a.m. to 6 p.m. The proposed medical office building would include a prompt-care, non-emergency department with hours of operation anticipated to extend to 10 p.m., seven days a week. Extending these hours to accommodate prompt-care services is no expected to impact the surrounding residents or businesses. The building placement on the site is consistent with the existing rehabilitation center and provides an ample buffer from the adjacent residential neighborhood of approximately 165 feet. Common issues associated with extended business hours in the OR zoning district include noise, light and glare and parking and traffic. Each of these issues is briefly discussed below:

a. Noise

The project will introduce potential noise disturbances normally associated with medical office uses (i.e. parking lots noise, alarms, emergency vehicle sirens, garbage trucks) to the project site. A six-foot-tall 'good-neighbor' wood fence was originally proposed along the rear property line and would adjoin an existing five-foot-tall CMU brick wall located at the northeast corner of the site. To address neighbor concerns regarding aesthetics, light and glare spillage, and noise, staff is recommending a condition of approval (see Condition of Approval #6) to increase the height of the rear property line fence to seven-feet, and to extend the fence the entire length of the rear property line, including behind the existing adjacent rehabilitation center site. Pursuant to CMC 19.60.060 (Fencing and screening), a use permit is necessary to construct a fence that extends beyond 6-feet in height. The applicant agreed that the increased fence height would benefit the adjacent residential neighbors by buffering noise and light, and is requesting approval of the use permit.

b. Light and Glare

Development of the project will include new light sources in the parking area surrounding the medical office building, exterior lighting on the building façade, and lighting sources inside the building. Parking lot pole lights are depicted on the photometrics plan at a height of 25-feet. To reduce light glare and spillage that may disturb the adjacent residential neighbors, staff is recommending a condition of approval (see Condition of Approval #7) to limit the height of

parking lot light poles located along the rear perimeter of the site to 12-feet, and all interior light poles to 18-feet. Twelve-foot parking lot light poles at the rear of the site would be consistent with the existing light poles on the adjacent rehabilitation center site. Bollards, fixtures mounted under solar shade structures and building-mounted wall sconce lighting would provide additional lighting throughout the site and are required to comply with CMC 19.60.050 (Exterior Lighting).

Floor plans provided by the applicant (see **Attachment F**, Floor Plans) indicate that the prompt care would be located on the first floor, near the buildings front entry. Second and third floor spaces would accommodate other office and therapy uses. Office hours for second and third floor uses are anticipated to be Monday through Friday, 8 a.m. to 6 p.m. and would not include weekends. By locating the prompt care on the first floor facing W. East Avenue, light and glare associated with interior building lights would be reduced during evening and nighttime hours, limiting impacts to adjacent residential neighbors.

c. Parking and Traffic

Access to the site would be provided by a new driveway from W. East Avenue, or through the existing driveway serving the rehabilitation center and the proposed project. A total of 392 vehicle parking spaces are provided on the site with an additional 67 new vehicle parking spaces to be located on the adjacent rehabilitation center site. Pursuant to CMC 19.70.040, Table 5-4 (Number of parking spaces required), a total of 481 parking spaces are required based on the use of the building. CMC 19.70.060.G (Design and development standards for off-street parking) requires that all parking be located on the same parcel as the main use, unless granted a use permit to allow off-site parking. The applicant is requesting a use permit to allow 67 required vehicle parking spaces to be located on the adjacent rehabilitation facility site, which provides ample parking for the existing rehabilitation use in addition to the requested off-site parking. In total, all parking requirements pursuant to CMC 19.70 (Parking and loading standards) have been satisfied and staff supports the request.

A Traffic Impact Study was prepared for the project and concluded that the proposal would not have any significant impacts on traffic operations for intersections in the project vicinity (see **Attachment G,** Traffic Impact Study). All study intersections are expected to operate at acceptable levels of service during the AM and PM peak hours under every study scenario. Based on the results of the Study, the site plan was modified to prohibit outbound left-turn movements from the new project driveway to avoid traffic and safety impacts. Furthermore, the site is located approximately 560-feet from an existing transit route (B-Line route #3), and is adjacent to a major arterial roadway identified as a Corridor Opportunity Site on the General Plan.

Locating the proposed medical office building adjacent to an existing medical facility will result in land use, parking and traffic efficiencies that would ultimately reduce vehicle miles traveled. Additionally, the project will pay the appropriate City of Chico standard Transportation Facility Fees for added traffic on the roadway system.

4. Site Design and Architectural Review

The Architectural Review and Historic Preservation Board (ARHPB) has reviewed the site design and architecture at its June 20, 2018 meeting and recommends approval, subject to conditions. Project issues discussed by Board members included light intensity for parking lot light poles, safety concerns for pedestrians traveling between the buildings and on-site circulation. The project team was available to answer Board member questions.

The proposed architecture for the new building is consistent with Enloe Medical Center's traditional mission revival characteristics, including towers with tile roofing and arched window frame accents (see **Attachment H,** Elevations, **Attachment I**, Colors and Materials, and **Attachment J**, Perspectives). The buildings main body features stucco surfaces in a variety of cream and beige. An elevator tower reaching 63 feet in height is proposed towards the main-entry of the building, providing a prominent way-finding feature. The building's massing and scale would not overwhelm the site and matches the same building front setback as the adjacent rehabilitation center site, resulting in a cohesive transition. Landscape plans depict careful attention to the W. East Avenue frontage to provide a park-like setting along the busy corridor and an ample landscape buffer is provided along the rear property line to enhance aesthetics and mitigate sound and light for the adjacent residential neighbors (see **Attachment K**, Landscape Planting Plan).

The project is consistent with Design Guidelines (DGs) that call for incorporating recognizable cultural motifs and referencing cultural ties to the community (DG 1.1.11, 1.1.34, and 1.2.21). Building materials, such as light stucco and terra cotta tile give a Spanish feel to the building, reinforcing a sense of permanence, history and place (DG 1.2.32).

The project site represents an infill development opportunity in a portion of Chico developed with a mix of uses, including a variety of housing types and densities and commercial and office uses. The buildings design, placement, architecture and landscaping have been thoughtfully placed, resulting in a cohesive transition from residential uses to the north and commercial and office uses to the east and west. All aspects of the project are supported by staff.

GENERAL PLAN CONSISTENCY

The W. East Avenue corridor, where the project site is located, is identified as a Corridor Opportunity Site on the General Plan. Corridor Opportunity Sites are identified as areas that provide a greater opportunity for change or improvement with the General Plan planning horizon with the highest infill and redevelopment potential in the City.

The proposal is consistent with the following goals, policies, and action items from the Land Use and Economic Development Elements of the General Plan:

The following General Plan principles and policies are applicable to the project:

CD-5: Support infill and redevelopment compatible with the surrounding neighborhood.

CD-5.2 Encourage context sensitive transitions in architectural scale and character

between new and existing residential development.

CD-5.3 For infill development, incorporate context sensitive design elements that maintain compatibility and raise the quality of the area's architectural character.

LU-4: Promote compatible infill development.

LU-4.2: Support infill development, redevelopment, and rehabilitation projects that are compatible with surrounding properties and neighborhoods.

LU-4.2.3: For projects proposed on or adjacent to residentially zoned property, which require a discretionary approval by the Planning Commission or City Council, require applicants to have a pre-application neighborhood meeting with interested parties in the respective neighborhood to hear issues and consider input.

PPFS-7.2: Support efforts to improve and expand health and social services for all segments of the community.

ED-1.2: Ensure an adequate supply of appropriately zoned land that is readily served by infrastructure to support local economic development for base level job growth and to maintain Chico's prominence as the regional center of retail activity for the tri-county region.

ED-1.5: Encourage projects and programs that help increase the quality of life for local businesses and their employees.

Neighborhood Meeting and Outreach

In accordance with CMC 19.16.020, a neighborhood meeting was held on May 23, 2018 at the project site. There were approximately 30 people in attendance, including the applicant team, City staff, and 20 members of the public (see **Attachment L**, Neighborhood Meeting Notes). Issues identified at the neighborhood meeting included fencing and screening, hours of operation, landscape improvements, and noise concerns in regard to garbage trucks and deliveries. The applicant, design team, and contractor were available to answer questions and address concerns.

REQUIRED FINDINGS FOR APPROVAL

Environmental Review

Based on the results of an Initial Study, a Negative Declaration was prepared for the project (see **Exhibit I**, Negative Declaration) and circulated for a 20-day comment period commencing on May 30, 2018 and extending until June 19, 2018. No correspondence has been received during prior to the public review period as of the date of this report. Any correspondence received after the date of the report will be presented at the public hearing. The Negative Declaration discusses the projects introduction of new light sources to the project site and change in the visual character to the site.

General Plan Amendment Findings (CMC Section 19.06.050)

The Planning Commission must make a written recommendation to the City Council whether to

approve, approve in modified form, or deny the proposed General Plan Amendment based on the required findings noted below. An amendment to the General Plan may be approved only if all of the following findings are made:

1. *The proposed amendment is internally consistent with the plan being amended.*

   The General Plan will remain internally consistent because the proposed land use designation amendment from Residential Mixed Use to Commercial Mixed Use is supported by several General Plan policies, including those that promote compatible infill development, support efforts to improve and expand health and social services for all segments of the community and ensure an adequate supply of appropriately zoned land that is readily served by infrastructure to support local economic development for base level job growth and to maintain Chico's prominence as the regional center of retail activity for the tri-county region (LU-4, ED-1.50 and ED-1.2)

2. *The site is physically suitable, including access, provision of utilities, compatibility with adjoining land uses, and absence of physical constraints, for the proposed land use or development.*

   There are no physical or environmental constraints on the property which would prohibit use of the land consistent with the Office Mixed Use land use designation. The site is physically suitable to support the proposed project and all utilities (water, storm drain, sewer, gas, electric facilities, and communications) are currently located on or adjacent to the site and have available capacity to serve the proposed project. The proposed project is compatible with the adjacent rehabilitation facility and will result in land use, parking and traffic efficiencies that would ultimately reduce vehicle miles traveled.

<u>Rezone Findings</u>

The Planning Commission must make a written recommendation to the Council whether to approve, approve in modified form, or deny the proposed zoning map amendment based on the required findings noted below. Pursuant to Chico Municipal Code Section 19.06.050 B. (Findings for Zoning Map and Development Regulations Amendments), an amendment to the zoning map may be approved only if all of the following findings are made:

1. *The proposed amendment is consistent with the General Plan, any applicable specific plan, and any applicable neighborhood and area plans.*

   If the proposed General Plan Amendment is approved, the proposed rezone from RMU (Residential Mixed Use) to OR (Office Residential), would be consistent with the proposed General Plan designation of Office Mixed Use. The rezone would be internally consistent with the General Plan because it is supported by several General Plan goals and policies, including those that promote compatible infill development, support efforts to improve and expand health and social services for all segments of the community and ensure an adequate supply of appropriately zoned land that is readily served by infrastructure to support local economic development for base level job growth and to maintain Chico's prominence as the regional center of retail activity for the tri-county

region (LU-4, ED-1.50 and ED-1.2)

2. *Finding for Zoning Map Amendments: The site is physically suitable, including, but not limited to access, provision of utilities, compatibility with adjoining land uses, and absence of physical constraints, for the requested zoning designation and anticipated land use and development.*

   There are no physical or environmental constraints on the property which would prohibit use of the land consistent with the OR (Office Residential) zoning regulations. The site is physically suitable to support the proposed project and all utilities (water, storm drain, sewer, gas, electric facilities, and communications) are currently located on or adjacent to the site and have available capacity to serve the proposed project. The proposed project is compatible with the adjacent rehabilitation facility and will result in land use, parking and traffic efficiencies that would ultimately reduce vehicle miles traveled.

Use Permit Findings

The Planning Commission must make a written recommendation to the Council whether to approve, approve in modified form, or deny the proposed Use Permit on the required findings noted below.

1. *The proposed use is allowed within the subject zoning district and complies with all of the applicable provisions of Chapter 19.24 (Use Permits).*

   Chico Municipal Code §19.44.020, Table 4-6, provides for business hours that extend beyond Monday through Friday, 8 a.m. to 6 p.m. in the OR (Office Residential) zoning district, subject to use permit approval. CMC 19.70.060.G (Design and development standards for off-street parking) requires that all parking be located on the same parcel as the main use, unless granted a use permit to allow off-site parking. Pursuant to CMC 19.60.060 (Fencing and screening) a use permit is necessary to construct a fence that extends beyond the allowed height of 6-feet. This use permit has been processed in accordance with the requirements of Chapter 19.24.

2. *The proposed use would not be detrimental to the health, safety, and general welfare of persons residing or working in the neighborhood of the proposed use.*

   No impacts to the health, safety, or welfare of persons residing or working in the neighborhood have been identified as the proposed medical office use is consistent with the existing surrounding residential and commercial uses. The proposed medical office building is physically separated from adjacent residential development and screened by a privacy wall to reduce light and glare and noise impacts. Sufficient off-street vehicle parking is demonstrated on the site plan and the project meets the City's parking requirements. Additional conditions of approval requiring a seven-foot rear year fence and limiting parking lot light pole height would reduce potential impacts to the adjacent residential neighbors. No impacts to the health, safety, or welfare of neighborhood residents have been identified.

3. *The proposed use will not be detrimental and/or injurious to property and improvements in the neighborhood of the proposed use, as well as the general welfare of the City.*

The surrounding area currently contains improved public streets, bicycle facilities, and access to public transit (B-Line Route #3). A Traffic Impact Study was prepared for the project and concluded that the proposal would not have any significant impacts on traffic operations for intersections in the project. Based on the results of the Study, the site plan was modified to prohibit outbound left-turn movements from the new project driveway to avoid traffic and safety impacts. Existing regulations require that any public improvements damaged during the course of construction be repaired or reconstructed by the applicant. No impacts to property or improvements have been identified.

4. *The proposed use will be consistent with the policies, standards, and land use designations established by the General Plan.*

   The proposed project is consistent with several General Plan goals and policies, including those that encourage compatible infill development (LU-1, LU-4, and CD-5), support efforts to improve and expand health and social services for all segments of the community (PPFS-7.2), ensure an adequate supply of appropriately zoned land that is readily served by infrastructure to support local economic development for base level job growth and to maintain Chico's prominence as the regional center of retail activity for the tri-county region (ED-1.2) and encourage projects and programs that help increase the quality of life for local businesses and their employees (ED-1.5).

5. *The design, location, size, and operating characteristics of the proposed use are compatible with the existing and future land uses in the vicinity.*
   The proposed medical office building and extended business hours use will be consistent and compatible with existing adjacent single-family residential and commercial retail and office uses. As conditioned, reduced heights of parking lot lighting and the construction of a seven-foot tall rear year fence would reduce and avoid impacts to the adjacent residential neighbors. By locating the prompt care on the first floor, light and glare associated with interior building lights would be greatly reduced during evening and nighttime hours, limiting impacts to adjacent residential neighbors. Locating the proposed medical office building adjacent to an existing medical facility will result in land use, parking and traffic efficiencies that would ultimately reduce vehicle miles traveled.

<u>Architectural Review</u>

According to the Chico Municipal Code Section 19.18.060, the Architectural Review and Historic Preservation Board shall determine whether or not a project adequately meets adopted City standards and design guidelines, based upon the following findings:

1. *The proposed development is consistent with the General Plan, any applicable specific plan, and any applicable neighborhood or area plans.*

   The proposal would be consistent with several General Plan goals and policies if the Planning Commission and City Council approve the General Plan Amendment. In addition, the project would be consistent with goals and policies that encourage architectural designs that create a culturally relevant sense of place, and promote pedestrian-oriented development by limiting the front entry to single-story (CD-3.1, CD-

4.1.3, CD-3.2 and CD-3.3). Further, the native, drought tolerant species selections for the proposed landscaping are consistent with sustainability policies that promote water conservation and energy efficiency (SUS-4.2). The site is not located within the bounds of a Neighborhood Plan or area plan.

2. *The proposed development, including the character, scale, and quality of design are consistent with the purpose/intent of this chapter and any adopted design guidelines.*

   The project is consistent with Design Guidelines (DGs) that call for incorporating recognizable cultural motifs and referencing cultural ties to the community (DG 1.1.11, 1.1.34, and 1.2.21). The design achieves a pedestrian-friendly environment by locating vehicle parking to the side and rear of the site (DG 1.1.13, 1.1.14 and 1.1.15) and the main entry tower creates a sense of focus so people can easily find the entrance (DG 3.2.23). Building materials, such as light stucco and terra cotta tile give a Spanish feel to the building, reinforcing a sense of permanence, history and place (DG 1.2.32). Design Guideline consistency is further enhanced by the trash enclosure to match the main building with solid metal doors, as well as proper screening of HVAC units behind rooftop parapet walls, as called-for by DG 2.1.36.

3. *The architectural design of structures, including all elevations, materials and colors are visually compatible with surrounding development. Design elements, including screening of equipment, exterior lighting, signs, and awnings, have been incorporated into the project to further ensure its compatibility with the character and uses of adjacent development.*

   The design, materials and colors of the proposed new building are visually compatible with the surrounding commercial development. Exterior equipment will be properly screened from view by roof parapets or landscaping. The height reduction of parking lot pole lighting will reduce potential impacts to adjacent residential neighbors associated with light spillage and glare.

4. *The location and configuration of structures are compatible with their sites and with surrounding sites and structures, and do not unnecessarily block views from other structures or dominate their surroundings.*

   The proposed structure is appropriately placed on the site to promote compatibility with the surrounding commercial development and adjacent residential neighbors. With the addition of a seven-foot tall good-neighbor fence that will provide aesthetic quality and visual relief for the adjacent residential development, the building will not unnecessarily block views or visually dominate its surroundings by its placement on the center of the site and next to the existing facility. The overall building design at three-stories tall incorporates elements that emphasize the lower pedestrian level while building articulation that deemphasizes the mass of the building.

5. *The general landscape design, including the color, location, size, texture, type, and coverage of plant materials, and provisions for irrigation and maintenance, and protection of landscape elements, have been considered to ensure visual relief, to complement structures, and to provide an attractive environment.*

The proposed landscaping will provide a variety of seasonal color, while minimizing irrigation demands. Careful attention is paid to the W. East Avenue frontage to provide a park-like setting along the busy corridor, and an ample landscape buffer is provided along the rear property line to enhance aesthetics and mitigate sound and light for the adjacent residential neighbors.

PUBLIC CONTACT

A 10-day public hearing notice was mailed to all landowners and residents within 1,000 feet of the site. A legal notice was also placed in the Chico Enterprise Record. As of the date of this report, no additional inquiries regarding this project had been received by City staff.

DISTRIBUTION:

Internal
PC Distribution
AP Costa
PP Ambo
Files: Enloe Medical Office Building (GPA/RZ 16-01, UP 18-01 and AR 18-01)

External
Enloe Medical Center, c/o Bill Seguine, 1531 Esplanade, Chico CA, 95926 (bill.seguine@enloe.org)
Modern Building, Attn.: Mike Wyrauch (mikew@modernbuildinginc.com) and James Seegart (jamess@modernbuildinginc.com)
Kelly Maves, 6528 Lonetree Blvd, Rocklin, CA 95765
Jim Stevens (jstevens@northstareng.com)

ATTACHMENTS:

A. Planning Commission Resolution No. 18-15
   Exhibit I Negative Declaration
   Exhibit II General Plan Amendment 16-01 Plat
   Exhibit III Rezone 16-01 Plat
   Exhibit IV Conditions of Approval for UP 18-01 and AR 18-01
B. Location/Notification Map
C. Project Description
D. Site Plan
E. W. East Avenue Zoning Districts
F. Floor Plans (3)
G. Traffic Impact Study
H. Elevations
I. Colors and Materials
J. Perspectives
K. Landscape Planting Plan
L. Neighborhood Meeting Notes

RESOLUTION NO. 18-15

RESOLUTION OF THE CITY OF CHICO PLANNING COMMISSION RECOMMENDING CITY COUNCIL ADOPTION OF A NEGATIVE DECLARATION AND APPROVAL OF GENERAL PLAN AMENDMENT 16-02, APPROVAL OF REZONE 16-02, APPROVAL OF USE PERMIT 18-01 AND CONDITIONAL APPROVAL ARCHITECTURAL REVIEW 18-01 (Enloe Medical Office Building)

WHEREAS, applications have been received by Enloe Medical Center to construct a 126,000-square-foot medical office building on a vacant parcel on the north site of W. East Avenue, approximately 0.25-miles westly of the intersection at Esplanade and W. East Avenue, identified as Assessor's Parcel Nos. 006-530-026 and 006-530-025 (the "Development"); and

WHEREAS, an application has been received to amend the General Plan land use designation from Residential Mixed Use to Office Mixed Use for the Development site (the "GPA"); and

WHEREAS, an application has been received to change the zoning classification from RMU (Residential Mixed Use) to OR (Office Residential) for the Development site (the "Rezone") (collectively, the Development, UP, GPA and Rezone constitute the "Project"); and

WHEREAS, an application has been received for a use permit to allow: 1) Business hours that extend beyond Monday through Friday, 8 a.m. to 6 p.m., 2) Perimeter fencing that exceeds 6-feet in height, and 3) To allow off-site parking on the adjacent rehabilitation center parcel (the "UP"); and

WHEREAS, the Planning Commission considered the Project, staff report, recommendation from the Architectural Review and Historic Preservation Board, and comments submitted at a noticed public hearing held on July 19, 2018; and

WHEREAS, the Planning Commission has considered the Initial Study and proposed negative declaration which conclude that the Project will not result in a significant impact on the environment.

NOW, THEREFORE, BE IT RESOLVED BY THE PLANNING COMMISSION OF THE CITY OF CHICO AS FOLLOWS:

Attachment A

1. With regard to the negative declaration the Planning Commission finds that:
   A. There is no substantial evidence supporting a fair argument that the Project may have a significant effect on the environment;
   B. The negative declaration has been prepared in conformance with the provisions of the California Environmental Quality Act and the Chico Municipal Code (CMC), Chapter 1.40, "Environmental Review Guidelines; and
   C. The negative declaration prepared for the Project reflects the independent judgment of the City of Chico.
2. With regard to the GPA the Planning Commission finds that:
   A. The General Plan will remain internally consistent because the proposed land use designation amendment from Residential Mixed Use to Office Mixed Use would increase the potential for the site to be developed in a manner that achieves compatible infill development (LU-4.2 and LU-4.3), and would maintain an appropriate transitional zone from residential uses to the north to commercial and office uses to the east and west. The Project implements General Plan goals and policies that expand health and social services for all segments of the community and incorporates context sensitive design elements that maintain compatibility and raise the quality of the area's architectural character (PPFS-7.2 and LU-4.2):
   B. There are no physical or environmental constraints on the property which would prohibit use of the land with the Office Mixed Use land us designation. The site is physically suitable to support the proposed project and all utilities (water, storm drain, sewer, gas and electric facilities) are currently located on or adjacent to the site and have available capacity to serve the proposed project. The proposed project is compatible with the adjacent rehabilitation facility and will result in land use, parking and traffic efficiencies that would ultimately reduce vehicle miles traveled.
3. With regard to the Rezone the Planning Commission finds that:
   A. The proposed rezone from RMU (Residential Mixed Use) to OR (Office Residential) would be consistent with the proposed General Plan designation of Office Mixed Use.

The rezone would be internally consistent with the General Plan designation because the proposed rezone would increase the potential for the site to be developed in a manner that achieves compatible infill development (LU-4.2 and LU-4.3), and would maintain an appropriate transitional zone from residential uses to the north to commercial and office uses to the east and west. The Project implements General Plan goals and policies that expand health and social services for all segments of the community, and incorporates context sensitive design elements that maintain compatibility and raise the quality of the area's architectural character (PPFS-7.2 and LU-4.2):

B. There are no physical or environmental constraints on the property which would prohibit use of the land with the Office Mixed Use land us designation. The site is physically suitable to support the proposed project and all utilities (water, storm drain, sewer, gas and electric facilities) are currently located on or adjacent to the site and have available capacity to serve the proposed project. The proposed project is compatible with the adjacent rehabilitation facility and will result in land use, parking and traffic efficiencies that would ultimately reduce vehicle miles traveled.

4. With regard to the use permit the Planning Commission finds that:

A. CMC 19.44.020, Table 4-6 provides for business hours that extend beyond Monday through Friday, 8 a.m. to 6 p.m. in the OR zoning district, subject to use permit approval. CMC 19.70.060.G required that all parking be located on the same parcel as the main use, unless granted a use permit to allow off-site parking. Pursuant to 19.60.060, a use permit is necessary to construct a fence that extends beyond 6-feet in height. This use permit has been processed in accordance with the requirements of Chapter 19.24;

B. No impacts to the health, safety, or welfare of persons residing or working in the neighborhood have been identified as the proposed medical office use is consistent with the existing surrounding residential and commercial uses. The proposed medical office building is physically separated from adjacent residential development and screened by a privacy wall to reduce light and glare and noise impacts. Sufficient off-street vehicle parking is demonstrated on the site plan and the project meets the City's parking

requirements. Additional conditions of approval requiring a seven-foot rear year fence and limiting parking lot light pole height would reduce potential impacts to the adjacent residential neighbors. No impacts to the health, safety, or welfare of neighborhood residents have been identified;

C. The surrounding area currently contains improved public streets, bicycle facilities, and access to public transit (B-Line Route #3). A Traffic Impact Study was prepared for the project and concluded that the proposal would not have any significant impacts on traffic operations for intersections in the project. Based on the results of the Study, the site plan was modified to prohibit outbound left-turn movements from the new project driveway to avoid traffic and safety impacts. Existing regulations require that any public improvements damaged during the course of construction be repaired or reconstructed by the applicant. No impacts to property or improvements have been identified;

D. The proposed project is consistent with several General Plan goals and policies, including those that encourage compatible infill development (LU-1, LU-4, and CD-5), support efforts to improve and expand health and social services for all segments of the community (PPFS-7.2), ensure an adequate supply of appropriately zoned land that is readily served by infrastructure to support local economic development for base level job growth and to maintain Chico's prominence as the regional center of retail activity for the tri-county region (ED-1.2) and encourage projects and programs that help increase the quality of life for local businesses and their employees (ED-1.5);

E. The proposed medical office building and extended business hours use will be consistent and compatible with existing adjacent single-family residential and commercial retail and office uses. As conditioned, reduced heights of parking lot lighting and the construction of a seven-foot tall rear year fence would reduce and avoid impacts to the adjacent residential neighbors. By locating the prompt care on the first floor, light and glare associated with interior building lights would be greatly reduced during evening and nighttime hours, limiting impacts to adjacent residential neighbors. Locating the proposed medical office

building adjacent to an existing medical facility will result in land use, parking and traffic efficiencies that would ultimately reduce vehicle miles traveled.

5. With regard to the Site Design and Architectural Revie the Planning Commission finds that:

A. The proposal would be consistent with several General Plan goals and policies if the Planning Commission and City Council approve the General Plan Amendment and Rezone. In addition, the project would be consistent with goals and policies that encourage architectural designs that create a culturally relevant sense of place, and promote pedestrian-oriented development by limiting the front entry to single-story (CD-3.1, CD-4.1.3, CD-3.2 and CD-3.3). Further, the native, drought tolerant species selections for the proposed landscaping are consistent with sustainability policies that promote water conservation and energy efficiency (SUS-4.2). The site is not located within the bounds of a Neighborhood Plan or area plan;

B. The project is consistent with Design Guidelines (DGs) that call for incorporating recognizable cultural motifs and referencing cultural ties to the community (DG 1.1.11, 1.1.34, and 1.2.21). The design achieves a pedestrian-friendly environment by locating vehicle parking to the side and rear of the site (DG 1.1.13, 1.1.14 and 1.1.15) and the main entry tower creates a sense of focus so people can easily find the entrance (DG 3.2.23). Building materials, such as light stucco and terra cotta tile give a Spanish feel to the building, reinforcing a sense of permanence, history and place (DG 1.2.32). Design Guideline consistency is further enhanced by the trash enclosure to match the main building with solid metal doors, as well as proper screening of HVAC units behind rooftop parapet walls, as called-for by DG 2.1.36;

C. The design, materials and colors of the proposed new building are visually compatible with the surrounding commercial development. Exterior equipment will be properly screened from view by roof parapets or landscaping. The height reduction of parking lot pole lighting will reduce potential impacts to adjacent residential neighbors associated with light spillage and glare;

D. The proposed structure is appropriately placed on the site to promote compatibility with the surrounding commercial development and adjacent residential neighbors. With the addition of a seven-foot tall good-neighbor fence that will provide aesthetic quality and visual relief for the adjacent residential development, the building will not unnecessarily block views or visually dominate its surroundings by its placement on the center of the site and next to the existing facility. The overall building design at three-stories tall incorporates elements that emphasize the lower pedestrian level while building articulation deemphasizes the mass of the building;

E. The proposed landscaping will provide a variety of seasonal color, while minimizing irrigation demands. Native plantings are appropriately located to ensure visual relief and provide an attractive environment around the new building.

6. Based on all of the above, the Planning Commission hereby recommends that:

A. The City Council adopt the negative declaration as set forth in Exhibit I, attached hereto;

B. The City Council amend the General Plan land use diagram for APNs 006-530-026 and 006-530-025, as set forth in Exhibit II, attached hereto;

C. The City Council rezone APNs 006-530-026 and 006-530-025, as set forth in Exhibit III, attached hereto; and

D. The City Council approve the Development, subject to the conditions set forth in Exhibit IV, attached hereto.

7. The Planning Commission hereby specifies that the materials and documents which constitute the record of proceedings upon which its decision is based are located at and under the custody of the City of Chico Community Development Department.

THE FOREGOING RESOLUTION WAS ADOPTED at a meeting of the Planning Commission of the City of Chico held on July 19, 2018, by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

DISQUALIFIED:

ATTEST:

APPROVED AS TO FORM

_____	_____
BRUCE AMBO Planning Commission Secretary	ANDREW L. JARED Assistant City Attorney

X:\Current Planning\AR\2018\01 Enloe Medical West East (RT80092)\PC Recommendation\Att A PC Resolution 18- Enloe MOB.docx

Initial Study

Enloe Medical Office Building
GPA/RZ 16-01, AR 18-01 and UP 18-01

250 W. East Avenue, APN 006-530-026

Lead Agency:
City of Chico
411 Main Street
Chico, CA 95928

May 2018

Exhibit I

Initial Study / Environmental Checklist
City of Chico
Environmental Coordination and Review

I. PROJECT DESCRIPTION

A. **Project Title:** Enloe Medical Office Building (MOB)

B. **Project Location:** The site is situated at 250 West East Avenue, Chico, Butte County, CA, approximately 0.25 miles southwest of Esplanade within the City of Chico city limits. The project site is located in Section 19, Township 22 North, Range 1 East of the Richardson Springs United States Geological Survey (USGS) 7.5 minute quadrangle.

C. **Application(s):** General Plan Amendment and Rezone

D. **Assessor's Parcel Number (APN):** 006-530-025 and 006-530-026.

E. **Parcel Size:** 6.67 acres

F. **General Plan Designation:**
City of Chico: Residential Mixed Use (RMU), 15-70 dwelling units per acre (du/ac), located in East Avenue Corridor Opportunity Site.

G. **Zoning:**
City of Chico: Residential Mixed Use (RMU)

H. **Environmental Setting:** The project is a largely unimproved, disturbed, vacant property approximately 6.67 acres in size located on West East Avenue. The property is bordered by residential development to the north, the Chico Town and Country Shopping Center to the east, the Enloe Rehabilitation Center to the west, and West East Avenue to the south. Much of the surrounding area is developed. The property on the south side of West East Avenue is unimproved.

Site topography is flat with an elevation of approximately 180 feet above sea level. A majority of the site is covered in rudural annual vegetation, with a variety of introduced species dominating the site. A small number of trees can be found on the site, primarily along the borders of the property. Commonly encountered species include deodar cedar (*Cedrus deodara*), Italian cypress (*Cuppressus sempervirens*), holly oak (*Quercus ilex*), Chinese pistache (*Pistacia chinensis*), and valley oak (*Quercus lobata*).

I. **Project Description:**
The applicant proposes to amend the City of Chico General Plan (GP) Land Use Designation from Residential Mixed Use (RMU) to Office Mixed Use (OMU) and rezone the site from Residential Mixed Use (RMU) to Office Residential (OR).

In addition to the general plan amendment and zoning change, the applicant is proposing the construction of a three-story 120,292 square foot medical office building and associated parking facilities. The project would include on-site improvements including landscaping, walkways, photovoltaic solar arrays, covered bicycle parking, electric vehicle charging stations, and lighting. The medical office building will include clinical and laboratory space. Access to the site will be provided through the Enloe Rehabilitation Center parking lot and direct access from West East Avenue. The applicant is also seeking use permit approval to allow medical services that extend beyond the hours of Monday through Friday, 8 a.m. to 6 p.m. and to allow perimeter fencing to reach eight-feet in height.

J. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, has consultation begun?

City Staff requested consultation with the Mechoopda Tribe on 10/18/16 and received no response as of 5/23/2018.

K. Public Agency Approvals:

1. General Plan Amendment - from Residential Mixed Use (RMU) to Office Mixed Use (OMU) (City of Chico)
2. Rezone - from Residential Mixed Use (RMU) to Office Residential (OR) (City of Chico)
3. Use Permit – to allow medical services that extend beyond the hours of Monday through Friday, 8 a.m. to 6 p.m. and to allow perimeter fencing up to eight-feet in height (City of Chico)
4. Prior to development, Architectural Review (City of Chico)
5. Grading Permit (City of Chico)
6. Building Permit (City of Chico)

L. Applicant: Enloe Medical Center, c/o Bill Seguine, 1531 Esplanade, Chico, CA, 95926.

M. City Contact:

Shannon Costa, Assistant Planner, City of Chico, 411 Main Street, Chico, CA 95928
Phone: (530) 879-6807, email: shannon.costa@chicoca.gov

Initial Study / Environmental Checklist
City of Chico
Environmental Coordination and Review
Enloe Medical Office Building (GPA/RZ 16-02, AR 18-01 and UP 18-01)

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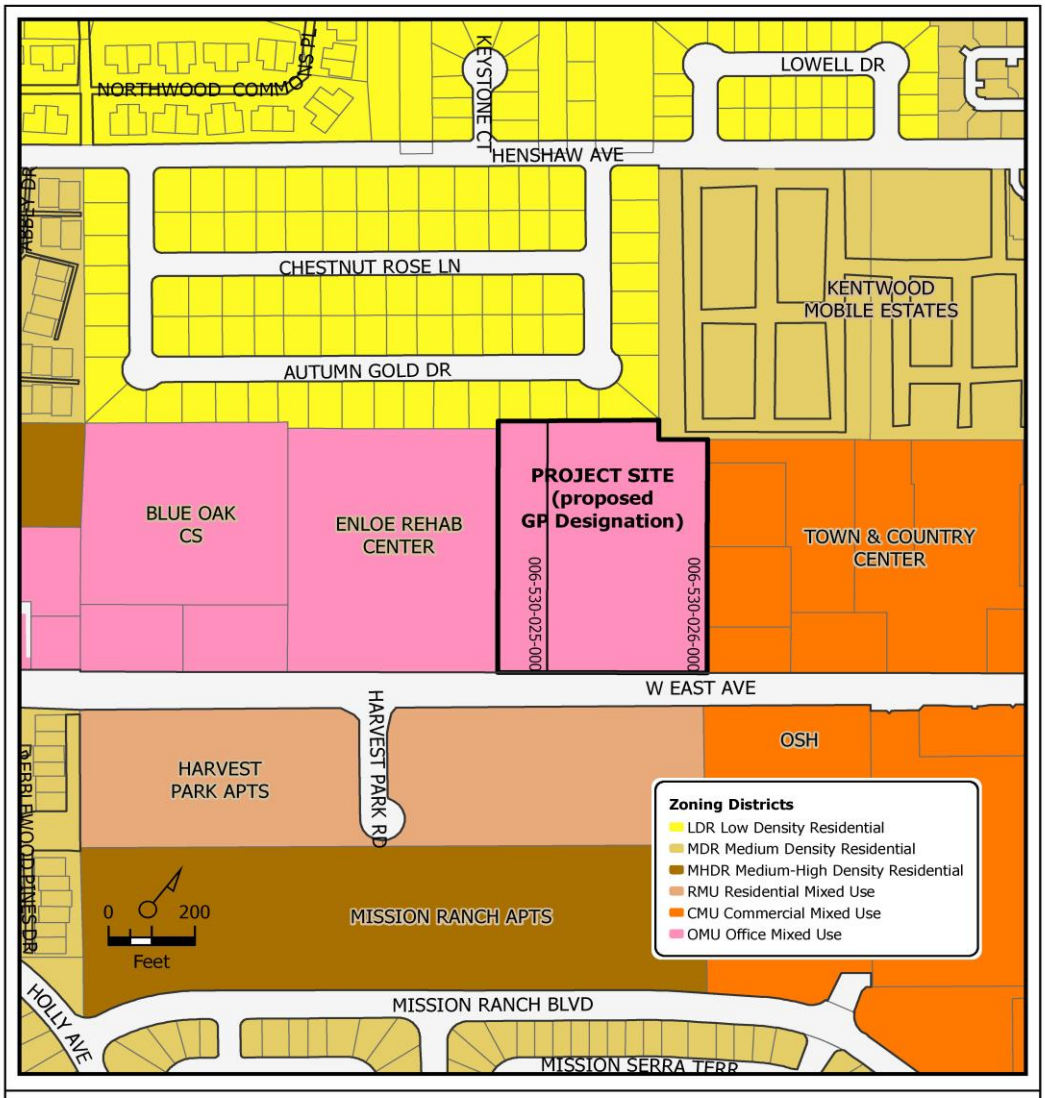
Figure 1. PROJECT LOCATION AND PROPOSED CHICO GENERAL PLAN DESIGNATION

GPA **16-02**

Approval Recommended by Chico Planning Commission on _____ by Resolution No. _____.

Approved by Chico City Council on _____ by Resolution No. _____.



GPA 16-02 (Enloe)
250 W East Avenue, APNs 006-530-025-000 and 006-530-026-000
From: RMU Residential Mixed Use
To: OMU Office Mixed Use

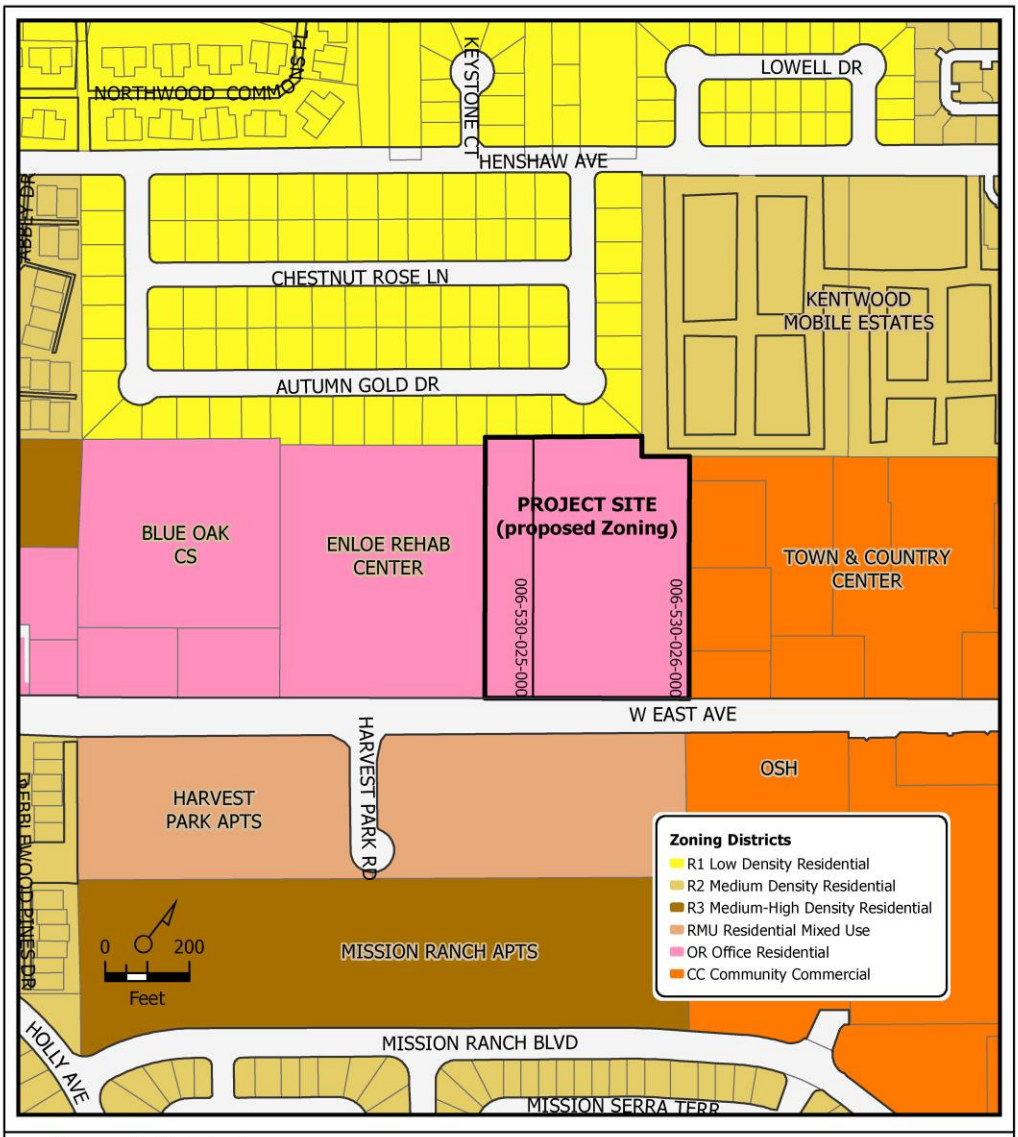
Exhibit ___

Figure 2. PROJECT LOCATION AND PROPOSED CHICO ZONING

Rezone **16-02**

Approval Recommended by Chico Planning Commission on _____ by Resolution No. _____.

Approved by Chico City Council on _____ by Ordinance No. _____.



Rezone 16-02 (Enloe)
250 W East Avenue, APNs 006-530-025-000 and 006-530-026-000
From: RMU Residential Mixed Use
To: OR Office Residential
-AOD, -COS overlay zoning to remain on both parcels

Exhibit ___

I. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

☐ Aesthetics	☐ Geology/Soils	☐ Noise
☐ Agriculture and Forest	☐ Greenhouse Gas Emissions	☐ Open Space/Recreation
☐ Air Quality	☐ Hazards/Hazardous Materials	☐ Population/Housing
☐ Biological Resources	☐ Hydrology/Water Quality	☐ Public Services
☐ Cultural Resources	☐ Land Use and Planning	☐ Tribal Resources
☐ Utilities	☐ Transportation/Circulation	

III. COMMUNITY DEVELOPMENT DIRECTOR DETERMINATION

On the basis of this initial evaluation:

☒ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☐ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a potentially significant impact or have a potentially significant impact unless mitigated, but at least one effect has been adequately analyzed in an earlier document pursuant to applicable legal standards, and has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT (EIR) is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, there WILL NOT be a significant effect in this case because all potentially significant effects have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards and have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION including revisions or mitigation measures that are imposed upon the proposed project. No further study is required.

Signature, Shannon Costa, Assistant Planner — Date

Printed Name (Shannon Costa, Assistant Planner)

IV. EVALUATION OF ENVIRONMENTAL IMPACTS

- Responses to the following questions and related discussion indicate if the proposed project will have or potentially have a significant adverse impact on the environment.

- A brief explanation is required for all answers except "No Impact" answers that are adequately supported by referenced information sources. A "No Impact' answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g. the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors or general standards.

- All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

- Once it has been determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there is at least one "Potentially Significant Impact" entry when the determination is made an EIR is required.

- Negative Declaration: "Less than Significant with Mitigation Incorporated" applies when the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less than Significant Impact." The initial study will describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from Section 4, "Earlier Analysis," may be cross-referenced).

- Earlier analyses may be used where, pursuant to tiering, a program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration [Section 15063(c)(3)(D)].

- Initial studies may incorporate references to information sources for potential impacts (e.g. the general plan or zoning ordinances, etc.). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated. A source list attached, and other sources used or individuals contacted are cited in the discussion.

- The explanation of each issue should identify:
  a. The significance criteria or threshold, if any, used to evaluate each question; and
  b. The mitigation measure identified, if any, to reduce the impact to less than significant.

A. Aesthetics Will the project or its related activities:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
1. Have a substantial adverse effect on a scenic vista, including scenic roadways as defined in the General Plan, or a Federal Wild and Scenic River?				X
2. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				X
3. Affect lands preserved under a scenic easement or contract?				X
4. Substantially degrade the existing visual character or quality of the site and its surroundings including the scenic quality of the foothills as addressed in the General Plan?			X	
5. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?			X	

DISCUSSION:

A.1-3. The project will not have a substantial adverse effect on a scenic vista, including scenic roadways as defined in the General Plan, Federal Wild and Scenic River, historic buildings, or state scenic highway as there are no designated scenic vistas or designated scenic resources associated with or neighboring the project site. The project site is neither located in the vicinity of a designated Wild and Scenic River, nor is it preserved under a scenic easement or contract. The project will have **No Impact** on any scenic vista, roadway, or resource, and **No Impact** on any lands preserved under a scenic easement or contract.

A.4. The project will not substantially degrade the existing visual character or quality of the site and its surroundings. The project consists of a GPA and rezone of a vacant 6.67-acre property located in an urbanized area within the City of Chico from a GP designation of RMU to OMU and a rezone from RMU to OR to accommodate development of an approximate 120,000 square foot medical office building project. The proposed three-story building would introduce new visual characteristics to a vacant, undeveloped site that is covered with grasses, shrubs and a few trees. The design of the medical office building would be required to adhere to the City of Chico Design Guidelines Manual (December 2009) and obtain approval by the City of Chico Architectural Review and Historic Preservation Board prior to construction of the project. The review process includes an assessment of detailed design aspects to ensure potential aesthetic impacts are avoided or minimized. The applicant is pursuing a use permit to allow perimeter fencing to reach seven-feet in height, which would shield lighting and potentially screen views of the building, reducing impacts for the adjacent residential neighborhood. Therefore, impacts on the existing visual character or quality of the site and its surroundings would be considered **Less Than Significant**.

A.5. Development of the project will include lighting sources not currently present at the site. Lighting sources will include lighting in the parking area surrounding the medical office building, exterior lighting on the building façade, and lighting sources inside the building. Because of the nature of the intended medical office use, it can be expected that new light sources could occur continuously over a 24-hour period. All exterior lighting is required to adhere to the City of Chico Municipal Code (CMC) standards regarding full cut off designs and downward orientation to reduce glare. Proposed lighting does have the potential to spill onto neighboring properties and result in substantial sources of light and glare. Incorporation of a condition requiring the reduction in height of parking lot light poles would reduce the potential for impacts for substantial light and glare affecting day or nighttime views to a level that is **Less Than Significant.**

Condition A.1 (Aesthetics)

The applicant shall reduce the height of all parking lot light poles located along the rear property line adjacent to the residential neighborhood to 12-feet in height and all interior parking lot light poles shall be reduced to 18-feet in height. All fixtures shall comply to CMC standards including full cut off design and downward orientation.

B. Agriculture and Forest Resources: Would the project or its related activities:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
1. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				X
2. Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X
3. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code Section 4526, or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?				X
4. Result in the loss of forest land or conversion of forest land to non-forest use?				X
5. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?				X

B.1.–5. The project will not convert Prime or Unique Farmland, or Farmland of Statewide Importance. The California Department of Conservation (DOC), Division of Land Resource Protection, Farmland Mapping and Monitoring Program's 'Butte County Important Farmland 2010' map identified the project site as "Urban or Built Up".

The proposed project will not conflict with existing zoning for agricultural use or forest land and is not under a Williamson Act Contract. The project will not result in the loss of forest land, conversion of forest land, or involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland or forest land. The proposed project site is a vacant parcel with no agriculture or timber resources and is surrounded by existing urban development. The proposed project will result in **No Impact** to Agriculture and Forest Resources.

MITIGATION: None required.

C. Air Quality Will the project or its related activities:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
1. Conflict with or obstruct implementation of the applicable air quality plans (e.g., Northern Sacramento Valley Planning Area 2012 Triennial Air Quality Attainment Plan, Chico Urban Area CO Attainment Plan, and Butte County AQMD Indirect Source Review Guidelines)?			X	
2. Violate any air quality standard or contribute substantially to an existing or projected air quality violation.			X	
3. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?			X	
4. Expose sensitive receptors to substantial pollutant concentrations?			X	
5. Create objectionable odors affecting a substantial number of people?			X	

DISCUSSION:

C.1–3. The project will neither conflict with nor obstruct implementation of the applicable air quality plan for the Northern Sacramento Valley, nor will the project violate any air quality standard or contribute substantially to an existing or projected air quality violation. The project will not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard.

According to Butte County Air Quality Management District (BCAQMD) CEQA Air Quality Handbook, October 23, 2014, Butte County is designated as a federal non-attainment area for 8-hour ozone and 24-hour PM2.5 and a state non-attainment area for 1 and 8-hour ozone, 24-hour PM10, and annual PM2.5 (**Table C.1**).

Table C.1: Butte County Ambient Air Quality Attainment Status

BUTTE COUNTY AMBIENT AIR QUALITY ATTAINMENT STATUS (2015)		
POLLUTANT	***STATE***	***FEDERAL***
1-hour Ozone	**Nonattainment**	--
8-hour Ozone	**Nonattainment**	**Nonattainment**
Carbon Monoxide	Attainment	Attainment
Nitrogen Dioxide	Attainment	Attainment
Sulfur Dioxide	Attainment	Attainment
24-Hour PM10**	**Nonattainment**	Attainment
24-Hour PM2.5**	No Standard	**Nonattainment**
Annual PM10**	Attainment	No Standard

Annual PM2.5**	**Nonattainment**	Attainment
** PM10: Respirable particulate matter less than 10 microns in size. PM2.5: Fine particulate matter less than 2.5 microns in size.		

The project consists of a GPA and rezone of a vacant 6.67-acre property located in an urbanized area within the City of Chico city limits from a General Plan designation of RMU to OMU and a rezone from RMU to OR, to accommodate development of a medical office building. Potential air quality impacts related to the proposed project are separated into two categories:

1) Temporary impacts resulting from construction-related activities (earth moving and heavy-duty vehicle emissions), and

2) Long-term indirect source emission impacts related to the build-out of the project, such a motor vehicle usage, water and space heating, including the use wood burning fire places, landscape maintenance equipment, etc.

Temporary construction related and long-term emissions were modeled using the most recent version of the California Emissions Estimator Model (CalEEMod) Version 2016.3.1. (CAPCOA 2016). CalEEMod contains region specific default assumptions for construction and operational activities.

Temporary (Construction-related) Impacts

Construction-related activities such as grading and operation of construction vehicles would create a temporary increase in fugitive dust within the immediate vicinity of the project site and contribute temporarily to slight increases in heavy-duty vehicle emissions (ozone precursor emissions, such as reactive organic gases (ROG) and nitrogen oxides (NOx), and fine particulate matter ten microns of less. The emissions of ROG, NOx, and fine particulate matter all fall under the BCAQMD threshold levels of significance (**Table C.2**). Due to the short duration of construction operations, and implementation of standard dust-control measures, the temporary increase in heavy-duty vehicle emissions would be considered **Less Than Significant**.

Table C.2: Modeled Temporary Emissions (Mitigated) for the Proposed Project

	ROG	NOx	PM10 or less
BCAQMD Threshold	4.5 tons/year	4.5 tons/year	80 lbs/day
CalEEMod Project Output	1.33 tons/year	1.57 tons/year	12.49 lbs/day

With regard to fugitive dust, the majority of the particulate generated as a result of grading operations is anticipated to settle quickly. Implementing BMPs for dust control will ensure dust related impacts remain **Less Than Significant**. These BMPs include but are not limited to the following:

- Watering de-stabilized surfaces and stock piles to minimize windborne dust.
- Ceasing operations when high winds are present.
- Covering or watering loose material during transport.
- Minimizing the amount of disturbed area during construction.
- Seeding and watering any portions of the site that will remain inactive longer than a period of 3 months or longer.
- Paving, periodically watering, or chemically stabilizing on-site construction roads.
- Minimizing exhaust emissions by maintaining equipment in good repair and tuning engines according to manufacturer specifications.
- Minimizing engine idle time, particularly during smog season (May-October).

Long-Term (Indirect Source) Impacts

The District's CEQA Air Quality Handbook provides screening criteria for when a quantified air emissions analysis is required to assess and mitigate potential air quality impacts from non-exempt CEQA projects (Table C.3). Projects that fall below screening thresholds need only to implement best practices to ensure that operational air quality impacts remain less than significant. The screening criteria are as follows:

Table C.3: BCAQMD Screen Criteria

LAND USE TYPE	***Model Emissions for Project Greater Than:***
Single Family Unit Residential	30 units
Multi-Family Residential	75 units
Commercial	15,000 square feet
Retail	11,000 square feet
Industrial	59,000 square feet

As noted above, the proposed medical office building of approximately 120,000 square feet exceeds the screening criteria. The proposed project's operational emissions were modeled using CalEEMod and are presented in **Table C.4 (see Appendix A, CAlEEMod Daily Model)**.

Table C.4: Modeled Long-term Emissions (Unmitigated) for the Proposed Project with Associated BCAQMD Significance Thresholds.

	ROG	**NOx**	**PM10 or less**
BCAQMD Threshold	25 lbs/day	25 lbs/day	80 lbs/day
CalEEMod Project Output	18.43 lbs/day	13.75 lbs/day	24.21 lbs/day

Under the "unmitigated" condition the proposed project would not exceed the BCAQMD significance threshold for ROG, NOx, or PM10 or less. Additionally, the project incorporates a number of design features that would further reduce operational air quality impacts including photovoltaic solar arrays in the parking lot north of the building, electric car charging stations to the north and east of the building, reserved clean air/van pool/electric vehicle parking, and covered and uncovered bicycle racks.

C.4.-5. Apart from the potential for temporary odors associated with construction activities (i.e., paving operations), the proposed project will neither expose sensitive receptors to substantial pollutant concentrations, nor create significant objectionable odors. These potential impacts are short-term in nature and could be considered **Less Than Significant**.

MITIGATION: None required.

D. Biological Resources Will the project or its related activities result in:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
1. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species as listed and mapped in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?			X	
2. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.			X	
3. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				X
4. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?			X	
5. Result in the fragmentation of an existing wildlife habitat, such as blue oak woodland or riparian, and an increase in the amount of edge with adjacent habitats.				X
6. Conflict with any local policies or ordinances, protecting biological resources?				X

DISCUSSION:

D.1. NorthStar biologist Matt Rogers conducted a site visit on August 25, 2016 to determine if the site had any potential habitat that could support special-status species. Based on review of the existing conditions of the site the following was determined: the subject property is located in an existing urban setting surrounded by commercial development, office buildings, and single-family residential development and contains minimal biological resources. There are no habitat types within the project site that could support special-status plant or wildlife species such as wetlands, vernal pools, or riparian areas. The subject property is vacant, depauperate, and dominated by rudural annual species including yellow star thistle, Johnsongrass, and puncture vine. A tree inventory was provided by Brian Firth, Landscape Architect for the proposed site and the adjacent rehabilitation center site and results are as follows: Ornamental trees are present along the borders of both sites; species present include Deodar cedar, Chinese pistache, Italian cypress and holly oak. The native tree species located on the sites include six valley oak trees; two are found along the northeastern border and four are found along the northwestern border. Evidence of recent tree clearing was encountered in the northwestern corner of the property where approximately 15 trees/clusters were removed from the site including the large cluster in the middle of the property visible on aerial imagery. Seven trees within the project site are proposed for removal, none of which qualify for mitigation pursuant to Chico's tree preservation

standards (CMC 16.66). Trees proposed for removal on the adjacent rehabilitation center site are subject to tree removal permit requirements and in-lieu payment requirements set forth by CMC 16.66.

The project site supports habitat that could support avian species protected by the Migratory Bird Treaty Act (MBTA). Suitable habitat is present for nesting, roosting, foraging, rearing young, and concealment from predators. All project activities would be conducted in compliance with the Federal MBTA and Fish and Game Code 3503 and 3503.5. Although development of the site is not likely to result in impacts to raptors or migratory birds due to the disturbed nature of the site and the surrounding urban land uses, there remains a potential for the site to provide suitable habitat for these species. Staff is recommending the inclusion of a standard condition of approval (Condition of Approval B.1) to reduce and avoid potential impacts to nesting raptors and migratory birds protected by the MBTA and Fish and Game Code, reducing impacts to **Less Than Significant**. The following condition of approval included to reduce impacts to a less than significant level:

Condition of Approval B.1 (Biological Resources):
Vegetation removal or ground disturbances should be conducted between September 1 and February 28 during the non-breeding season to prevent impacts to protected birds that may be utilizing the project area to nest. If vegetation removal or ground disturbance occurs during the breeding season (March 1 through August 31), then a pre-construction survey should be conducted by a qualified biologist within 500 feet of the project area to locate potential nests of protected bird species and establish a no disturbance buffer zone around nests. The buffer should be sufficient in size to ensure that breeding is not likely to be disrupted or adversely impacted by construction activities. No construction activities will commence within the buffer area until a qualified biologist confirms the nest is no longer active. The pre-construction survey should be conducted no more than 14-days prior to the beginning of construction, a lapse of two weeks in construction activities will require another survey. If no nests are identified during the survey, no additional mitigation would be necessary.

D.2-5. There is no riparian habitat present within the project site. Additionally, there are no Sensitive Natural Communities (SNCs) present within the proposed project site. Therefore, there will be **No Impact** to riparian habitat and SNCs.

The proposed project site does not contain waters that might be considered jurisdictional by the United States Army Corps of Engineers (USACE). Therefore, the project will have **No Impact** to protected wetlands or any other Waters of the United States (WOUS).

The proposed project will not substantially interfere with the movement of any resident or migratory fish or wildlife species, nor will it substantially interfere with a migratory wildlife corridor, or impede the use of a native wildlife nursery site, or result in fragmentation of existing wildlife habitat. There will be **No Impact** to these resources.

D.6. The proposed project will not conflict with any local ordinances protecting biological resources. The development of the project will comply with the City of Chico Tree Preservation Regulations (CMC 16.66 and 19.68.00) which provide city discretion over the proposed tree removal and specifies replacement and in-lieu fee requirements for the 17 trees that are approved for removal. Adherence to the guidelines specified in the City of Chico Tree Preservation Regulations will ensure potential impacts resulting from the loss of trees during project activities will be **Less Than Significant**.

E. Cultural Resources Will the project or its related activities:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
1. Cause a substantial adverse change in the significance of an historical resource as defined in PRC Section 15064.5?			X	
2. Cause a substantial adverse change in the significance of an archaeological resource pursuant to PRC Section 15064.5?			X	
3. Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?			X	
4. Disturb any human remains, including those interred outside of formal cemeteries?			X	

DISCUSSION:

E.1, 3. The project site is in an area of high archaeological sensitivity as designated by the Chico 2030 General Plan. Genesis Society prepared an Archaeological Inventory Survey Report for the project in November of 2016. In support of the report, Genesis Society staff conducted an archival record search, consultations, and an intensive pedestrian field survey to identify the cultural resources occurring, or potentially occurring in the project area (**see Appendix C, Archaeological Inventory Survery)**. The record search included a review of data housed at the Northeast Information Center at CSU Chico and a Sacred Lands search with the Native American Heritage Commission (NAHC). The tribal consultation involved potentially interested local Native American groups, as identified by the NAHC. The pedestrian survey was conducted on November 17, 2016 by Sean Michael Jensen, Mr. Jensen did not discover any historical, archaeological, or paleontological resources on-site. Additionally, the project is not anticipated to cause a substantial adverse change in the significance of a historical resource, archaeological resource, directly or indirectly destroy a unique paleontological resource or site, geological feature, or unique geological feature. Due to the disturbed character of the site, the potential to encounter surface-level cultural resources is considered remote as none were discovered during the intensive pedestrian survey. Therefore, impacts would be considered **Less Than Significant**.

E.2. No cultural resources are known to exist in or around the proposed project site. However, it is possible that previously undiscovered or unknown cultural resources exist at the site and could be uncovered during ground disturbing activities. The probability is low that construction activities would impact buried resources as the pedestrian survey did not locate any such resources at the site. The inclusion of a standard conditions of approval (Condition of Approval E.1 and E.2) will ensure impacts during project related construction activities will be **Less Than Significant** in the unlikely event that cultural resources are discovered during project related activities.

Condition of Approval E.1. (Cultural Resources):
A note shall be placed on all grading and construction plans which informs the construction contractor that if any bones, pottery fragments or other potential cultural resources are encountered during construction, all work shall cease within the area of the find pending an examination of the site and materials by a professional archaeologist. If during ground disturbing activities, any bones, pottery fragments or other potential cultural resources are encountered, the developer or their supervising contractor shall cease all work within the area of the find and notify Planning staff at 879-6800. A professional archaeologist who meets the Secretary of the Interior's Professional Qualification Standards for prehistoric and historic archaeology and who is familiar with the archaeological record of Butte County, shall be retained by the applicant to evaluate the significance of the find. Further, Planning staff shall notify all local tribes on the consultation list maintained by the State of California Native American Heritage Commission (NAHC), to provide local tribes the opportunity to monitor evaluation of the site. Site work shall not resume until the

archaeologist conducts sufficient research, testing and analysis of the archaeological evidence to make a determination that the resource is either not cultural in origin or not potentially significant. If a potentially significant resource is encountered, the archaeologist shall prepare a mitigation plan for review and approval by the Community Development Director, including recommendations for total data recovery, Tribal monitoring, disposition protocol, or avoidance, if applicable. All measures determined by the Community Development Director to be appropriate shall be implemented pursuant to the terms of the archaeologist's report. The preceding requirement shall be incorporated into construction contracts and plans to ensure contractor knowledge and responsibility for proper implementation.

E.4. There are no known grave sites within the proposed project area. Therefore, the disturbance of human remains is not anticipated. However, in the unlikely event that human remains are encountered, a standard condition of approval (Condition of Approval E.2) would reduce potential impacts to **Less Than Significant**.

Condition of Approval E.2. (Cultural Resources):
If human remains are discovered, all work must immediately cease, and the local coroner shall be contacted. Procedures for the discovery of human remains will be followed in accordance with provisions of the Public Health and Safety Code, Sections 7052 and 7050.5 and the State Public Resources Code Sections 5097.9 to 5097.99. If remains are determined to be prehistoric, the coroner shall contact the NAHC, which will determine and notify a most likely descendant (MLD). With the permission of the landowner or his/her authorized representative, the MLD may inspect the site of the discovery, and must complete the inspection within 24-hours of notification by the NAHC. The MLD will have the opportunity to make recommendations to the NAHC on the disposition of the remains.

F. Geology/Soils Will the project or its related activities:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
1. Expose people or structure to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
a. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Div. of Mines & Geology Special Publication 42)?			X	
b. Strong seismic ground shaking?			X	
c. Seismic-related ground failure/liquefaction?			X	
d. Landslides?			X	
2. Result in substantial soil erosion or the loss of topsoil?			X	
3. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?			X	
4. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?			X	
5. Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water, or is otherwise not consistent with the Chico Nitrate Action Plan or policies for sewer service control?				X

DISCUSSION:

F.1. The City of Chico is located in one of the least active seismic regions in California and contains no active faults. Currently, there are no designated Alquist-Priolo Special Studies Zones within the Planning Area, nor are there any known or inferred active faults. With the absence of active faults within the project site, the possibility of ground rupture, strong seismic shaking, seismic liquefaction, and landslides are extremely low. Under existing regulations, all future structures will incorporate California Building Code standards into the design and construction that are designed to minimize potential impacts associated with ground-shaking during an earthquake. The potential for impacts relating to seismic activity is considered **Less Than Significant.**

F.2.-4. The proposed project would be subject to the City of Chico grading ordinance, which requires the implementation BMPs regarding erosion control and sediment transport. Additionally, the Regional Water Quality Control Board (RWQCB) requires a project specific Stormwater Pollution Prevention Plan (SWPPP)

for any project that disturbs an area one acre or larger. Each project specific SWPPP will include BMPs that are designed to control erosion and drainage. The City and the BCAQMD require implementation of all applicable fugitive dust control measures, which further reduces the potential for erosion. Development of the site will also be required to meet all requirements of the California Building Code which will address potential issues of ground shaking, soil swell/shrink, and the potential for liquefaction. As a result, potential future impacts relating to geology and soils are considered to be **Less Than Significant.**

F.5. No septic tanks or alternative waste water disposal systems are proposed for the subject property. All new structures will be connected to the City sewer system, which is located within the West East Avenue public right-of-way. Since development of the project site would require connection to the City's sewer system, the project will result in **No Impact** relative to policies governing sewer service control.

MITIGATION: None Required

G. **Greenhouse Gas Emissions** Will the project or its related activities:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
1. Generate greenhouse gas (GHG) emissions, either directly or indirectly, that may have a significant impact on the environment?			X	
2. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			X	

DISCUSSION:

G.1.-2. In 2012, the Chico City Council adopted a Climate Action Plan (CAP) which sets forth objectives and actions that will be undertaken to meet the City's GHG emission reduction target of 25 percent below 2005 levels by the year 2020. This target is consistent with the State Global Warming Solutions Act of 2006 (AB 32, Health & Safety Code, Section 38501[a]).

Development and implementation of the CAP are directed by a number of goals, policies and actions in the City's General Plan (SUS-6, SUS-6.1, SUS-6.2, SUS-6.2.1, SUS-6.2.2, SUS-6.2.3, S-1.2 and OS-4.3). Growth and development assumptions used for the CAP are consistent with the level of development anticipated in the General Plan Environmental Impact Report (EIR). The actions in the CAP, in most cases, mirror adopted General Plan policies calling for energy efficiency, water conservation, waste minimization and diversion, reduction of vehicle miles traveled, and preservation of open space and sensitive habitat.

Chico's CAP, in conjunction with General Plan policies, meet State criteria for tiering and streamlining the analysis of GHG emissions in subsequent CEQA project evaluation. Therefore, to the extent that a development project is consistent with CAP requirements, potential impacts with regard to GHG emissions for that project are considered to be less than significant. Requirements include but are not limited to Compliance with the City's Tree Ordinance, Compliance with the California Title 24 Building Energy Efficiency Standards, Option to incorporate solar arrays in parking areas in lieu of tree shading requirements, and consistency with the City's design guideline manual.

As part of the City's land use entitlement and building plan check review processes, development projects in the City are required to include and implement applicable measures identified in the City's CAP. The GP EIR assumed full build-out of the Land Use Diagram over a 20-year horizon. The proposed project would result in a GPA and rezone of the site from RMU to OMU and a rezone from RMU to OR. This minor shift of the land use designation and zoning would not result in a substantial difference in the types of allowed uses within each zoning classification. The change in composition is negligible and would not substantially affect the comprehensive analysis for city-wide GHG emissions anticipated by the CAP and GP EIR. Thus, the proposed changes in land use classifications are considered to be **Less Than Significant.**

MITIGATION: None Required.

H. Hazards /Hazardous Materials Will the project or its related activities:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
1. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			X	
2. Create a significant hazard to the public or the environment through reasonable foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			X	
3. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?			X	
4. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				X
5. For a project located within the airport land use plan, would the project result in a safety hazard for people residing or working in the Study Area?				X
6. For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the Study Area?				X
7. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				X
8. Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?				X

DISCUSSION:

H.1.-3. The types and amounts of hazardous materials that would be used for development and operation of the proposed project would be typical for construction activities and those for medical uses. Construction activities would require limited, short term handling of hazardous materials, such as fueling and servicing equipment on site with fuels, lubricating fluids, and solvents. Biohazardous and radioactive wastes may be generated from the on-site operations of the medical office building. The proposed project is located approximately 0.12 miles from Blue Oak Charter School (west of project site), however, any handling, transportation, use, or disposal of hazardous materials would comply with all federal, state, and local regulations. Impacts relating to handling and transporting of hazardous materials would be considered **Less Than Significant**.

H.4-8. The proposed project site is not identified as a hazardous site at the local, state or federal levels, including hazardous waste sites listed pursuant to Governmental Code Section 65962.5. The project is not located near a public or private airstrip, nor will it result in a safety hazard for people working or residing in

the area. The proposed project will not impair implementation or interfere with an adopted emergency response or evacuation plan, On-site circulation patterns, designs, and improvements will be subject to Fire Marshall approval to ensure adequate access for emergency response. The project will not expose people or structures to a significant risk of loss, injury, or death involving wildland fires as there are no wildlands located in the vicinity of the project area. Therefore, there will be **No Impact**.

MITIGATION: None Required

I. Hydrology/ Water Quality Will the project or its related activities:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
1. Violate any water quality standards or waste discharge requirements?			X	
2. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g. the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted?			X	
3. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?			X	
4. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?			X	
5. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?			X	
6. Otherwise substantially degrade water quality?			X	
7. Place real property within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				X
8. Place within a 100-year flood hazard area structures which would impede or redirect flood flows?				X
9. Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?				X
10. Inundation by seiche, tsunami, or mudflow?				X

DISCUSSION:

I.1.-6. The proposed project consists of GPA and rezone of an undeveloped 6.67-acre property located in an urbanized area within the City of Chico city limits from a General Plan designation of RMU to OMU and a rezone from RMU to OR to accommodate the development of a medical office building project. The ultimate development of the site would result in an increase in surface water runoff due to reduced absorption from impervious surfaces and change in the drainage pattern on the site. The project will be connected to the City's storm drain system located in the West East Avenue right-of-way. Addressing stormwater quality and

quantity will be accomplished in accordance with the City's Stormwater Master Plan BMPs, with review and approval by the City of Chico Public Works Department. Connection to the City's existing storm drain system will be in conformance with City standards.

The project will not result in the violation of any water quality standards or waste discharge requirements, nor will it substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site, or create or contribute runoff water which would exceed the capacity of existing or planned stormwater system. The project will not otherwise substantially degrade water quality drainage systems or provide substantial additional sources of polluted runoff. Under the existing General Construction Permit requirements of the National Pollutant Discharge Elimination System (NPDES), development of the site will require preparation of a SWPPP that incorporates water quality control BMPs to reduce sedimentation. Implementation of storm water BMP requirements would minimize the impacts from construction to a **Less Than Significant** level.

I.2. The project will not substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted). The proposed project will result in an increase in the overall quantity of impervious surfaces within the project vicinity. However, this increase in impervious surface is insignificant when compared to the total area providing aquifer recharge within the greater Chico area. Therefore, impacts would be considered **Less Than Significant.**

I.7.-10. The proposed project will not expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam. According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map No. 06007C0340E, the entire site is located in Zone X, which is outside the 500 year flood plain. Therefore, the project would not expose people or structures to a significant risk of loss, injury or death involving flooding or related events. The project is not subject to inundation by seiche, tsunami, or mudflow; therefore, the project will result in **No Impact**.

MITIGATION: None Required

J. Land Use and Planning Will the project or its related activities:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
1. Result in physically dividing an established community?				X
2. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the City of Chico General Plan, Title 19 "Land Use and Development Regulations", or any applicable specific plan) adopted for the purpose of avoiding or mitigating an environmental effect?			X	
3. Results in a conflict with any applicable Resource Management or Resource Conservation Plan?				X
4. Result in substantial conflict with the established character, aesthetics or functioning of the surrounding community?			X	
5. Result in a project that is a part of a larger project involving a series of cumulative actions?				X
6. Result in displacement of people or business activity?				X

DISCUSSION:

J.1,3,5-6. The project will not physically divide an established community. It will not conflict with any applicable resource management or resource conservation plan as the Butte County Habitat Conservation Plan has yet to be adopted. The project is not part of a larger project and will not result in displacement of people or business activities. Therefore, the project is anticipated to have **No Impact**.

J.2. The proposed project consists of a GPA and rezone of an undeveloped 6.67-acre property located in an urbanized area from a General Plan designation of RMU to OMU and a rezone from RMU to OR to accommodate the development of a medical office building project. The -AOD and -COS (Aircraft Operations Zone D and Corridor Opportunity Site) overlays would remain unchanged. No aspects of the proposed land use changes or reasonably foreseeable development of the site have been found to be inconsistent with any applicable land use plan, policy, or regulation that was adopted for the purpose of avoiding or mitigating an environmental impact.

As required by CMC 19.44.020, Footnote 8, a use permit is required to allow a medical office use that extends beyond the hours of Monday through Friday, 8 a.m. to 6 p.m. If this use permit is approved the project would be in compliance with the Municipal Code as it relates to hours of operations for the zoning district.

Adherence with all applicable policies and regulations intended to protect environmental resources will be required either as conditions of approval for the future development of the site or as a condition of building permit issuance. Therefore, impacts would be considered **Less Than Significant**.

J.4. The GPA and rezone of the subject property from RMU to OMU/OR will not result in a substantial conflict with the established character, aesthetics or functioning of the surrounding community. There are a variety of land uses in the immediate area, including single-family residences, multi-family residential apartment complexes, offices, and commercial use. The GPA and rezone would encourage infill development along the East Avenue Opportunity site identified in the City of Chico 2030 General Plan. The proposed project is

consistent with the following Chico General Plan policies related to sustainable smart growth, compact development, and mixed-use/multi-modal transportation goals:

- **Policy LU-1.3 (Growth Plan)** – Maintain balanced growth by encouraging infill development where City services are in place and allowing expansion into Special Planning Areas.
- **Goal LU-2** - Maintain a land use plan that provides a mix and distribution of uses that meet the identified needs of the community.
- **Policy LU-2.3 (Sustainable Land Use Pattern)** - Ensure sustainable land use patterns in both developed areas of the City and new growth areas.
- **Goal LU-3** - Enhance existing neighborhoods and create new neighborhoods with walkable access to recreation, places to gather, jobs, daily shopping needs, and other community services.
- **Policy LU-3.1. (Complete Neighborhoods)** – Direct growth into complete neighborhoods with a land use mix and distribution to reduce auto trips and support walking, biking, and transit use.
- **Policy LU-4.2 (Infill Compatibility)** – Support infill development, redevelopment, and rehabilitation projects, which are compatible with surrounding properties and neighborhoods.
- **Policy LU-5** – Support Development and redevelopment of the designated Opportunity Sites.

Development of the site would be subject to Site Design and Architectural Review pursuant to the Chico Municipal Code (CMC) section 19.18, and any approval of a specific development proposal would adhere to the City's Land Use and Development Regulations (i.e. landscaping, setbacks, parking, lighting, etc.), and require findings that the proposed site design is compatible with the surrounding area and consistent with the City's Design Guidelines Manual (December 2009). Further, compliance with General Plan policies relating to specific project designs would be required, such as:

- **Policy CD-5.1 (Compatible Infill Development)** – Ensure that new development and redevelopment reinforces the desirable elements of its neighborhood including architectural scale, style, and setback patterns.
- **Policy CD-5.2 (Context Sensitive Transitions)** – Encourage context sensitive transitions in architectural scale and character between new and existing residential development.
- **Policy CD-5.3 (Context Sensitive Design)** – For infill development, incorporate context sensitive design elements that maintain compatibility and raise the quality of the area's architectural character.

Since implementation of existing Chico General Plan policies will avoid substantial conflicts between foreseeable development of the project site and the surrounding community, impacts would be considered **Less Than Significant**.

MITIGATION: None Required.

K. Mineral Resources. Would the project or its related activities:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
1. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				X
2. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				X

DISCUSSION:

K.1.-2. There are no known mineral resources of local, regional, or national importance located within the proposed project site. The project would not result in the loss of availability of a known mineral resource that would be of value to the region or residents or a locally important mineral resource recovery site on any applicable plan. The project will result in **No Impact** to mineral resources**.**

MITIGATION: None Required.

L. Noise Will the project or its related activities result in:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
1. Exposure of persons to or generation of noise levels in excess of standards established in the Chico 2030 General Plan or noise ordinance.			X	
2. Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?			X	
3. Exposure of sensitive receptors (residential, parks, hospitals, schools) to exterior noise levels (CNEL) of 65 dBA or higher?			X	
4. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?			X	
5. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?			X	
6. For a project located within the airport land use plan, would the project expose people residing or working in the Study Area to excessive noise levels?			X	
7. For a project within the vicinity of a private airstrip, would the project expose people residing or working in the Study Area to excessive noise levels?			X	

DISCUSSION:

L.1. Construction of the proposed project would generate noise and result in temporary noise level increases in the project vicinity. However, construction activities would adhere to the City's noise ordinance which limits the hours which construction can take place and the maximum noise levels. Implementation of standard BMPs regarding noise attenuation, include but are not limited to proper tuning of equipment, equipping combustion driven equipment with intake and exhaust mufflers, limiting idling, and utilizing quiet compressors where the technology exists would reduce noise impacts to **Less Than Significant** levels.

L.2. Any groundborne vibration due to site preparation and grading activities on the site would be temporary in nature and cease once construction activities have been completed. Additionally, compliance with the City's municipal code regarding noise will limit the hours of construction and avoid times when groundborne vibrations could potentially be a nuisance. Therefore, impacts from groundborne vibration would be considered **Less Than Significant**.

L.3.-5. Noise events will be generated during the construction activities on the project site. These impacts are temporary and contractors will be required to adhere with the City of Chico's noise regulations which limit the hours construction can take place and maximum noise levels. Potential noise disturbances normally associated with commercial uses (i.e. parking lots noise, alarms, emergency vehicle sirens, garbage trucks) are more likely to occur within closer proximity to the adjoining residences along the periphery of the parking lot. Trash enclosures have been located away from the property line shared with the residential neighborhood and on-site would prevent the need for garbage trucks to drive around the perimeter of the site, potentially effecting residential neighbors. A seven-foot tall wood fence and row of hedge and shrub plantings is proposed along the rear property line that would reduce noise impacts on the

adjacent residential neighborhood. Construction of the fence and landscape treatment is expected to significantly reduce noise impacts to the adjacent residential neighbors to a level that is **Less Than Significant.**

L.6.-L.7. The proposed project site is not located within an airport land use plan or within two miles of a public or private airport and will not expose people in the project area to excessive noise levels. The project site is located approximately 2.45 miles southwest of the Chico Municipal Airport. Additionally, the project site is approximately 2.10 miles north of Ranchaero Airport, a private airstrip that supports general aviation. According to the 2030 Chico General Plan Draft EIR, the project site is situated well outside of the Chico Municipal Airport 55 CNEL noise contour and the Ranchero Airport 50 CNEL noise contour. Aircraft may occasionally fly over the project site and be noticed at the project site but noise exposure levels would remain **Less Than Significant**.

MITIGATION: None Required

M. Open Space/ Recreation Will the project or its related activities:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
1. Affect lands preserved under an open space contract or easement?				X
2. Affect an existing or potential community recreation area?				X
3. Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				X
4. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				X

DISCUSSION:

M.1.-4. The project site is private property that is not in an open space contract, nor does it contain an open space easement. The proposed project involves a general plan amendment and zone change and the construction of a medical office building. It will not increase the use of existing neighboring or regional parks, or other recreational facilities such that substantial physical deterioration would occur or be accelerated. The project does not involve the construction of recreational facilities. Therefore, with respect to open space and potential community recreation areas, the proposed project would have **No Impact**.

MITIGATION: None Required.

N. Population/ Housing Will the project or its related activities:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
1. Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?			X	
2. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				X
3. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				X

DISCUSSION:

N.1. The project would not induce substantial population growth, nor would it displace people or housing. The proposed project consists of a GPA and rezone of an undeveloped 6.67-acre property surrounded by urban uses, from a GP designation of RMU to OMU and a rezone from RMU to OR, to accommodate the development of a medical office building. The project does not involve the construction of additional dwelling units nor does it involve the construction of infrastructure that may induce population growth in the area. With regard to population and housing, the proposed project would have **No Impact**.

MITIGATION: None Required.

O. Public Services Will the project or its related activities have an effect upon or result in a need for altered governmental services in any of the following areas:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
1. Fire protection?			X	
2. Police protection?			X	
3. Schools?			X	
4. Parks and recreation facilities? (See Section J Open Space/Recreation)			X	
5. Other government services?			X	

DISCUSSION:

O.1.-5. The proposed project consists of a GPA and rezone of an undeveloped 6.67-acre property surrounded by urban uses, from RMU to OMU in the City of Chico General Plan, with a corresponding change to the City's zoning from RMU to OR to accommodate the development of a medical office building. The medical office building that would result from the project would not overburden fire or police protection services, schools or recreation facilities, or other governmental services. The area is currently served with the necessary public services. Impacts to fire protection, police, schools, recreation, and other public services would be considered **Less Than Significant**.

MITIGATION: None Required.

P. Transportation/Circulation Will the project or its related activities:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
1. Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?			X	
2. Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?			X	
3. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?				X
4. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			X	
5. Result in inadequate emergency access?			X	
6. Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?				X

DISCUSSION:

P.1.-2. The proposed project will not conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, nor will it conflict with an applicable congestion management program.

The Traffic Impact Study for Enloe Medical Office Building prepared by Traffic Works **(see Appendix C, Traffic Impact Study)** estimates the project would generate approximately 4,287 Daily Trips, 362 AM peak hour trips, and 411 PM peak hour trips on weekdays. All study intersections are expected to operate at acceptable levels of service during the AM and PM peak hours under every study scenario including Existing Plus Project, Cumulative No Project, and Cumulative Plus Project conditions. **Table P.1** includes the Cumulative No Project and Cumulative Plus Project Conditions Intersection Levels of Service (LOS). Comparing the Cumulative No Project and Cumulative Plus Project LOS conditions at each of the study intersections there is little difference between LOS when incorporating the project. The project will not have any significant impacts on traffic operations. Locating the proposed medical office building adjacent to an existing medical facility will result in land use, parking and traffic efficiencies that would ultimately reduce vehicle miles traveled. Additionally, the project will pay the appropriate City of Chico standard Transportation Facility Fees for added traffic on the roadway system. With the payment of development impact fees, the project's impacts would be considered **Less Than Significant**.

Table P.1: Cumulative No Project and Cumulative Plus Project Intersection Levels of Service

Intersection	Control	Cumulative No Project				Cumulative Plus Project			
		AM		PM		AM		PM	
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
East Ave/Holly Ave/Cussick Ave	Signal	19.6	**B**	39.9	**D**	19.9	**B**	42.4	**D**
East Ave/Harvest Park	Signal	6.6	**A**	10.0	**B**	11.1	**B**	48.3	**D**
East Ave/Project Driveway	Side Street Stop								
Southbound Right		N/A				15.7	**C**	28.2	**D**
Eastbound Left						13.1	**B**	14.1	**B**
East Ave/Raleys Driveway/ Save Mart Driveway	Signal	15.5	**B**	20.9	**C**	19.0	**B**	24.0	**C**
East Ave/Esplanade	Signal	35.2	**D**	45.2	**D**	37.8	**D**	53.3	**D**
East Ave/SR 99 SB Ramps	Signal	15.6	**B**	15.9	**B**	15.7	**B**	15.8	**B**
East Ave/SR 99 NB Ramps	Signal	21.1	**C**	20.5	**C**	22.0	**C**	21.0	**C**

P.3,6. The project would not affect air traffic patterns and will not conflict with any adopted policies, plans, or programs related to public transportation. There will be **No Impact**.

P.4.-5. The ultimate development of the project site will not substantially increase hazards due to a design feature or create incompatible uses. The project will not result in inadequate emergency access as the site has multiple points of ingress and egress. The project will be served by two access driveways; one connecting west to the existing East Avenue/Harvest Park/Enloe Rehabilitation Hospital signalized intersection and a new driveway on East Avenue, east of Harvest Park Court. The new driveway would include right-in/right-out/left-in access only. Left out access would be prohibited for safety and traffic operation reasons. Left-in striping will be added to East Avenue to create a proper inbound left-turn pocket. Proper site design, including the provision for fire apparatus turn around shall be approved by the City of Chico Fire Marshal. Application of existing standards would ensure that the project would not increase traffic hazards. Therefore, this impact would be considered **Less Than Significant.**

MITIGATION: None Required.

Q. Tribal Cultural Resources Will the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
1. Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a Native American tribe, and that is			X	
a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or			X	
b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a Native American tribe.			X	

DISCUSSION:

Q.1. The site is classified as High Sensitivity on the Prehistoric Archaeological Sensitivity Area map in the Chico General Plan. However, the proposed project is not anticipated to cause a substantial adverse change in the significance of a tribal cultural resource. City staff requested consultation with the Mechoopda Tribe on October 18, 2016 and received no response as of May 23, 2018. The site is not listed as eligible for listing in the California Register of Historical Resources, or in a local register. Should an unrecorded cultural or tribal resource be discovered during site-disturbing activities, Condition of Approval E.1 (*Cultural Resources*) would minimize the potential damage to the previously unknown resource. Therefore, there would be **No Impact.**

MITIGATION: Implementation of Condition of Approval E.1 (*Cultural Resources)* would reduce impacts to a less than significant level. See Impact E.1 (*Cultural Resources*) for condition specifics.

R. Utilities Will the project or its related activities have an effect upon or result in a need for new systems or substantial alterations to the following utilities:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
1. Water for domestic use and fire protection?			X	
2. Natural gas, electricity, telephone, or other communications?			X	
3. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?			X	
4. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			X	
5. Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			X	
6. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?			X	
7. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?			X	
8. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?			X	
9. Comply with federal, state, and local statutes and regulations related to solid waste?			X	

DISCUSSION:

R.1.-7. All utilities (water, storm drain, sewer, gas, electric facilities, and communications) are currently located on or adjacent to the site and have available capacity to serve the proposed project. The project would not exceed the wastewater treatment requirements of the Central Valley Regional Water Quality Control Board (CVRWQCB).

The California Water Service Company (Cal Water) is the local water provider for the Chico area. Groundwater is extracted from the sub-basins of the Sacramento Valley Groundwater Basins including the Vina sub-basin, West Butte sub-basin, and the East Butte sub-basin. The proposed site does not have established water service. Construction of water facilities and service lines will be required as necessary to accommodate development of the medical office building within the site. Cal Water has the operational capacity to accommodate the proposed development of the site. Impacts to water provision for domestic use and fire protection would be considered **Less Than Significant**.

The development of the proposed medical office building would require connection to the City of Chico's sanitary sewer system in accordance with the City's standards. The Chico Water Pollution Control Plant provides treatment of the City's wastewater. The facility has an operational capacity of 12 million gallons per day with the future expandability to 15 million gallons per day. Since the development within the project site would require connection to the City of Chico sewer system and there is ample capacity to

serve development projects, potential impacts regarding sewer treatment capacity are considered **Less Than Significant**.

Two stormwater drain lines border the site; one is found in the West East Avenue right-of-way, the other is along the northeastern border of the property between the project site and the Chico Town and Country Shopping Center. The proposed project would tie into the current storm drain lines located adjacent to the site. The proposed project will not require construction or expansion of storm water drainage facilities.

R.8.-9. Available capacity exists at the Neal Road landfill to accommodate waste generated by the project. The Neal Road landfill has a total capacity of approximately 25 million cubic yards of solid waste and has a tentative closure date of 2035. The proposed project will comply with federal, state, and local statutes and regulations regarding solid waste. This impact would be **Less Than Significant**.

MITIGATION: None Required.

V. MANDATORY FINDINGS OF SIGNIFICANCE

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
A. The project has the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory.			X	
B. The project has possible environmental effects which are individually limited but cumulatively considerable. (Cumulatively considerable means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past, current and probable future projects).			X	
C. The environmental effects of a project will cause substantial adverse effects on human beings, either directly or indirectly.			X	

DISCUSSION:

A-C: The project does not have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory. Based on the preceding environmental analysis, the application of existing regulations and incorporation of identified mitigation measures will ensure that all potentially significant environmental impacts associated with the project and reasonably foreseeable development, including those related to air quality, biological resources, and cultural resources would be minimized or avoided, and the project will not result in direct or indirect adverse effects on human beings or the environment, nor result in significant cumulative impacts. Therefore, with the incorporation of the identified mitigation measures, the project will result in a **Less Than Significant** impact.

VI. REFERENCES

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California Department of Toxic Substances Control. Hazardous Waste and Substances Site List. www.envirostor.dtsc.ca.gov/public/

California Emissions Estimator Model. CALEEMOD v2013.2.2

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City of Chico GP EIR. 2011. City of Chico General Plan Environmental Impact Report. State Clearinghouse Number 2008122038. Certified April 12, 2011.

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NRCS. 2006. Soil Survey of Butte Area, California, Parts of Butte and Plumas Counties. Natural Resources Conservation Service. 2006.

Streamline Engineering. August 2016. Spoils Investigation Report for Enloe Office Buildings.

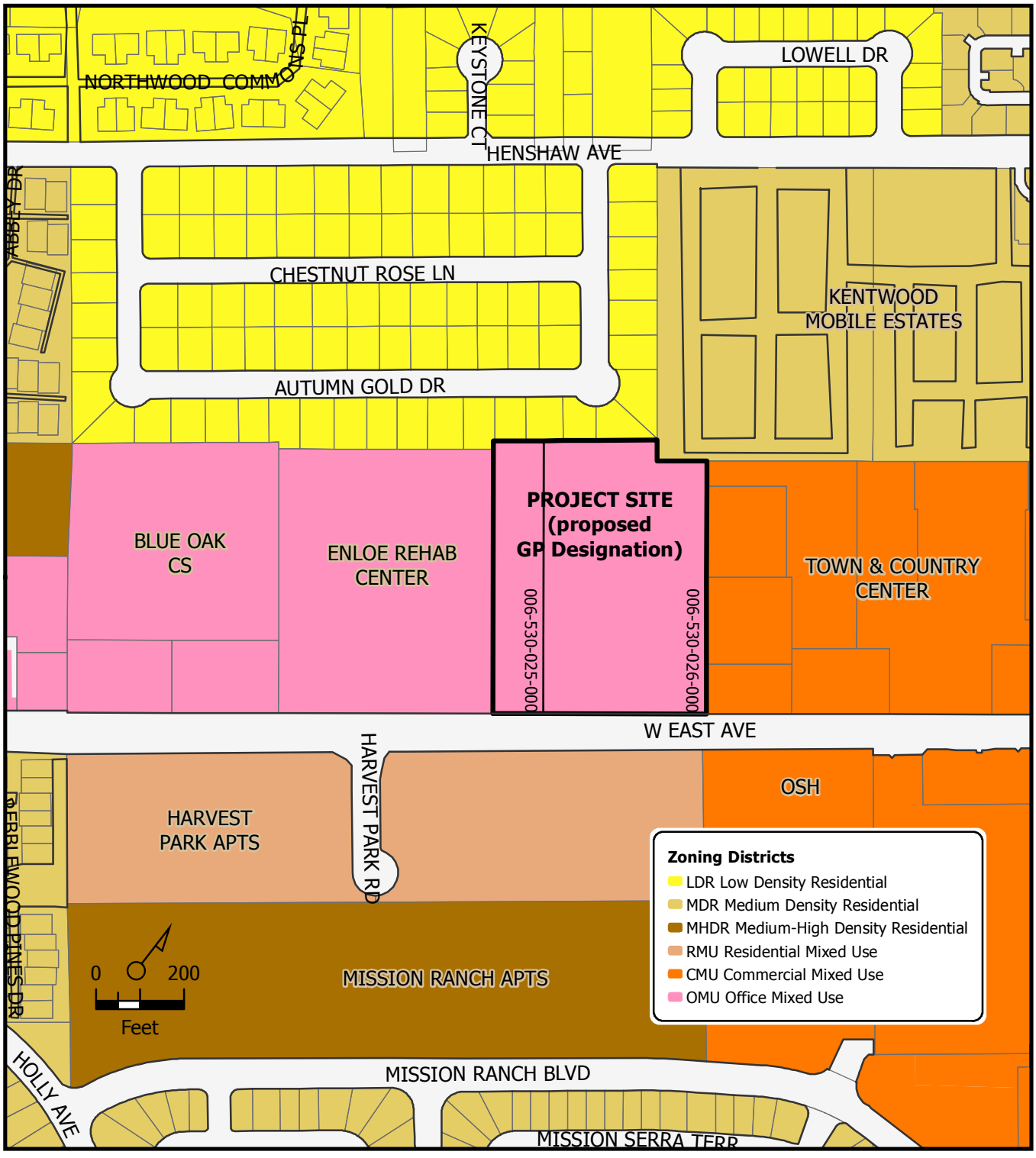
Sean Michael Jensen, M.A. Archaeological Inventory Survey, prepared for Northstar Engineering, Inc. November 2016.

Traffic Works. April 2018. Traffic Impact Study for Enloe Medical Office Building prepared for Northstar Engineering, Inc. 2018.

GPA **16-02**

Approval Recommended by Chico Planning Commission on _____ by Resolution No. _____.

Approved by Chico City Council on _____ by Resolution No. _____.



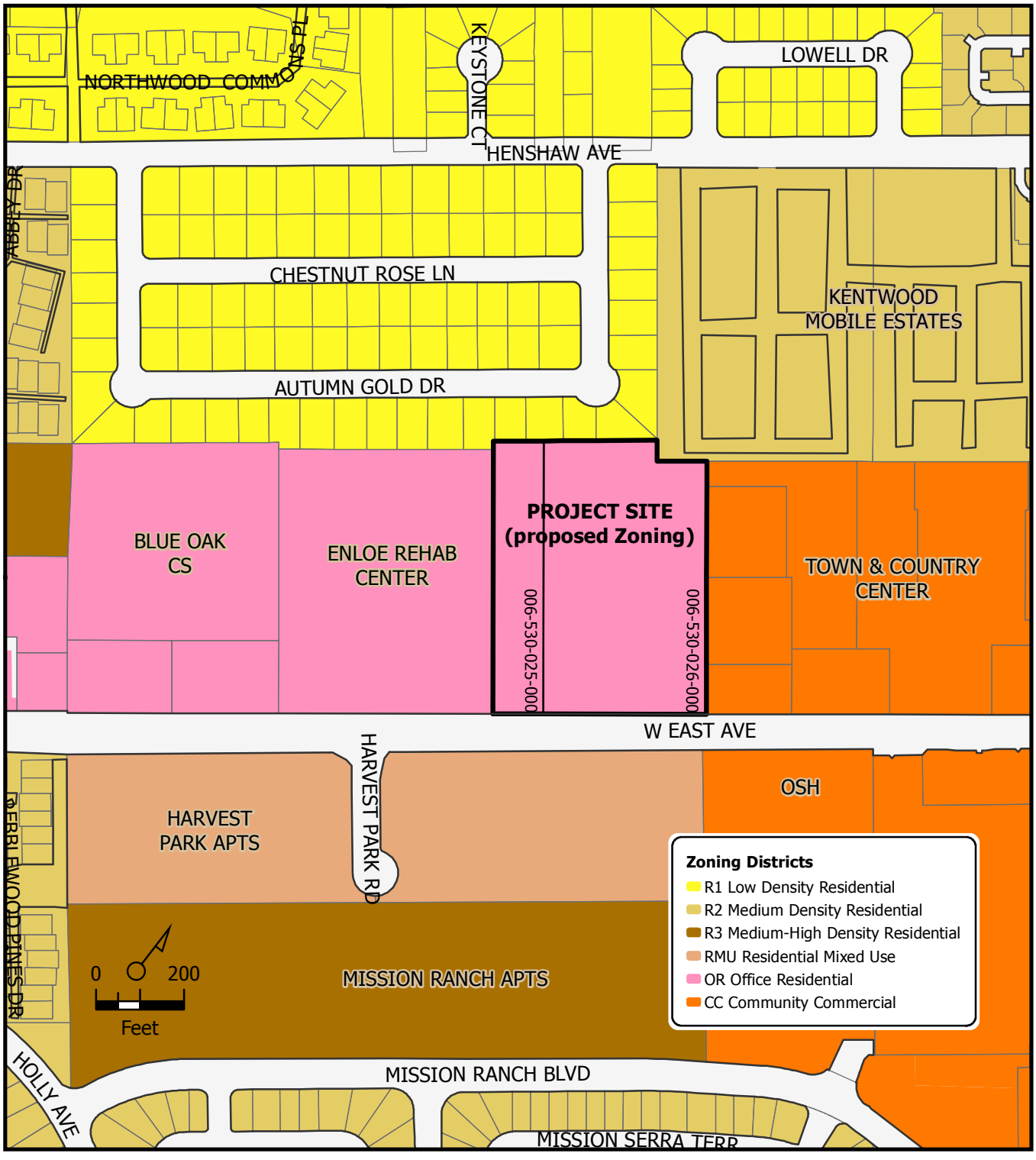
GPA 16-02 (Enloe)
250 W East Avenue, APNs 006-530-025-000 and 006-530-026-000
From: RMU Residential Mixed Use
To: OMU Office Mixed Use

Exhibit II

Rezone **16-02**

Approval Recommended by Chico Planning Commission on _____ by Resolution No. _____.

Approved by Chico City Council on _____ by Ordinance No. _____.



Rezone 16-02 (Enloe)
250 W East Avenue, APNs 006-530-025-000 and 006-530-026-000
From: RMU Residential Mixed Use
To: OR Office Residential
-AOD, -COS overlay zoning to remain on both parcels

Exhibit III

EXHIBIT "IV"
CONDITIONS OF APPROVAL
Enloe Medical Office Building GPA/RZ 16-01, UP 18-01 and AR 18-01
(Enloe Medical Office Building)

1. All development shall comply with all other State and local Code provisions, as well as any applicable requirements of the Fire Department, the Public Works Department, Butte County Environmental Health, and the Community Development Department. The developer is responsible for contacting these offices to verify the need for permits.

2. Impacts to school facilities within the Chico Unified School District shall be fully mitigated by payment of school impact fees to the extent permitted by State Law.

3. Use Permit 18-01 authorizes the following for the Enloe Medical Office Building:
    a. Business hours that extend beyond Monday through Friday, 8 a.m. to 6 p.m.,
    b. Parameter fencing taller than 6-feet in height,
    c. Required parking to be located off-site at the Enloe Rehabilitation Center site.

4. All approved building plans and permits shall note on the cover sheet that the project shall comply with AR 18-01 (Enloe Medical Office Building). Approval documents for this project include the following exhibits:
    a. Elevations date stamped April 6, 2018
    b. Color and Finish materials received May 5, 2018
    c. Overall Site Plan received April 27, 201118
    d. Shade Structure and Bike racks date stamped April 6, 2018
    e. Trash Enclosure date stamped April 6, 2018
    f. Landscape Plans date stamped April 6, 2018

5. All wall-mounted utilities and roof or wall penetrations, including vent stacks, utility boxes, exhaust vents, gas meters and similar equipment, shall be screened by appropriate materials and colors. Adequate screening shall be verified by Planning staff prior to issuance of a certificate of occupancy.

6. The rear property line fence shall be constructed of wood or cement block and at a minimum height of seven feet tall. The fence or wall shall extend the entire length of the project site, and the adjacent rehabilitation center site.

7. All parking lot light poles located along the rear perimeter of the site shall be limited to 12-feet in height and all interior parking lot light poles shall be limited to 18-feet in height.

8. As required by CMC 16.66, trees removed shall be replaced as follows:

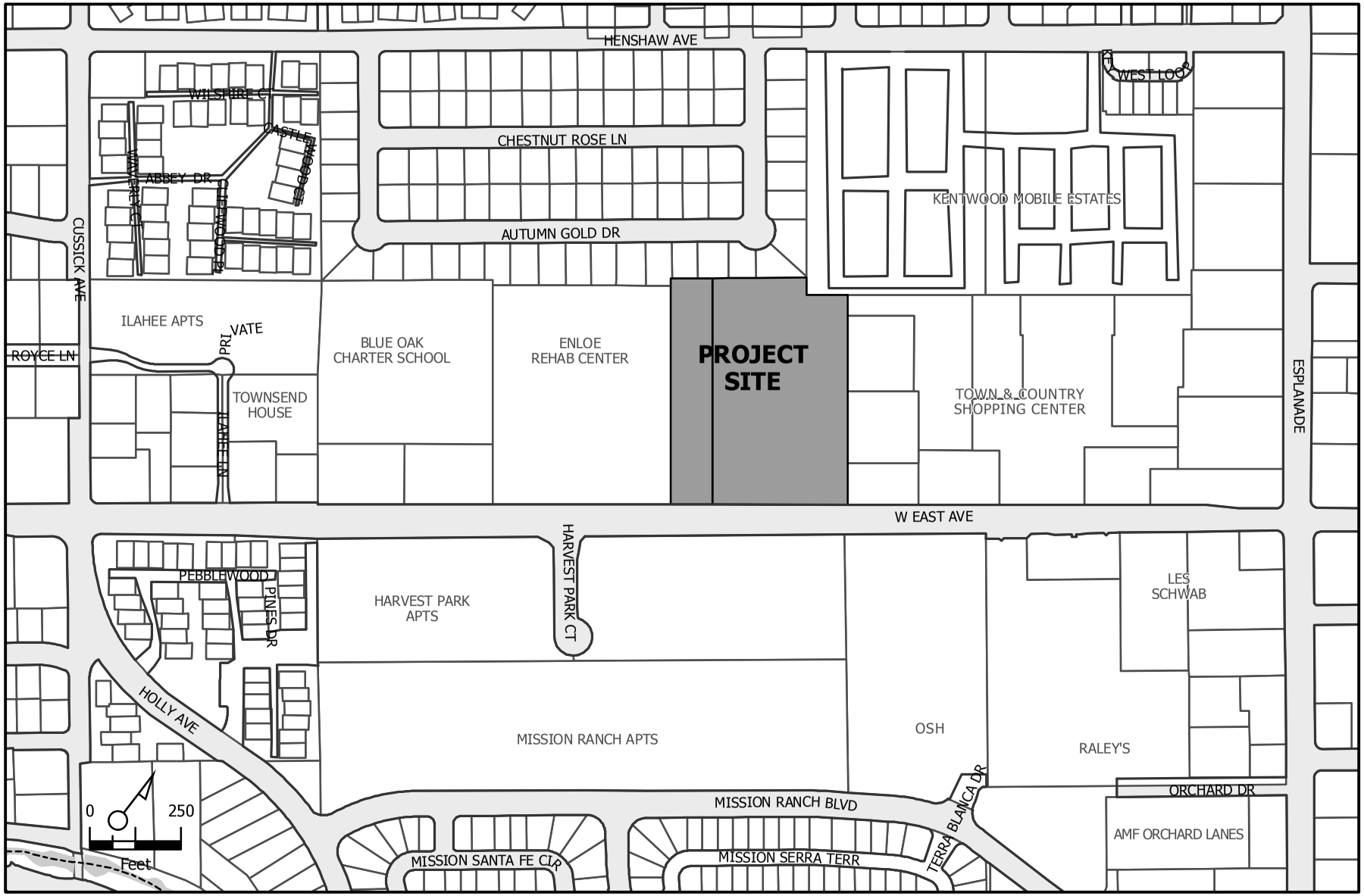
    a. On-site. For every six inches in DBH removed, a new 15-gallon tree shall be planted on-site. Replacement trees shall be of similar species, unless otherwise approved by the urban forest manager, and shall be placed in areas dedicated for tree plantings. New plantings' survival shall be ensured for three years after the date of planting and shall be verified by the applicant upon request by the director. If any replacement trees die or fail within the first three years of their planting, then the applicant shall pay an in-lieu fee as established by a fee schedule adopted by the City Council.

    b. Off-site. If it is not feasible or desirable to plant replacement trees on-site, payment of an in-lieu fee as established by a fee schedule adopted by the City Council shall be required.

    c. Replacement trees shall not receive credit as satisfying shade or street tree requirements otherwise mandated by the municipal code.

    d. Tree removal shall be subject to the in-lieu fee payment requirements set forth by Chico Municipal Code (CMC) 16.66 and fee schedule adopted by the City Council.

    e. All trees not approved for removal shall be preserved on and adjacent to the project site. A tree preservation plan, including fencing around drip lines and methods for excavation within the drip lines of protected trees to be preserved shall be prepared by the project developer pursuant to CMC 16.66.110 and 19.68.060 for review and approval by planning staff prior to any ground-disturbing activities.



AR 18-01, UP 18-01, GPA/RZ 16-02 (Enloe Medical Office)
West East Avenue
APN 006-530-(025, 026)-000

Attachment B

June 4, 2018

Shannon Costa
City of Chico, Planning Services
Assistant Planner
411 Main Street, 2nd Floor
P.O. Box 3420
Chico, CA 95927

Subj: 250 W East Ave, Proposed Medical Office Building Development

Mrs. Costa,

Enloe currently has outpatient clinics and ancillary services in 18 locations spread throughout Chico. These hospital based clinics provide critical services and in most cases the only services for our community. To make these services readily available and to allow them to expand in scope to meet the future needs of the community, we are in need of consolidating them in a new 126,000 SF Medical Office Building (MOB).

In looking at this project Enloe had a few primary goals; preserve inpatient capabilities at the Esplanade campus, reduce the outpatient volume at the Esplanade campus, create additional capacity at the Rehab campus, reduce lease costs, and improve the overall patient experience and access to critical services. This new project allows us to move approx. 16,000 outpatient visits from the Esplanade campus into a commercial development on a primary traffic corridor with ample parking. It will eliminate approx. $1 mil annually in lease costs, and by combining the physician and ancillary services in one location it eliminates the need of patients to travel to multiple locations to receive care.

The building will house 135 exam rooms, 5 minor procedure rooms, 60 providers, staff support, and utility spaces. The new design is planned to house an Urgent Care, Pharmacy, Cafe, Outpatient Rehab, Cardiac Rehab, Pulmonary Rehab, Sports Medicine, Cardiology, Heart Surgeon, Primary Care (including Transitional Care, Pre-Surgical Testing, and Diabetes Education), Wound/Ostomy Clinic, Pain Clinic, ENT Clinic, Urology Clinic, GI Clinic, Colorectal Clinic, Joint Clinic, Neuro and Spine Clinic, and Vascular Clinic. The normal hours of operation for the building are anticipated to be M-F 8am to 5pm. The Prompt Care would be open 7 days a week running from 10am to 9pm (to allow relief for the extremely high usage that occurs in the Emergency Department currently at 65,000 patients annually). The building is planned to have full time security provided by Enloe's Security department.

These clinics are currently located in the spaces available at the time they were acquired by Enloe and are not able to expand or grow to meet current and future community needs. The new space is designed to allow flexibility for the various clinics to expand and contract within a common footprint so on days where one clinic has high volume and another has low volumes we can flex to meet the patient needs. As

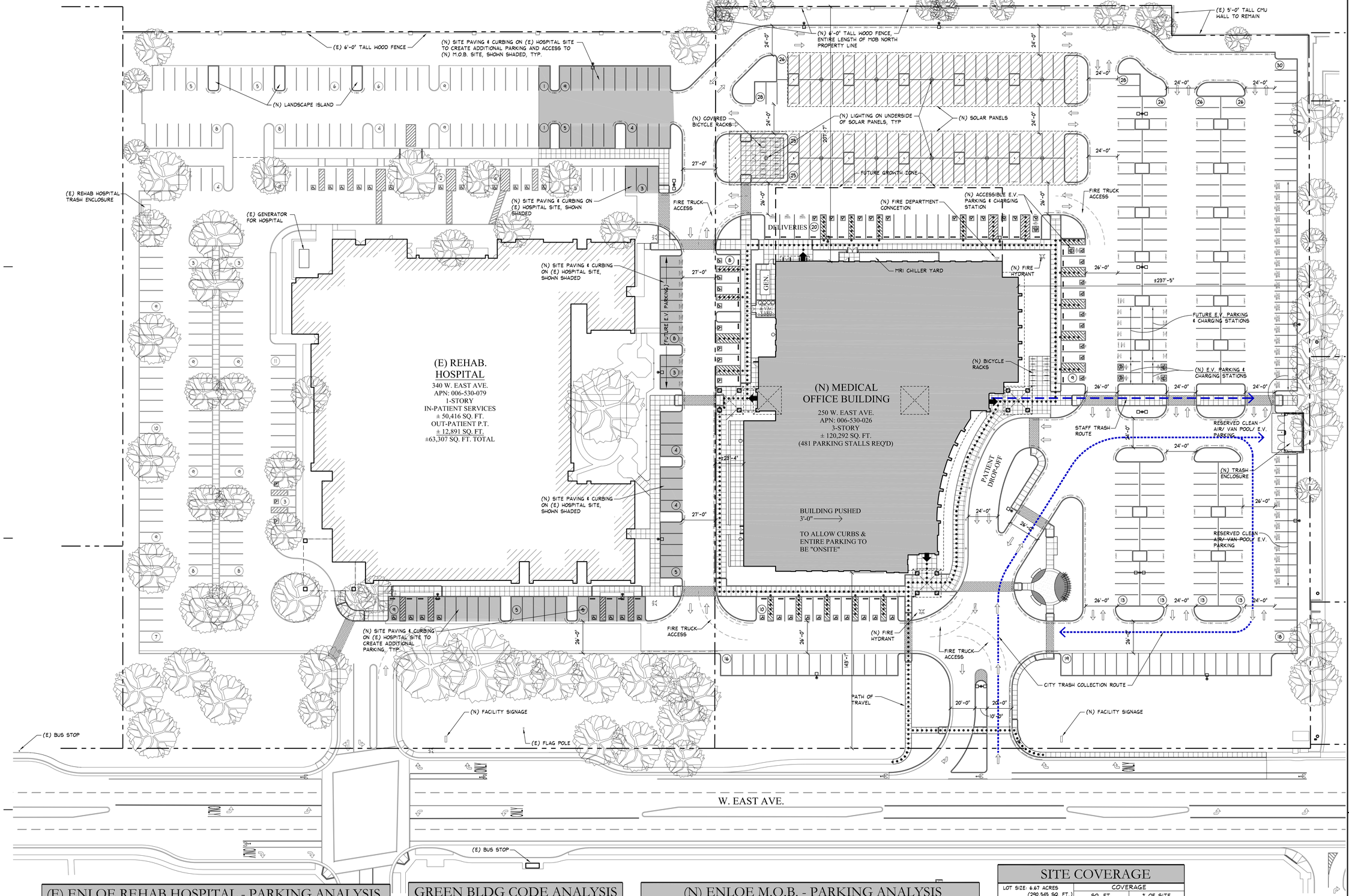
part of the project we are creating 444 parking spaces between this site and the adjacent Rehab Hospital, along with a complete landscaping plan that incorporates both buildings. The goal is to make parking easy and convenient for the patients traveling from all over Butte County to receive these critical services and to enhance the overall beauty of the area.

If you have any questions or need further information, please do not hesitate to contact me at (530) 332-4590.

Sincerely,

William Seguine
Enloe Medical Center
Director Property Development
And Facilities Management

Cc: Mike Wiltermood, CEO Enloe Medical Center
Mike Wyrauch, Modern Building



(E) ENLOE REHAB HOSPITAL - PARKING ANALYSIS

BUILDING	SQUARE FOOT / BED PROGRAM		PARKING ANALYSIS	
	GROSS SF	BEDS	FORMAT	# REQ'D
(E)ENLOE REHAB. HOSPITAL				
MAIN FLOOR				
IN-PATIENT SERVICES (42 PATIENT BEDS), P.T. POOL, KITCHEN, PATIENT DINING, EXAM ROOMS, CENTRAL SUPPLY	(E) 50,416	42	1 STALL / LIC. BED	42
			ADDITIONAL ANCILLARY SUPPORT	50
OUT-PATIENT PHYSICAL THERAPY (P.T.) (18 BEDS)	(E) 12,891	18	1 STALL / 250 SQ. FT.	52
TOTAL REQUIRED:	63,307	60		144

PARKING PROVIDED

OFF-STREET PARKING	PARKING PROVIDED
(E) HOSPITAL PARKING LOT	191
(N) STALLS ON (E) HOSPITAL PARKING LOT	67
TOTAL	258
IN-PATIENT REHAB ADA STALLS REQ'D: (PER 2016 CBC TABLE 11B-208.2)	7
O.P. P.T. ADA STALLS REQ'D: (20% PER 2016 CBC 11B-208.2.2)	11
ADA STALLS PROVIDED:	23

GREEN BLDG CODE ANALYSIS

TOTAL (N) PARKING SPACES PROVIDED:	421
BICYCLE PARKING	
SHORT TERM BICYCLE PARKING REQUIRED: (CGBC SECTION 5.104.1 & LOCAL ORDINANCE) (10% OF VEHICULAR SPACES - CHICO CODE OF ORDINANCE TABLE 5-4)	43
BICYCLE RACKS REQUIRED:	21
COVERED, LOCKABLE BICYCLE PARKING REQUIRED: (BICYCLE PARKING TO BE WITHIN 200 FEET OF VISITOR ENTRANCES - CGBC 5.106.4.1.1)	22
SHOWER FACILITIES REQUIRED: (CHICO CODE OF ORDINANCE TABLE 5-6)	2
CLEAN AIR / VAN POOL / E.V. PARKING	
DESIGNATED PARKING STALLS REQUIRED: (CGBC TABLE 5.106.5.2)	34
FUTURE ELECTRIC VEHICLE CHARGING SPACES	
6% FUTURE E.V. CHARGING STATIONS: (CGBC TABLE 5.106.5.3.3)	26
ACTUAL CHARGING STATIONS PROVIDED:	6
FUTURE CHARGING STATIONS REQUIRED: (PROVIDE ELECTRICAL INFRASTRUCTURE FOR FUTURE E.V. CHARGING STATIONS - CGBC TABLE 5.106.3.2)	20

(N) ENLOE M.O.B. - PARKING ANALYSIS

BUILDING	SQUARE FOOT / BED PROGRAM		PARKING ANALYSIS	
	GROSS SF	BEDS	FORMAT	# REQ'D
ENLOE MEDICAL OFFICE BUILDING				
MAIN FLOOR PROMPT CARE, LAB / IMAGING, COFFEE SHOP, PHARMACY, BUILDING SERVICES, P.T. & CARDIAC REHAB.	44,945	0	1 STALL / 250 SQ. FT.	180
2ND FLOOR PRIMARY CARE, PMR, WOUND CLINIC/HYPERBARIC, ANTI-COAG, HEART, CARDIOLOGY	39,270	0	1 STALL / 250 SQ. FT.	157
3RD FLOOR ADMIN, PMR, ENT, TOTAL JOINT, NEURO SPINE, O.P. PHYSICAL THERAPY., CARDIAC REHAB.	36,077	0	1 STALL / 250 SQ. FT.	144
TOTAL REQUIRED:	120,292	0		481

PARKING PROVIDED

OFF-STREET PARKING	PARKING PROVIDED
(N) MEDICAL OFFICE BUILDING PARKING LOT	392
TOTAL	392
ADA STALLS REQ'D: (10% TOTAL STALLS PER 2016 CBC 11B-208.2.1)	39
ADA STALLS PROVIDED:	39

SITE COVERAGE

LOT SIZE: 6.67 ACRES (290,545 SQ. FT.)	COVERAGE	
	SQ. FT.	% OF SITE
BUILDING PAD AREA	45,015 S.F.	16%
ASPHALT/PARKING	160,547 S.F.	55%
CONCRETE	19,812 S.F.	7%
LANDSCAPE	65,178 S.F.	22%
TOTAL:	290,545 S.F.	100%

LEGEND:

- (E) ACCESSIBLE PATH OF TRAVEL
- (E) ACCESSIBLE EXIT TO EXTERIOR
- (#) (E) PARKING STALL COUNT
- (E) PROPERTY LINE
- FIRE (E) FIRE (N) FIRE LANE PAINTED CURBS

Recieved 4/27/18 sc

1 OVERALL SITE CODE REVIEW

Scale: 1" = 30'-0"

UPDATED: 04-23-2018

KAP
KELLY ARCHITECTURE & PLANNING
6528 LONETREE BOULEVARD | ROCKLIN, CA 95765
P. 916.797.1199 | WWW.KELLYARCH.COM

Client: ENLOE MEDICAL CENTER

Facility:
Enloe Medical Center
Medical Offices Building
250 W. East Avenue
Chico, CA 95926

Project Name:
New OSHPD 3
Medical Office Building

Submittal:
ARCHITECTURAL DESIGN REVIEW

Architect of Record
LICENSED ARCHITECT KELLY W. MAUES C27597 REN: 5/19 STATE OF CALIFORNIA
Date Signed: __/__/____

Consultant

Revisions
Description

Approvals

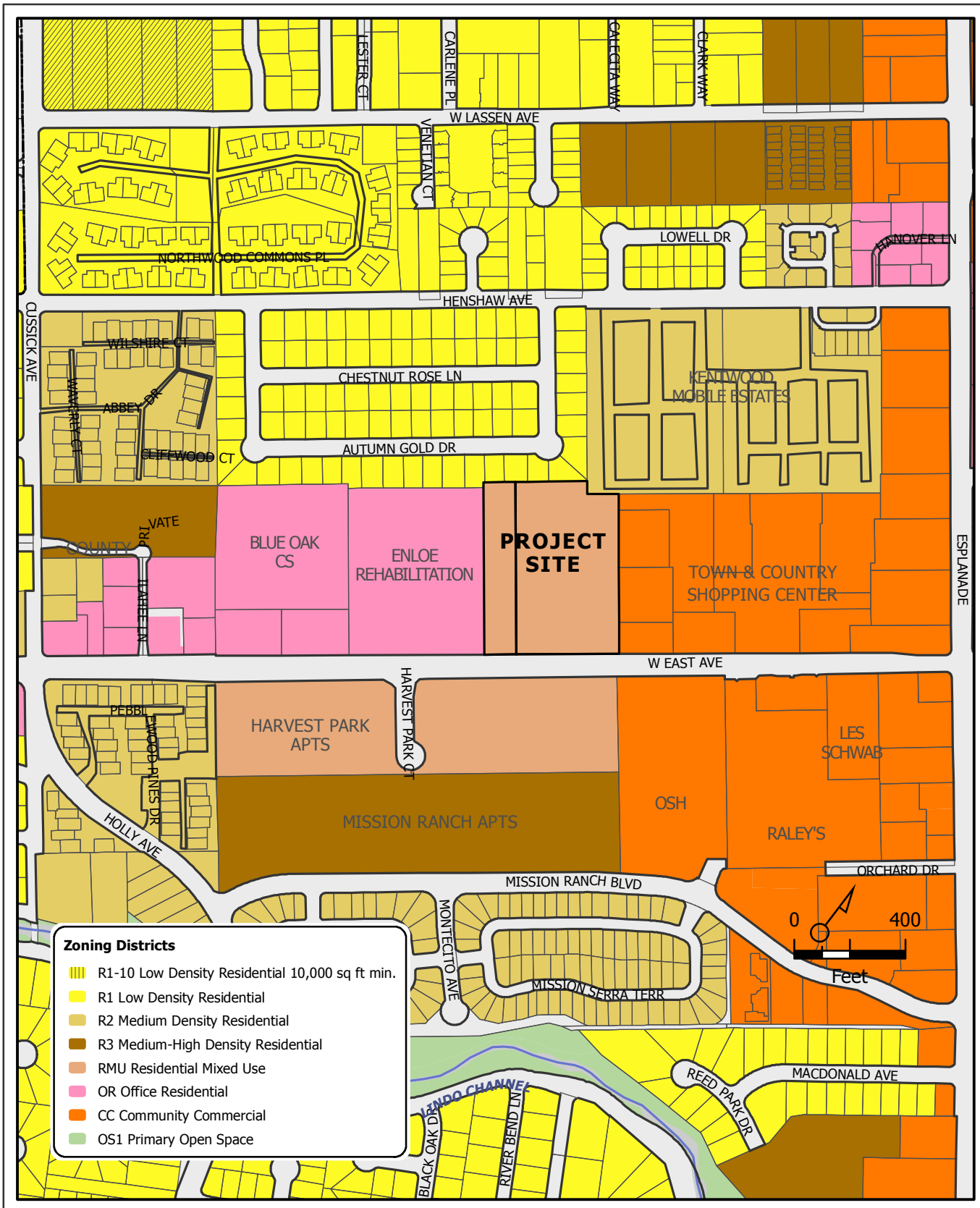
Key Plan
N.T.S

KAP Job No. 240.00
Scale: As Noted
Date: 04/06/2018
Drawn By: AG/RJS
Checked By: KM / SJ

Sheet Name
OVERALL SITE CODE REVIEW

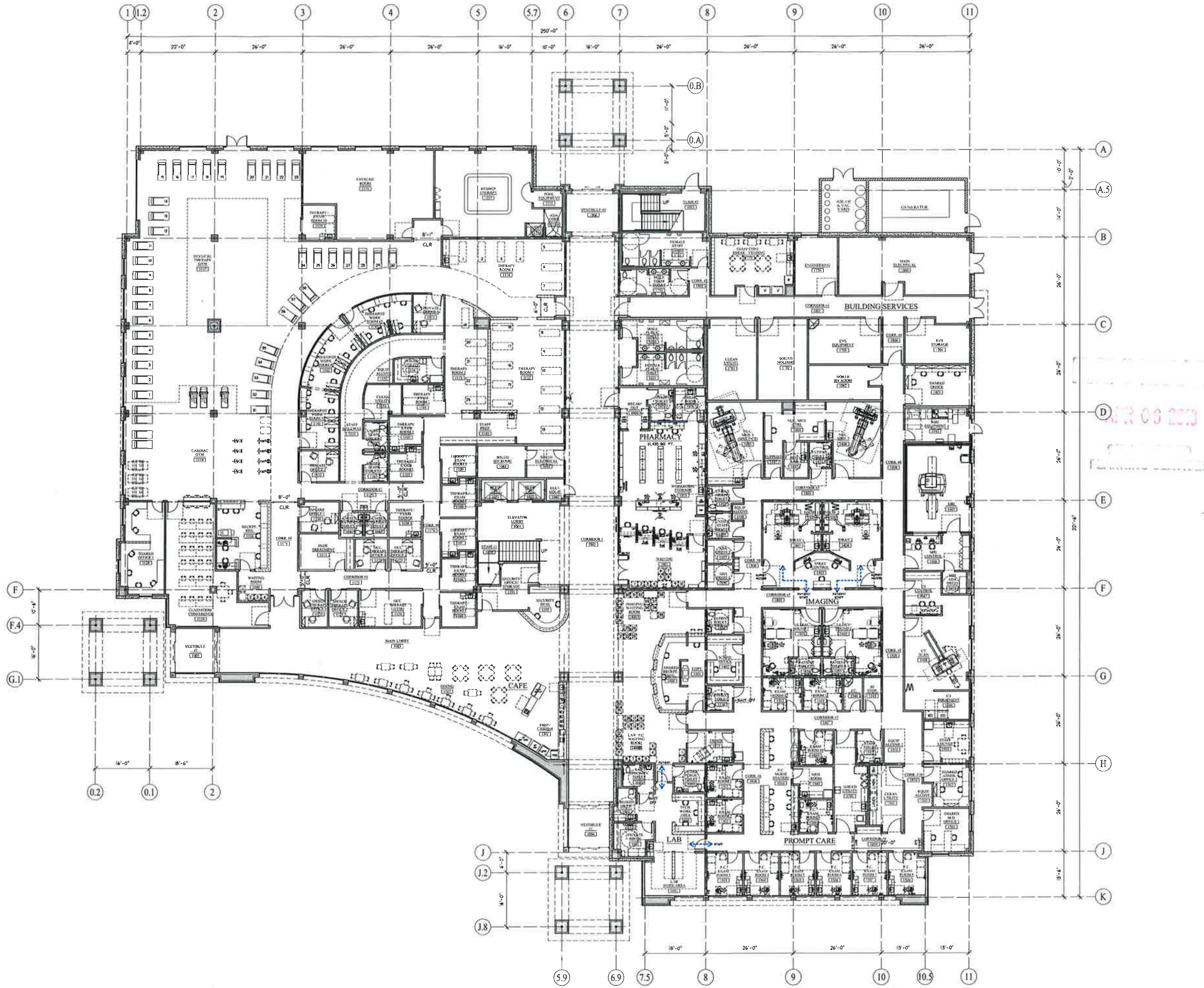
Sheet Number
A0.10

Attachment D



W East Avenue Zoning Districts

Attachment E



1 FIRST FLOOR PLAN
Scale: 3/32" = 1'-0"

44,945 SQ. FT.
UPDATED: 03-15-2018

KAP
KELLY ARCHITECTURE & PLANNING

Client:
ENLOE MEDICAL CENTER

Facility:
Enloe Medical Center
Medical Offices Building
250 W. East Avenue
Chico, CA 95926

Project Name:
New OSHPD 3
Medical Office Building

Submittal:
ARCHITECTURAL
DESIGN REVIEW

Architect of Record
LICENSED ARCHITECT
KELLY W. MAYES
C27597
REN. 5/19
STATE OF CALIFORNIA
Date Signed: __/__/__

Consultant

Revisions
Description

Approvals

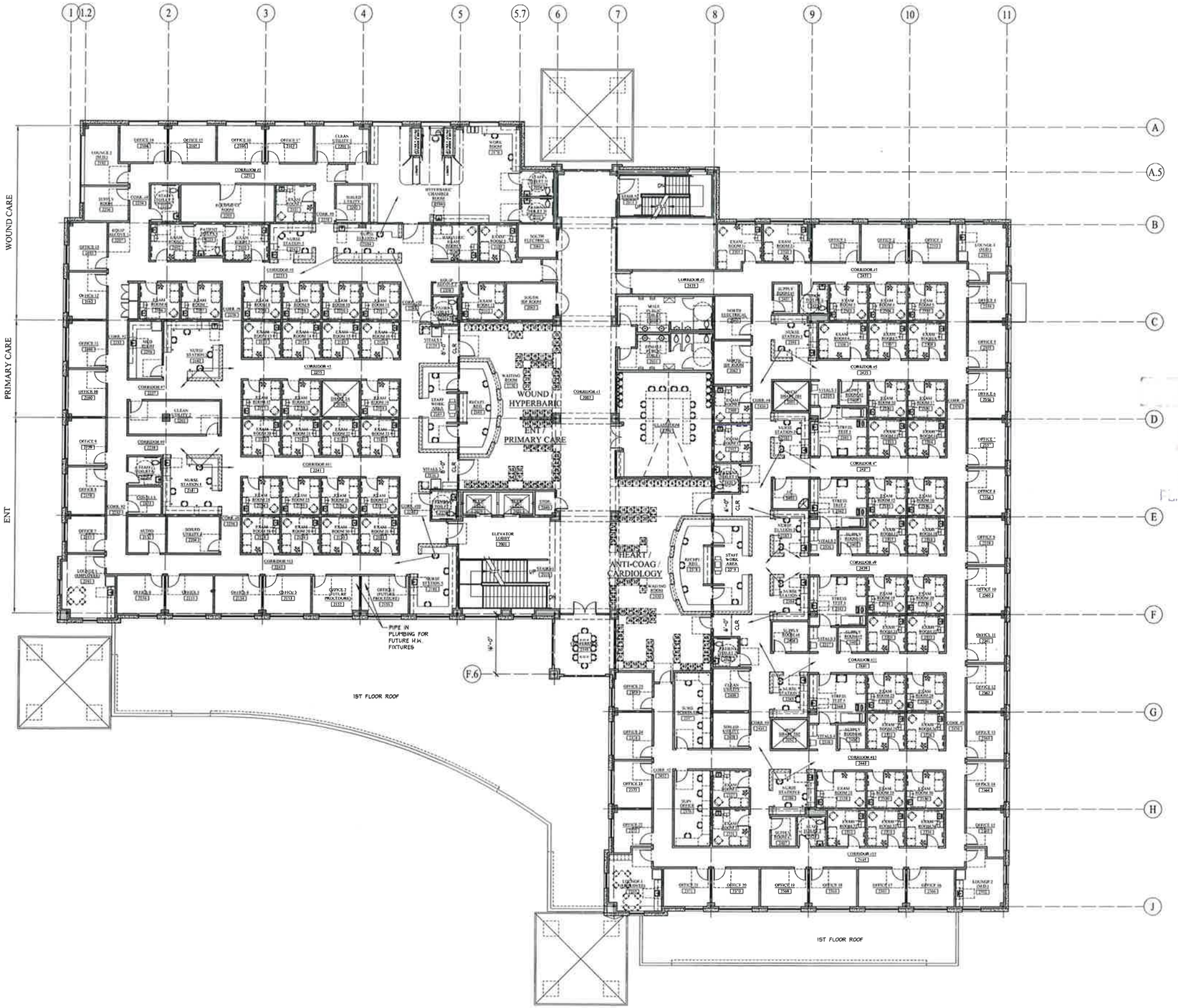
Key Plan
N.T.S.

KAP Job No. 240.00
Scale: As Noted
Date: 04/06/2018
Drawn By: AG/RJS
Checked By: KM / SJ

Sheet Name
OVERALL
FIRST FLOOR PLAN

Sheet Number
A3.11

Attachment F



1 SECOND FLOOR PLAN
Scale: 3/32" = 1'0"

39,270 SQ. FT.

UPDATED: 03-15-2018

KAP
KELLY ARCHITECTURE & PLANNING
6938 LONETREE BOULEVARD | ROCKLIN, CA 95765
P. 916.797.1100 | www.KELLYARC.COM

Client:
ENLOE MEDICAL CENTER

Facility:
Enloe Medical Center
Medical Offices Building
250 W. East Avenue
Chico, CA 95926

Project Name:
New OSHPD 3
Medical Office Building

Submittal:
ARCHITECTURAL
DESIGN REVIEW

Architect of Record
LICENSED ARCHITECT
KELLY W. NAMES
C27597
REN. 5/19
STATE OF CALIFORNIA

Date Signed:

Consultant

Revisions
Description
△
△
△
△
△

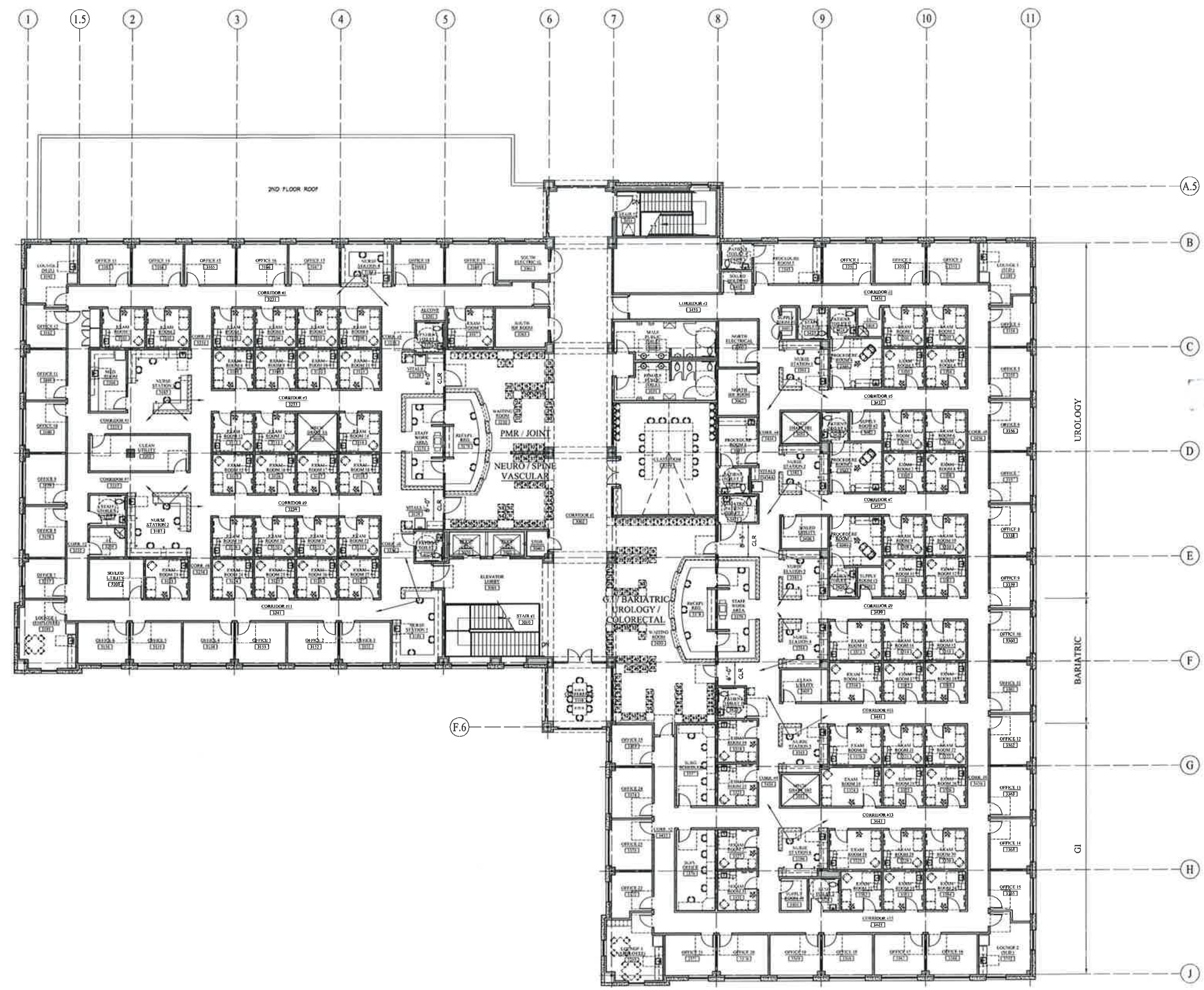
Approvals

Key Plan
N.T.S

KAP Job No. 240.00
Scale: As Noted
Date: 04/06/2018
Drawn By: AG/RJS
Checked By: KM / SJ

Sheet Name
OVERALL
SECOND FLOOR PLAN

Sheet Number
A3.21



1 THIRD FLOOR PLAN
Scale: 3/32" = 1'-0"

36,077 SQ. FT.

UPDATED: 03-15-2018

KAP
KELLY ARCHITECTURE & PLANNING

Client:

ENLOE MEDICAL CENTER

Facility:
Enloe Medical Center
Medical Offices Building
250 W. East Avenue
Chico, CA 95926

Project Name:
New OSHPD 3
Medical Office Building

Submittal:
ARCHITECTURAL
DESIGN REVIEW

Architect of Record

LICENSED ARCHITECT KELLY W MAYES C27597 REN. 5/19 STATE OF CALIFORNIA

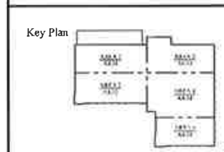
Date Signed: __/__/__

Consultant

Revisions
Description

Approvals

Key Plan



N.T.S

KAP Job No. 240.00
Scale: As Noted
Date: 04/06/2018
Drawn By: AG/RJS
Checked By: KM / SJ

Sheet Name
OVERALL
THIRD FLOOR PLAN

Sheet Number
A3.31

Attachment F

TRAFFIC IMPACT STUDY

for

Enloe Medical Office Building

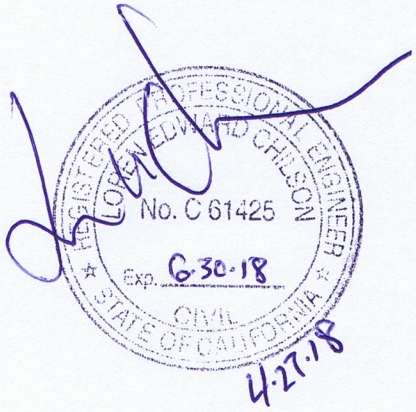
April 27, 2018

PREPARED FOR:

Modern Building, Inc.

PREPARED BY:

TRAFFIC WORKS LLC



TRAFFIC WORKS, LLC
2240 St. George Lane, Suite 1, Chico, CA 95926
530.897.0199
www.Traffic-Works.com

Attachment G

YOUR QUESTIONS ANSWERED QUICKLY

Why did you perform this study?

This Traffic Impact Study evaluates the potential impacts on traffic and circulation associated with the proposed Enloe Medical Office Building and Clinical space to be located at 250 W. East Avenue on the vacant parcel on the north side of East Avenue between the Enloe Rehabilitation Center and the Save Mart anchored shopping center in Chico, CA.

What does the project consist of?

For the purposes of this study, the project consists of a 120,292 square foot Medical Office Building with office and clinical/lab type spaces anticipated.

How much traffic will the project generate?

The project is anticipated to generate 4,287 Daily trips, 362 AM peak hour trips, and 411 PM peak hour trips.

Are there any traffic impacts?

The proposed project is not anticipated to cause any significant impacts on the adjacent transportation system. All the study intersections are expected to operate at acceptable levels of service under Existing Plus Project and Cumulative Plus Project conditions.

The project shall pay the appropriate City of Chico standard Transportation Facility Fees as its mitigation for added traffic on the roadway system. With the payment of development impact fees, the project's impacts would be reduced to a less-than-significant level.

Are there any recommendations?

Outbound left-turn movements should be prohibited at the new project driveway. Left-turn pocket striping should be constructed in place of the current double yellow striping on East Avenue, at the new project driveway, to emphasize the allowed and disallowed turn movements and implement striping consistent with the CA MUTCD with the driveway construction.

LIST OF FIGURES

1. Project Location
2. Project Site Plan
3. Existing Lane Configurations & Controls
4. Existing Traffic Volumes
5. Project Trip Distribution & Assignment
6. Existing Plus Project Traffic Volumes
7. Cumulative Traffic Volumes
8. Cumulative Plus Project Traffic Volumes

LIST OF APPENDICES

A. Existing LOS Calculations
B. Existing Plus Project LOS Calculations
C. Cumulative No Project LOS Calculations
D. Cumulative Plus Project LOS Calculations

INTRODUCTION

This report presents the findings of a Traffic Impact Study completed to assess the potential traffic impacts associated with a proposed medical office building project in Chico, CA. The project would consist of an approximately 120,292 square foot Medical Office Building with both office and clinical/lab type spaces anticipated. This traffic impact study has been prepared to document existing traffic conditions, quantify traffic volumes generated by the proposed project, identify potential impacts, document findings, and make recommendations to mitigate impacts, if any are found. The project is located at 250 W. East Avenue on the vacant parcel on the north side of East Avenue between Enloe Rehabilitation Center and the Save Mart anchored shopping center, as shown on **Figure 1**. The project site plan is shown on **Figure 2**.

Study Area and Evaluated Scenarios

The following intersections are included in the analysis:

- East Avenue / Cussick Avenue / Holly Avenue
- East Avenue / Harvest Park Court / Enloe Rehabilitation Center Driveway
- East Avenue / Save Mart Driveway / Raley's Driveway
- East Avenue / Esplanade
- East Avenue / SR 99 Southbound Ramps
- East Avenue / SR 99 Northbound Ramps
- East Avenue / Project Driveway (Plus Project Conditions only)

The existing study intersection lane configurations and traffic controls are shown on **Figure 3**, attached. This study includes analysis of both the weekday AM and PM peak hours as these are the periods of time in which peak traffic is anticipated to occur. The evaluated development scenarios are:

- Existing Conditions (no project)
- Existing Plus Project Conditions
- Cumulative Conditions (no project)
- Cumulative Plus Project Conditions

ANALYSIS METHODOLOGY

Level of service (LOS) is a term commonly used by transportation practitioners to measure and describe the operational characteristics of intersections, roadway segments, and other facilities. This term equates seconds of average delay per vehicle at intersections to letter grades "A" through "F" with "A" representing optimum conditions and "F" representing breakdown or over capacity flows.

Intersections

Intersection level of service methodology is established in the *Highway Capacity Manual (HCM), 2010*, published by the Transportation Research Board (TRB). The methodology for signalized intersections determines the level of service by comparing the average control delay for the overall intersection to the delay thresholds in **Table 1**. The level of service at unsignalized (side-street stop controlled) intersections is determined by comparing the average control delay for the worst movement/approach to the delay thresholds in **Table 1.**

Table 1: Level of Service Definition for Intersections

Level of Service	Brief Description	Average Delay (seconds per vehicle)	
		Unsignalized Intersections	Signalized Intersections
A	Free flow conditions.	< 10	< 10
B	Stable conditions with some affect from other vehicles.	10 to 15	10 to 20
C	Stable conditions with significant affect from other vehicles.	15 to 25	20 to 35
D	High density traffic conditions still with stable flow.	25 to 35	35 to 55
E	At or near capacity flows.	35 to 50	55 to 80
F	Over capacity conditions.	> 50	> 80

Source: Highway Capacity Manual (2010), Chapters 18 & 19

Level of service calculations were performed for the study intersections using the Synchro 9 software package with results reported in accordance with the current *HCM 2010* methodology.

Level of Service Policy

City of Chico

The City of Chico *2030 General Plan* Circulation Element includes the following level of service policy:

> *Policy CIRC-1.4 (Level of Service Standards) – Maintain LOS D or better for roadways and intersections at the peak PM period, except as specified below:*
>
> - *LOS E is acceptable for City streets and intersections under the following circumstances:*
>
> - *Downtown streets within the boundaries identified in Figure DT-1 of the Downtown Element.*
> - *Arterials served by scheduled transit.*
> - *Arterials not served by scheduled transit, if bicycle and pedestrian facilities are provided within or adjacent to the roadway.*
> - *Utilize Caltrans LOS standards for Caltrans' facilities.*
> - *There are no LOS standards for private roads.*

Exceptions to the LOS standards above may be considered by the City Council where reducing the level of service would result in a clear public benefit. Such circumstances include, but are not limited to, the following:

- *If improvements necessary to achieve the LOS standard results in impacts to a unique historical resource, a highly sensitive environmental area, requires infeasible right-of-way acquisition, or some other unusual physical constraint exists.*
- *If the intersection is located within a corridor that utilizes coordinated signal timing, in which case, the operation of the corridor as a whole should be considered.*

The project site and study intersections are located on an arterial roadway served by scheduled transit (East Avenue).

Butte County

The *Butte County General Plan 2030* includes the following level of service policies:

CIR-P6.1 The level of service for County-maintained roads within the unincorporated areas of the county but outside municipalities' sphere of influences (SOIs) shall be level of service (LOS) C or better during the PM peak hour. Within a municipality's SOI, the level of service shall meet the municipality's level of service policy.

CIR-P6.2 The level of service on State Highways should at least match the concept level of service for the facility, as defined by Caltrans.

The study intersections are located within the City of Chico boundaries and are subject to the City's LOS policies.

Caltrans

Caltrans has developed Transportation Concept Reports (TCR) for each of its state highways. "The TCR is a planning document that identifies the existing and future route conditions as well as future needs for each route on the state highway system (Caltrans, 2017)." Each TCR establishes a Concept Level of Service as the minimum acceptable level of service for that route. Longer routes are often split into segments with a different Concept LOS for each segment.

The State Route 99 Transportation Concept Report (July 2017) states the following:

The "Concept LOS" is based on District 3 standards, which are from the Caltrans District 3 District System Management Development Plan (DSMDP). Typical LOS standards in District 3 are LOS "D" in rural areas and LOS "E" in urban areas. Performance variations and interchange deficiencies within a corridor segment may inadvertently increase or decrease the LOS calculations, which may warrant additional detailed operational analysis.

Segment 16 [of SR 99] is a 4-lane freeway beginning south of Chico, running from Southgate Avenue to north of Eaton Road.

The segment currently operates at LOS F, with AADT at 73,000. By the year 2035, peak hour operation is expected to remain at LOS F, with AADT increasing to 111,370.

Caltrans will collaborate and coordinate with BCAG and City of Chico on future projects and studies that will improve mobility along the SR 99 corridor.

Level of Service Threshold Summary

LOS E was used as the threshold (i.e. the minimum acceptable LOS) for this project consistent with the City of Chico and Caltrans policies outlined above.

Where intersections are already experiencing level of service beyond the thresholds, conditions should not be exacerbated. In practice, this has often been interpreted as not increasing average delay per vehicle by more than 5 seconds at signalized intersections.

EXISTING TRANSPORTATION FACILITIES

Roadway Facilities

A brief description of the key roadways in the study area is provided below.

State Route (SR) 99 is a north-south highway that intersects Interstate 5 (I-5) near Redding, CA at its north end and I-5 south of Bakersfield, CA at its south end. Within the analysis area, SR 99 is a divided freeway with two through lanes in each direction.

W. East Avenue is an Arterial roadway in the City of Chico running in a northeast-southwest direction west of SR 99. East of SR 99, the roadway is called East Avenue. Within the project area, East Avenue is a four-lane roadway (two lanes in each direction) with left-turn pockets or a two-way left-turn lane for the entire length. Some intersections on East Avenue also have right-turn pockets. The posted speed limit on East Avenue varies from 25 mph near SR 99 to 45 mph at Cussick Avenue and Holly Avenue.

Esplanade is an Arterial roadway that generally parallels SR 99 west of the highway. In the project area, Esplanade is a four-lane roadway (two lanes in each direction) with a two-way left-turn lane. The posted speed limit on Esplanade near East Avenue is 35 mph.

Cussick Avenue/Holly Avenue is a two-lane Collector roadway. North of East Avenue the roadway is Cussick Avenue and south of East Avenue the roadway is called Holly Avenue. Cussick Avenue and Holly Avenue primarily serve residential uses. The posted speed limit on Cussick Avenue north of East Avenue is 25 mph. The posted speed limit on Holly Avenue south of East Avenue is 35 mph.

Bicycle and Pedestrian Facilities

Bicycle and pedestrian facilities exist along the majority of East Avenue in the project area. Sidewalks exist on both sides of East Avenue from west of Cussick Avenue/Holly Avenue to the SR 99 Southbound Ramps. The section of East Avenue between the SR 99 Southbound and Northbound Ramps only has sidewalk on the north side of the roadway. Crosswalks are also present at all of the study intersections.

Bicycle lanes exist along both sides of East Avenue within the majority of the project area, expect for the section of the roadway through the Esplanade intersection. The eastbound bicycle lane ends approximately 500 feet from the intersection and begins again approximately 180 feet after the intersection. The westbound bicycle lane ends approximately 260 from the intersection and begins again approximately 350 after the intersection. Esplanade is classified as a Class III bicycle route in the City of Chico *General Plan*. Bicycle lanes also exist on Holly Avenue south of East Avenue.

The project site is well served by existing pedestrian and bicycle facilities.

Transit Facilities

B-Line (Butte Regional Transit) operates fixed route bus service throughout Butte County. There are 14 routes throughout the City of Chico. The routes closest to the project are Routes 3, 15, and 16 as shown on the exhibit on the next page.

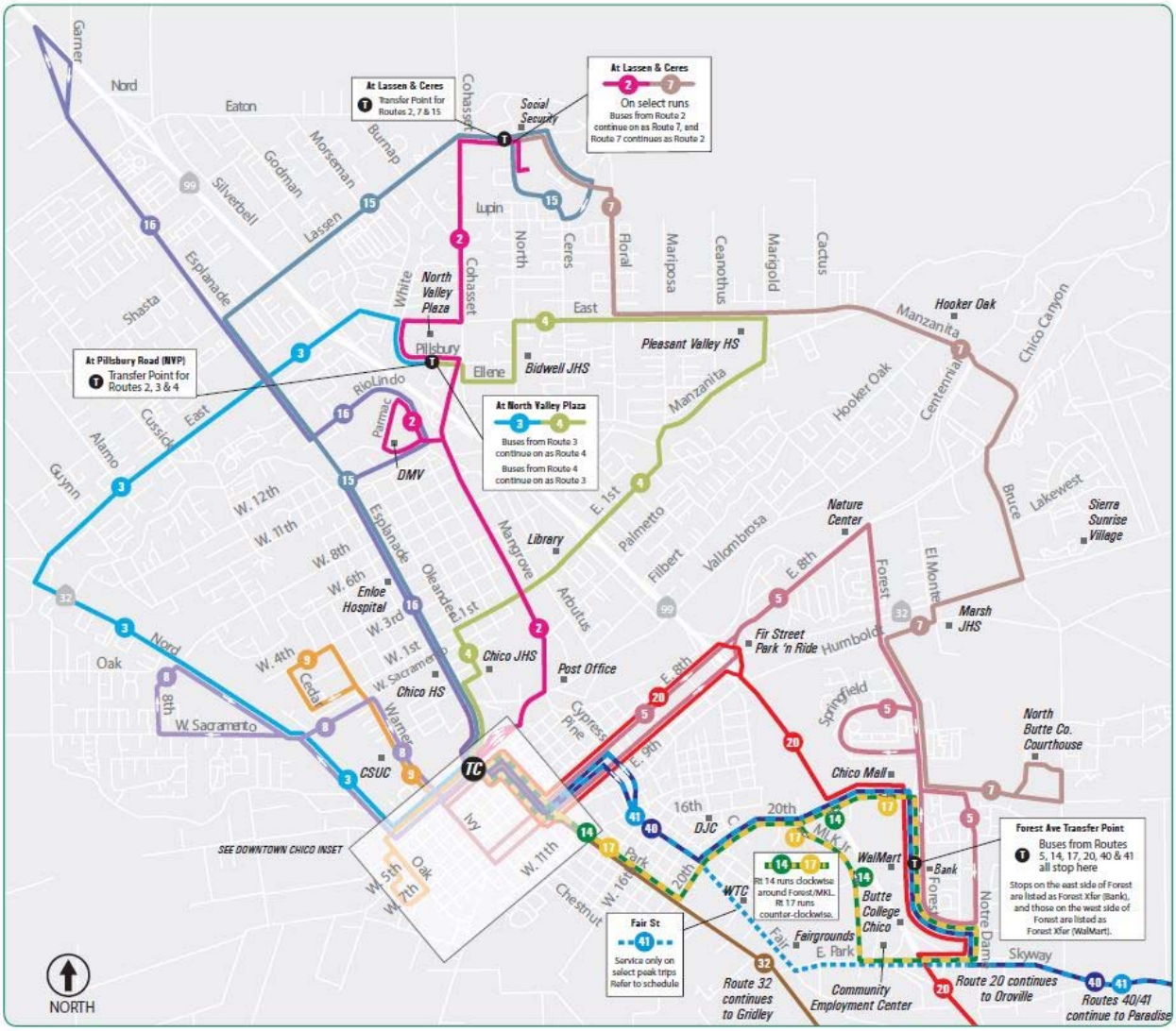
Route 3 provides service from the Downtown Chico Transit Center to the North Valley Plaza Transfer Point. Route 3 runs along East Avenue adjacent to the project site, from Nord Avenue to Pillsbury Road. Service is provided from approximately 6:15 AM to 9:00 PM Monday through Friday, and from 8:50 AM to 7:00 PM on Saturday. Sunday service is not provided.

Route 15 provides service from the Downtown Chico Transit Center to the Lassen & Ceres Transfer Point, and runs along Esplanade and Lassen Avenue. Service is provided from 6:15 AM to 9:30 PM Monday through Friday, and from 7:50 AM to 6:30 PM on Saturday. Sunday service is not provided.

Route 16 provides service along Esplanade from the Downtown Chico Transit Center to the SR 99 / Esplanade intersection. Service is provided from 6:55 AM to 6:55 PM Monday through Friday, and from 7:55 AM to 5:55 PM on Saturday. Sunday service is not provided.

The project site is well served by existing public transportation/transit facilities.

B-Line Transit Stops & Routes – Chico Area



Source: blinetransit.com, April 2018

EXISTING CONDITIONS

Traffic Volumes

Existing AM (7:00 AM to 9:00 AM) and PM (4:00 PM to 6:00 PM) peak hour intersection turning movement volumes were collected at the study intersections on a mid-week day in April 2018 when schools were in regular session. **Figure 4** shows the existing intersection turning movement volumes.

Intersection Level of Service

Existing conditions intersection level of service analysis was performed using Synchro 9 software, with reports based on HCM 2010 methodology. The peak hour factors (PHF) from the existing counts were used in the analysis. A default heavy vehicle percentage of 2 percent was also used in the analysis. The level of service results are presented in **Table 2** and the calculation sheets are provided in **Appendix A**, attached.

Table 2: Existing Conditions Intersection Level of Service

Intersection	Control	AM		PM	
		Delay[1]	LOS	Delay[1]	LOS
East Ave/Holly Ave/Cussick Ave	Signal	15.7	B	20.6	C
East Ave/Harvest Park Ct	Signal	5.5	A	6.1	A
East Ave/Raley's Dwy/Save Mart Dwy	Signal	7.3	A	16.3	B
East Ave/Esplanade	Signal	30.6	C	31.7	C
East Ave/SR 99 SB Ramps	Signal	14.2	B	14.8	B
East Ave/SR 99 NB Ramps	Signal	19.4	B	18.5	B

Notes: 1. Delay is reported in seconds per vehicle for the overall intersection for signalized intersections.
Source: Traffic Works, 2018

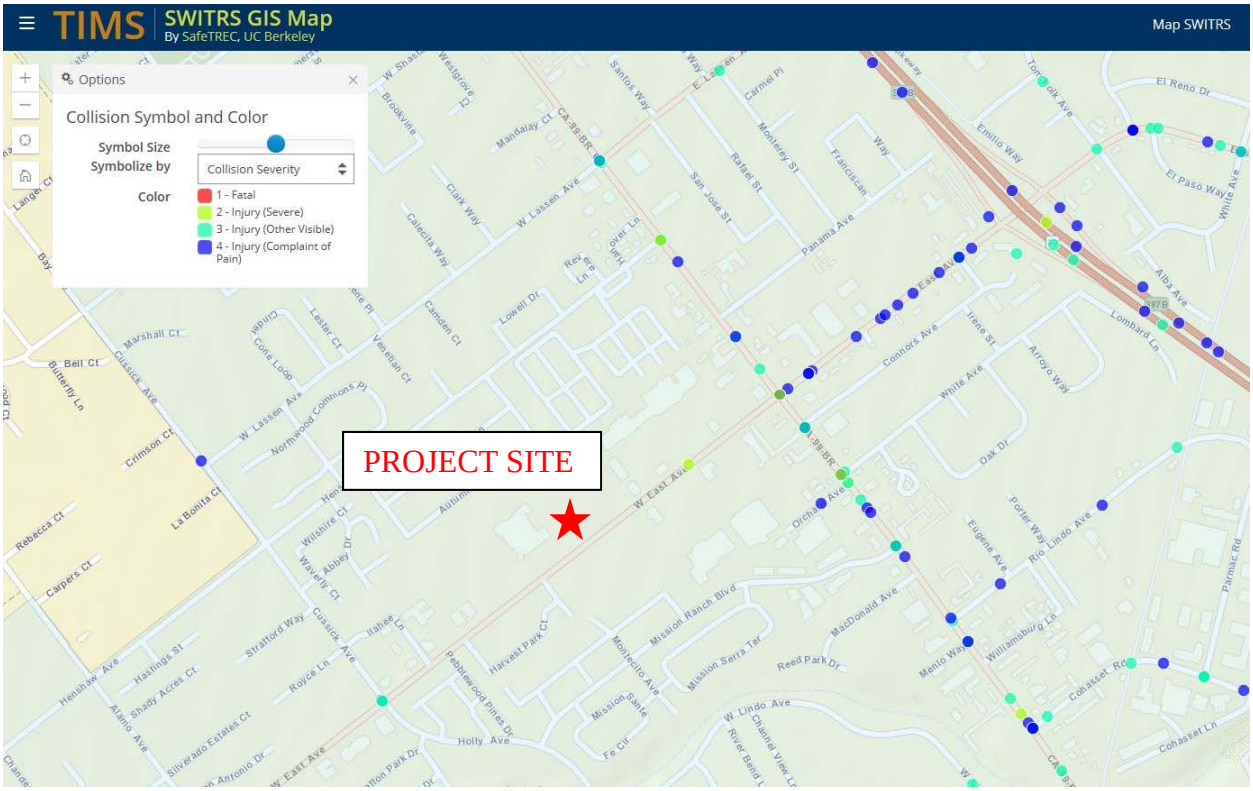
As shown in the table, all of the study intersections currently operate at acceptable levels of service during the AM and PM peak hours.

Crash History Review

Vehicular crash data history at the study intersections was obtained using the Transportation Injury Mapping System (TIMS) online tool which utilizes the State-Wide Integrated Traffic Records System (SWITRS) database managed by the California Highway Patrol. It is important to note that this database includes injury and fatal collisions, but does not include property damage only (PDO) collisions. There were three injury collisions reported on East Avenue from Cussick Avenue/Holly Avenue to Esplanade in the past five years (from 2013 to 2017) and approximately 11 injury collisions on East Avenue from Esplanade to SR 99. There were also numerous injury collisions on Esplanade and SR 99. No fatal collisions have been reported in the project area in the last five years. The exhibit on the next page shows individual crashes in the project area. As shown on the exhibit, no injury collisions have occurred adjacent to the project site.

There do not appear to be any notable existing safety issues near the proposed project driveway location.

5-Year Collision History



Source: blinetransit.com, April 2018

PROJECT CONDITIONS

Project Description

The proposed project consists of a 120,292 square foot medical office building that would likely include approximately 90,000 square feet (75 percent) of medical/dental office and 30,000 square feet (25 percent) of clinical space. The project site is located on the north side of East Avenue on the vacant parcel between Enloe Rehabilitation Center and the Save Mart anchored shopping center.

Project Access

As shown on the project site plan (**Figure 2**), the proposed project includes two access driveways, one connecting west to the existing East Avenue / Harvest Park Court/ Enloe Rehab Hospital signalized intersection and a new driveway on East Avenue east of Harvest Park Court. The new driveway would include right-in/right-out/left-in access only. Left-out access would be prohibited for safety and traffic operations reasons. Emergency access will be adequately provided with the multiple points of ingress and egress to the site.

Parking

The *Chico Municipal Code* includes the following parking space requirements for medical/dental offices and clinics:

- Medical/Dental Offices: 1 space per 250 square feet of gross floor area; 1 bicycle parking per 10% of vehicle spaces
- Medical/Dental Labs and Clinics: 1 space per 375 square feet of gross floor area; 1 bicycle parking per 10% of vehicle spaces

The minimum number of parking spaces required was calculated based on the parking standards above. The standards include requirements for both vehicle spaces and bicycle parking spaces. **Table 3** shows the parking requirements for the project.

Table 3: Parking Requirements

Land Use (ITE Code)	Size/Units[1]	Vehicle Spaces Required	Vehicle Spaces	Bicycle Spaces Required	Bicycle Spaces
Medical Dental Office	90 ksf	1 space per 250 sq. ft.	361	10% of vehicle spaces	36
Clinic	30 ksf	1 space per 375 sq. ft.	80		8
Total			441		44

Source: Traffic Works, 2018

As shown in the table, a minimum of 441 vehicle parking spaces are needed to adequately accommodate the project. As shown on **Figure 2**, the project would include approximately 480 vehicle parking spaces, as well as bicycle parking racks, which more than satisfies the code requirements.

Trip Generation

Trip generation estimates for the proposed project were developed based on standard trip generation rates presented in the Institute of Transportation Engineers' (ITE) *Trip Generation Manual, 10th Edition*. The trip generation rates for land uses 630 – Clinic and 720 – Medical Dental Office were used to calculate the Daily, AM peak hour, and PM peak hour trips generated by the project. **Table 4** shows the trip generation estimates. The project is expected to generate 4,287 Daily, 362 AM peak hour, and 411 PM peak hour trips.

Table 4: Project Trip Generation

Land Use (ITE Code)	Size/Units[1]	Trips[2]						
		Daily	AM	AM In	AM Out	PM	PM In	PM Out
Medical Dental Office (720)	90.25 ksf	3,140	251	196	55	312	87	225
Clinic (630)	30.05 ksf	1,147	111	87	24	99	29	70
Total		4,287	362	283	79	411	116	295

Notes: 1. ksf = 1,000 square feet
2. Based on the following ITE trip rates:
Medical Dental Office: Daily – 34.8 trips per ksf; AM – 2.78 trips per ksf (78% in / 22% out); PM – 3.46 trips per ksf (28% in / 72% out)
Clinic: 38.16 trips per ksf; AM – 3.69 trips per ksf (78% in / 22% out); PM – 3.28 trips per ksf (29% in / 71% out)

Source: Traffic Works, 2018

Trip Distribution and Assignment

Project generated traffic was distributed to the surrounding roadway network based on existing traffic volumes and traffic patterns in the area and the locations of complimentary land uses. The following trip distribution percentages were used:

- 15 % to/from west on East Avenue
  - 5 % to/from west on East Avenue
  - 5 % to/from north on Cussick Avenue
  - 5 % to/from south on Holly Avenue
- 85 % to/from east on East Avenue
  - 2 % to/from the Save Mart Driveway
  - 3 % to/from the Raley's Driveway
  - 10 % to/from north on Esplanade
  - 25 % to/from south on Esplanade
  - 10 % to/from north on SR 99
  - 25 % to/from south on SR 99
  - 10 % to/from east on East Avenue

The project trip distribution and assignment is shown on **Figure 5**.

Vehicle Miles Travelled (VMT) Estimation

With adoption of and implementation of California Senate Bill 743, Vehicle Miles Travelled (VMT) is an important consideration and a key metric of vehicular travel contributions to Green House Gas (GHG) emissions and energy consumption. VMT is typically expressed in miles per day and can simplistically be calculated by multiplying the number of daily project generated trips by the anticipated trip length(s).

The average trip length and percentage of each type of commercial based trip in Butte County was obtained from the California Emissions Estimator Model (CalEEMod). The CalEEMod trip length output

table is shown below. Note that Diverted Trips are 25% the length of Primary Trips and Pass-by Trips are stated as 0.1 miles within the CalEEMod methodologies.

	Land Use SubType	Size Metric	WkDy Trip Rate (/size /day)	Sat Trip Rate (/size /day)	Sun Trip Rate (/size /day)	Res H-W Trip Length (miles)	Res H-S Trip Length (miles)	Res H-O Trip Length (miles)	Non Res C-C Trip Length (miles)	Non Res C-W Trip Length (miles)	Non Res C-NW Trip Length (miles)	Primar Trip (%)	Divert Trip (%)	Pass-B Trip (%)	Res H-W Trip (%)	Res H-S Trip (%)	Res H-O Trip (%)	Non Res C-C Trip (%)	Non Res C-W Trip (%)	Non Res C-NW Trip (%)
	Medical Office Building	1000sqft	36.13	8.96	1.55	0	0	0	10.52	10.52	10.52	60	30	10	0	0	0	51.4	29.6	19

Table 5 shows the VMT calculations for this project using the above methodology.

Table 5: Project Vehicle Miles Travelled

Week Day Trip Rate	Sat Trip Rate	Sun Trip Rate	Average Overall Daily Trip Rate	Average Overall Daily Trips	Primary Trip %	Primary Trip Length (Miles)	Diverted Trip %	Diverted Trip Length (Miles)	Pass-by Trip %	Pass-by Trip Length (Miles)	Average Overall Trip Length	Total VMT per Day
36.13	8.96	1.55	27.3	3,285	60	10.52	30	2.63	10	0.1	7.1	23,324

Source: Traffic Works, 2018

As shown in **Table 5**, the project is estimated to cause an increase in VMT of 23,324 miles per day. This is a very conservative estimate since the project is located in the core urban area rather than more distant areas of Butte County. Note that the trip lengths above are averages for County-wide activity. Butte County currently does not have any specific thresholds or significance criteria related to VMT, but does have general goals of reducing VMT and GHG emissions. Projects located in the urban core (as this one is) typically have less VMT compared to new development sited toward the perimeter of the urban area. The project's synergistic proximity to the Rehab Hospital, adjacent pharmacies, walkable dining opportunities for employees, existing transit service, and extensive nearby housing indicate the VMT will likely be much lower that estimated by the CalEEMod methods and that the project location could be generally characterized as "VMT responsible".

EXISTING PLUS PROJECT CONDITIONS

Traffic Volumes

Existing Plus Project traffic volumes were developed by adding the project generated trips (**Figure 5**) to the existing traffic volumes (**Figure 4**) and are shown on **Figure 6**, attached.

Intersection Level of Service

Table 6 presents the level of service analysis summary for the Existing Plus Project scenario assuming the existing intersection configurations and traffic controls. The existing peak hour factors and heavy vehicle percentages were also used in the Existing Plus Project conditions analysis. Detailed calculation sheets are provided in **Appendix B**, attached.

Table 6: Existing Plus Project Conditions Intersection Level of Service

Intersection	Control	Existing				Existing Plus Project			
		AM		PM		AM		PM	
		Delay[1]	LOS	Delay[1]	LOS	Delay[1]	LOS	Delay[1]	LOS
East Ave/Holly Ave/Cussick Ave	Signal	15.7	B	20.6	C	16.0	B	21.7	C
East Ave/Harvest Park Ct[2]	Signal	6.1	A	8.4	A	7.6	A	15.9	B
East Ave/Project Driveway	Side Street STOP								
Southbound Right		N/A				13.6	A	19.8	C
Eastbound Left						11.3	B	11.8	B
East Ave/Raley's Dwy/Save Mart Dwy	Signal	7.3	A	16.3	B	7.5	A	18.0	B
East Ave/Esplanade	Signal	30.6	C	31.7	C	33.0	C	32.8	C
East Ave/SR 99 SB Ramps	Signal	14.2	B	14.8	B	14.2	B	14.9	B
East Ave/SR 99 NB Ramps	Signal	19.4	B	18.5	B	20.1	C	18.5	B

Notes: 1. Delay is reported in seconds per vehicle for the overall intersection for signalized intersections.
2. Delay and LOS reported based on HCM 2000 methodology because HCM 2010 cannot analyze U-turn movements.
Source: Traffic Works, 2018

As shown in the table, all the study intersections are expected to operate at acceptable levels of service during the AM and PM peak hours under Existing Plus Project conditions.

CUMULATIVE CONDITIONS

Traffic Volume Forecasts

Future year (2040) traffic volume forecasts were developed using outputs from the Butte County Association of Governments (BCAG) regional travel demand forecasting model. The BCAG model provides traffic volumes forecasts for the years 2014 and 2040 which were used to develop annual average growth rates for major roadways in the project area. Based on the BCAG model forecasts, the following growth rates were applied to the existing traffic volumes to develop future year (2040) traffic volume forecasts:

- 1.2 percent per year growth on East Avenue, Cussick Avenue/Holly Avenue, and Esplanade
- 2.0 percent per year growth on the SR 99 Ramps
- Zero percent growth was assumed at Harvest Park Court and Save Mart and Raley's Driveways, as the areas these roadways serve are already built-out

The final 2040 turning movement volumes were rounded to the nearest 5 (if the volume was less than or equal to 5) or 10 (if the volume was greater than 5) vehicles. Volumes were also adjusted to be balanced between intersections based on existing traffic volumes. The future year (2040) traffic volumes at the study intersections are shown on **Figure 7**.

Planned Roadway Improvement Projects

BCAG 2016 Regional Transportation Plan / Sustainable Communities Strategy

There are currently no projects listed in the BCAG *2016 Regional Transportation Plan / Sustainable Communities Strategy* (RTP / SCS) that would affect the project area roadways or intersections. Therefore, the cumulative conditions analysis is based on existing roadway and intersection configurations.

Intersection Level of Service Analysis

The Cumulative No Project Conditions intersection level of service analysis was performed using the future year (2040) traffic volume forecasts shown on **Figure 7**. The analysis assumes the existing intersection lane configurations and controls. The existing intersection peak hour factors, or a peak hour factor of 0.92, whichever is higher were also used in the cumulative analysis. Level of service analysis was performed using Synchro 9 software. The Cumulative No Project intersection level of service results are provided in **Table 7**, and the calculation sheets are provided in **Appendix C**.

Table 7: Cumulative No Project Conditions Intersection Level of Service

Intersection	Control	AM		PM	
		Delay[1]	LOS	Delay[1]	LOS
East Ave/Holly Ave/Cussick Ave	Signal	19.6	B	39.9	D
East Ave/Harvest Park Ct	Signal	6.3	A	6.9	A
East Ave/Raley's Dwy/Save Mart Dwy	Signal	8.5	A	20.9	C
East Ave/Esplanade	Signal	41.2	D	45.2	D
East Ave/SR 99 SB Ramps	Signal	16.2	B	15.9	B
East Ave/SR 99 NB Ramps	Signal	22.2	C	20.5	C

Notes: 1. Delay is reported in seconds per vehicle for the overall intersection for signalized intersections.
Source: Traffic Works, 2018

As shown in the table, all the study intersections are expected to operate at acceptable levels of service under Cumulative No Project conditions.

CUMULATIVE PLUS PROJECT CONDITIONS

Traffic Volumes

Cumulative Plus Project traffic volumes were developed by adding the project generated trips (**Figure 5**) to the Cumulative No Project traffic volumes (**Figure 7**) and are shown on **Figure 8**, attached.

Intersection Level of Service Analysis

Table 8 presents the level of service analysis summary for the Cumulative Plus Project scenario assuming the Cumulative No Project intersection configurations and traffic controls (same as Existing Conditions). Detailed calculation sheets are provided in **Appendix D**, attached.

Table 8: Cumulative Plus Project Conditions Intersection Level of Service

Intersection	Control	Cumulative				Cumulative Plus Project			
		AM		PM		AM		PM	
		Delay[1]	LOS	Delay[1]	LOS	Delay[1]	LOS	Delay[1]	LOS
East Ave/Holly Ave/Cussick Ave	Signal	19.6	B	39.9	D	19.9	B	42.4	D
East Ave/Harvest Park Ct[2]	Signal	6.6	A	10.0	B	11.1	B	48.3	D
East Ave/Project Driveway	Side Street STOP								
Southbound Right		N/A				15.7	C	28.2	D
Eastbound Left						13.1	B	14.1	B
East Ave/Raley's Dwy/Save Mart Dwy	Signal	15.5	B	20.9	C	19.0	B	24.0	C
East Ave/Esplanade	Signal	35.2	D	45.2	D	37.8	D	53.3	D
East Ave/SR 99 SB Ramps	Signal	15.6	B	15.9	B	15.7	B	15.8	B
East Ave/SR 99 NB Ramps	Signal	21.1	C	20.5	C	22.0	C	21.0	C

Notes: 1. Delay is reported in seconds per vehicle for the overall intersection for signalized intersections.
2. Delay and LOS reported based on HCM 2000 methodology because HCM 2010 cannot analyze U-turn movements.
Source: Traffic Works, 2018

As shown in the table, all the study intersections are expected to operate at acceptable levels of service during the AM and PM peak hours under Cumulative Plus Project conditions.

CONCLUSIONS AND RECOMMENDATIONS

The following is a list of our key findings and recommendations:

Proposed Project: For the purposes of this study, the project consists of a 120,292 square foot Medical Office Building with both office and clinical/lab type spaces anticipated. The project site is located at 250 W. East Avenue on the vacant parcel on the north side of East Avenue between Enloe Rehabilitation Center and Save Mart anchored shopping center in Chico, CA.

Project Trips: The project is anticipated to generate 4,287 Daily trips, 362 AM peak hour trips, and 411 PM peak hour trips on weekdays.

Project Access: The project will be served by two access driveways, one connecting west to the existing East Avenue / Harvest Park Court / Enloe Rehab Hospital signalized intersection and a new driveway on East Avenue east of Harvest Park Court. The new driveway would include right-in/right-out/left-in access only. Left-out access would be prohibited for safety and traffic operations reasons. Left-in striping will be added on East Avenue to create a proper inbound left-turn pocket.

Emergency access would be adequately provided with multiple points of ingress and egress to the site.

Potential Traffic Operations Impacts: All the study intersections are projected to operate at acceptable levels of service during both the AM and PM peak hours under every study scenario including Cumulative Plus Project Conditions. The project does not have any significant impacts on traffic operations.

Impact Fees: The project shall pay the appropriate City of Chico standard Transportation Facility Fees as its mitigation for added traffic on the roadway system. With the payment of development impact fees, the project's impacts would be reduced to a less-than-significant level.

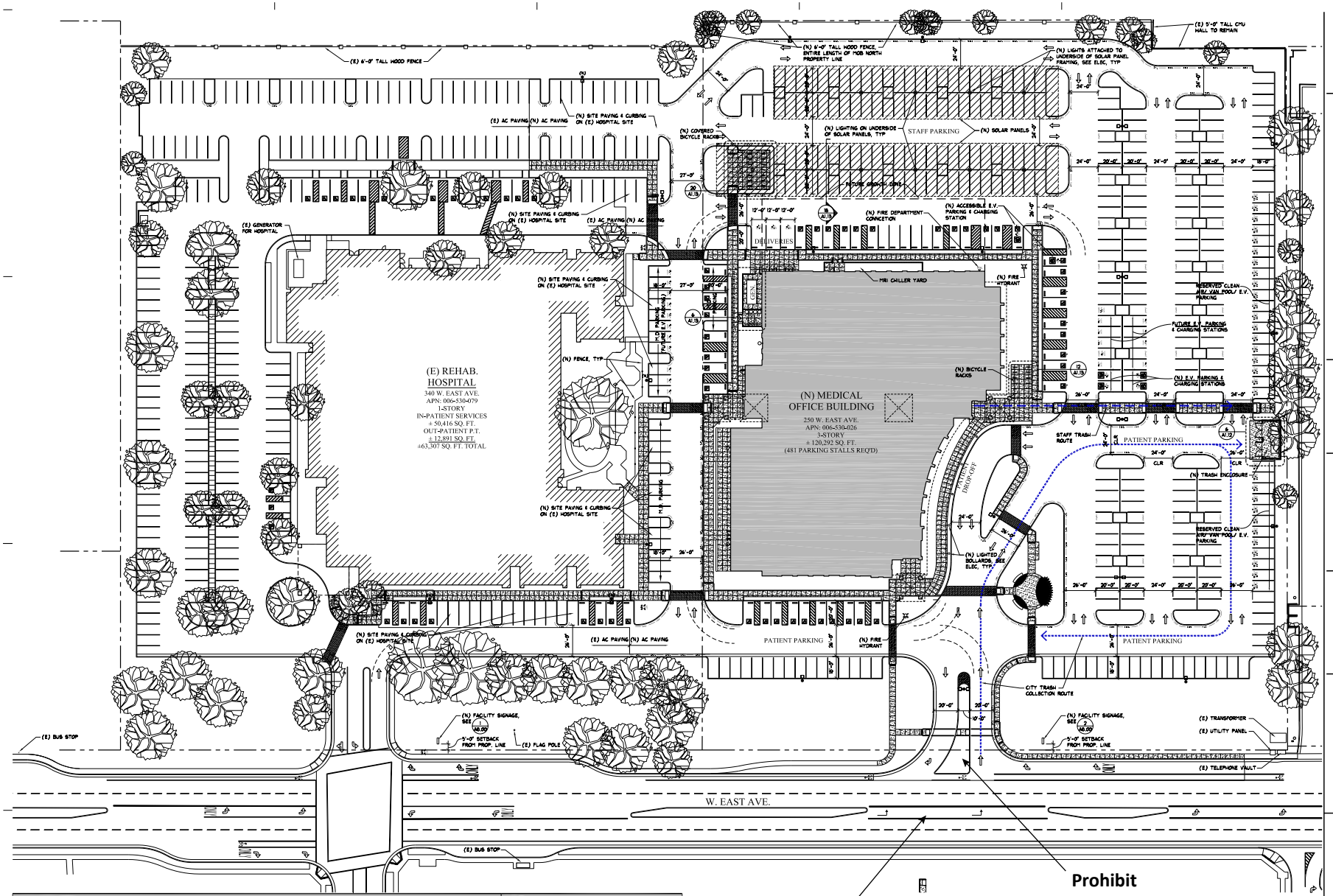
TRAFFIC WORKS

NO SCALE

Attachment G

Figure 1

Enloe Medical Office Building
TRAFFIC IMPACT STUDY
Project Location



SITE LEGEND

- (E) BUILDING / STRUCTURE TO REMAIN
- (N) BUILDING
- (N) CONCRETE SIDEWALK / PAVING
  - CURB W.O.
- (E) CONCRETE PAVING
  - CURB W.O.
- EXPANSION JOINT
- TOOLED JOINT
- (N) CONCRETE PAVING
  - CURB W.O.
  - GUTTER W.O.
- EXPANSION JOINT
- TOOLED JOINT
- (N) FIRE LANE PAINTED CURBS, SEE
- (N) LIGHT POLE
- (N) LIGHT POLE ON (E) REHAB SITE
- (E) LIGHT POLE ON (E) REHAB SITE
- (N) LIGHTED BOLLARD
- (N) LIGHT ATTACHED TO UNDERSIDE OF SOLAR PANEL FRAMING
- PROPERTY LINE

GENERAL NOTES

1. SEE CIVIL PLANS FOR ADDITIONAL INFORMATION. UTILITIES SHOWN ARE DIAGRAMMATIC.
2. SEE ELECTRICAL PLANS FOR SITE ELECTRICAL & LIGHTING WORK.
3. SEE LANDSCAPING PLANS FOR SITE PLANTING AND SCHEDULE.
4. ACCESS TO SITE, ADJACENT BUSINESSES AND FIRE ACCESS ROUTES TO BE MAINTAINED AND CLEAR AT ALL TIMES. COORDINATE CONSTRUCTION STAGING AREA WITH PROPERTY OWNER.

1 OVERALL NEW SITE PLAN
Scale: 1" = 30'-0"
UPDATED: 04-23-2018

NORTH

KAP
KELLY ARCHITECTURE & PLANNING
852B LOMETREE BOULEVARD | ROCKLIN, CA 95765
P. 916.797.1180 | WWW.KELLYARCH.COM

Client: ENLOE MEDICAL CENTER

Facility:
Enloe Medical Center
Medical Offices Building
250 W. East Avenue
Chico, CA 95926

Project Name:
New OSHPD 3
Medical Office Building

Submittal:
ARCHITECTURAL DESIGN REVIEW

Architect of Record
LICENSED ARCHITECT KELLY W. MYERS C27597 exp. 5/19 STATE OF CALIFORNIA
Date Signed:

Consultant

Revisions
Description

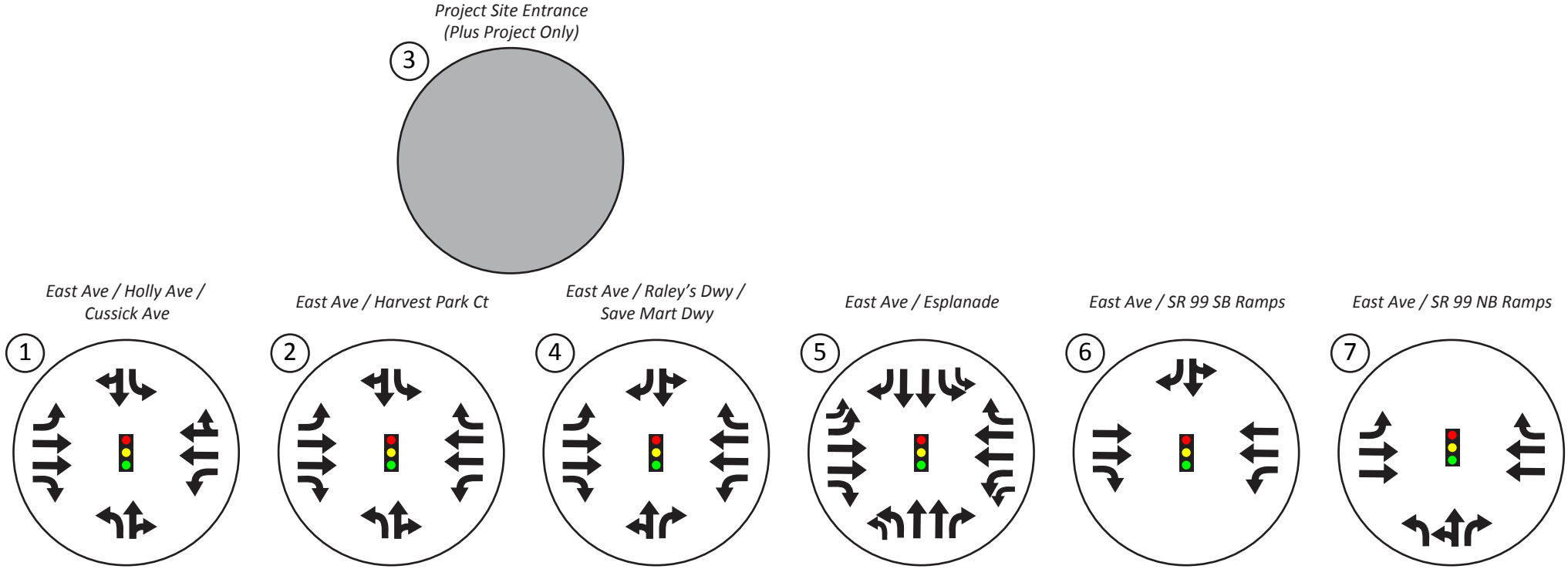
Approvals

Key Plan
N.T.S

KAP Job No. 240.00
Scale: As Noted
Date: 04/06/2018
Drawn By: AG/RJS
Checked By: KM / SJ

Sheet Name
OVERALL NEW SITE PLAN

Sheet Number
A1.11



TRAFFIC WORKS

NO SCALE

Attachment G Figure 3

Enloe Medical Office Building

TRAFFIC IMPACT STUDY

Existing Lane Configurations & Controls

Project Site Entrance (Plus Project Only)

3

(916) 900 → ← 803 (1070)

East Ave / Holly Ave / Cussick Ave

1

109 (97) / 111 (102) / 74 (65)
(77) 92 / (659) 691 / (50) 92
56 (98) / 486 (884) / 97 (72)
44 (104) / 78 (102) / 76 (62)

East Ave / Harvest Park Ct

2

3 (16) / 0 (0) / 24 (57)
(8) 16 / (842) 849 / (1) 2
62 (23) / 727 (1026) / 14 (21)
14 (3) / 0 (0) / 27 (17)

East Ave / Raley's Dwy / Save Mart Dwy

4

13 (48) / 6 (21) / 71 (201)
(42) 17 / (737) 826 / (57) 20
42 (110) / 763 (890) / 74 (172)
17 (92) / 4 (33) / 60 (149)

East Ave / Esplanade

5

171 (175) / 649 (434) / 262 (289)
(270) 167 / (749) 656 / (142) 148
198 (266) / 579 (878) / 221 (212)
159 (253) / 395 (627) / 166 (239)

East Ave / SR 99 SB Ramps

6

128 (103) / 2 (3) / 169 (155)
(777) 471 / (720) 742
1057 (1269) / 214 (204)

East Ave / SR 99 NB Ramps

7

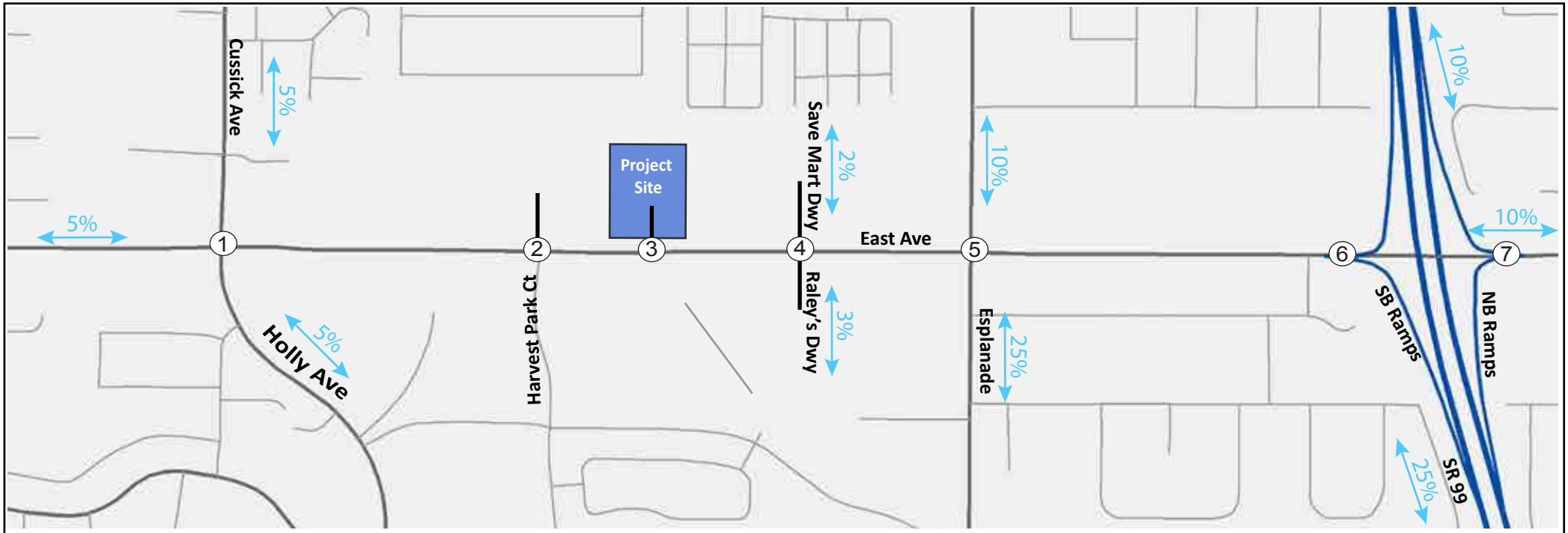
(128) 59 / (804) 581
125 (173) / 682 (805)
3 (2) / 589 (668)
86 (204)

AM Peak Hour Volume (PM Peak Hour Volume)

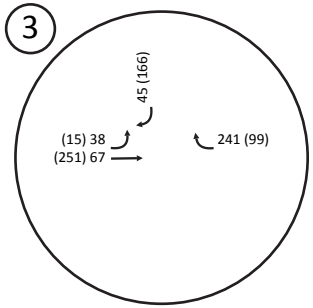
TRAFFIC WORKS

NO SCALE

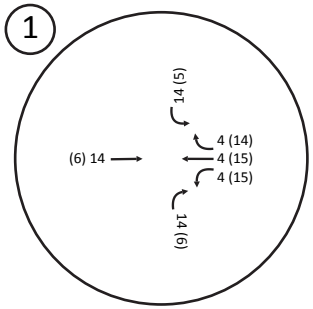
Attachment G Figure 4
Enloe Medical Office Building
TRAFFIC IMPACT STUDY
Existing Traffic Volumes



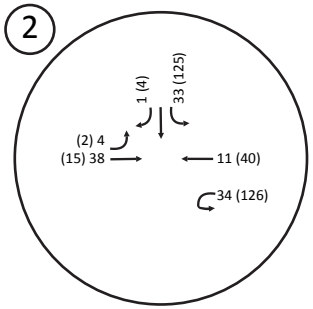
Project Site Entrance



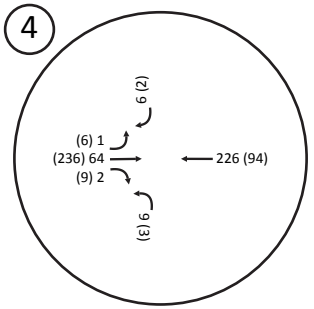
East Ave / Holly Ave / Cussick Ave



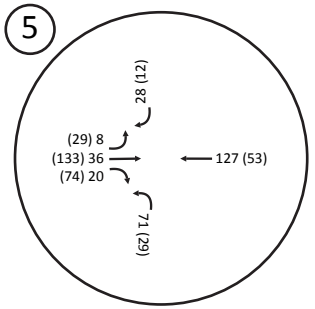
East Ave / Harvest Park Ct



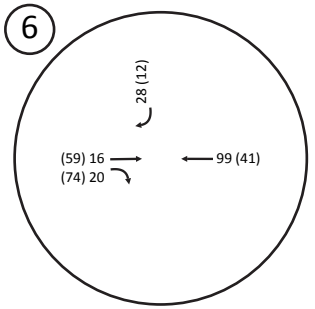
East Ave / Raley's Dwy / Save Mart Dwy



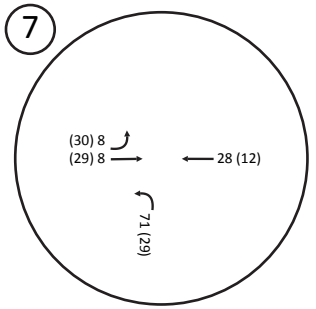
East Ave / Esplanade



East Ave / SR 99 SB Ramps



East Ave / SR 99 NB Ramps



AM Peak Hour Volume (PM Peak Hour Volume)

TRAFFIC WORKS LLC

NO SCALE

Attachment G Figure 5

Enloe Medical Office Building

TRAFFIC IMPACT STUDY

Project Trip Distribution and Assignment

Project Site Entrance

3

45 (166)
(15) 38
(1167) 967
241 (99)
803 (1070)

East Ave / Holly Ave / Cussick Ave

1

109 (97)
111 (102)
88 (70)
(77) 92
(665) 705
(50) 92
60 (112)
490 (899)
101 (87)
44 (104)
78 (102)
90 (69)

East Ave / Harvest Park Ct

2

4 (20)
57 (182)
(10) 20
(857) 887
(1) 2
62 (23)
738 (1066)
14 (21)
34 (126)
14 (3)
27 (17)

East Ave / Raley's Dwy / Save Mart Dwy

4

19 (50)
6 (21)
71 (201)
(48) 18
(973) 890
(66) 22
42 (110)
989 (984)
74 (172)
26 (95)
4 (33)
60 (149)

East Ave / Esplanade

5

199 (187)
649 (434)
262 (289)
(299) 175
(882) 692
(216) 168
198 (266)
706 (931)
221 (212)
230 (282)
393 (627)
166 (239)

East Ave / SR 99 SB Ramps

6

156 (115)
2 (3)
169 (155)
(836) 487
(794) 762
1156 (1310)
214 (204)

East Ave / SR 99 NB Ramps

7

(158) 67
(833) 589
125 (173)
710 (817)
3 (2)
660 (697)
86 (204)

AM Peak Hour Volume (PM Peak Hour Volume)

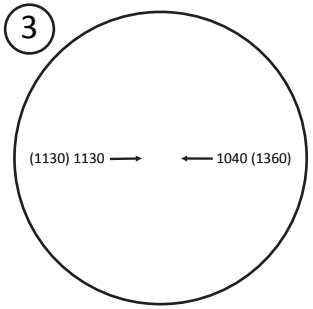
TRAFFIC WORKS

NO SCALE

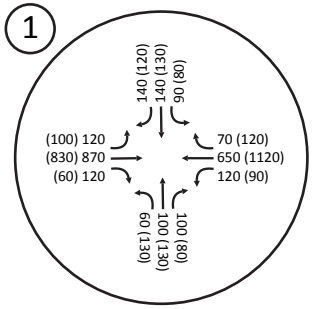
Attachment G Figure 6

Enloe Medical Office Building
TRAFFIC IMPACT STUDY
Existing Plus Project Traffic Volumes

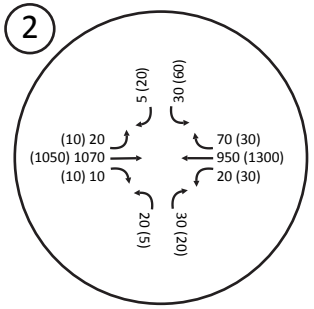
Project Site Entrance



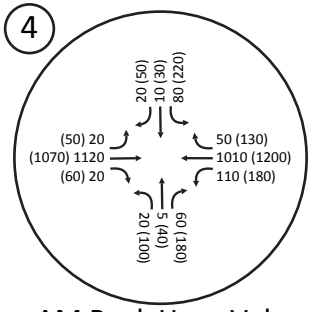
East Ave / Holly Ave / Cussick Ave



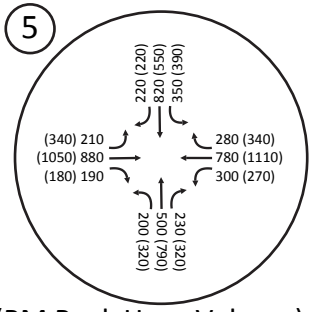
East Ave / Harvest Park Ct



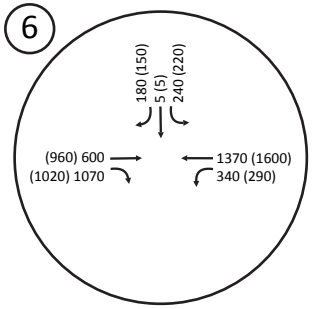
East Ave / Raley's Dwy / Save Mart Dwy



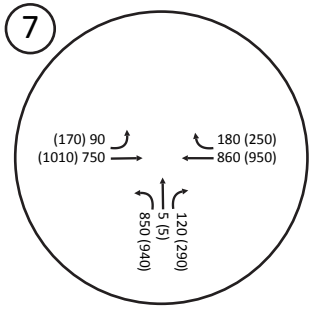
East Ave / Esplanade



East Ave / SR 99 SB Ramps



East Ave / SR 99 NB Ramps



AM Peak Hour Volume (PM Peak Hour Volume)

TRAFFIC WORKS

NO SCALE

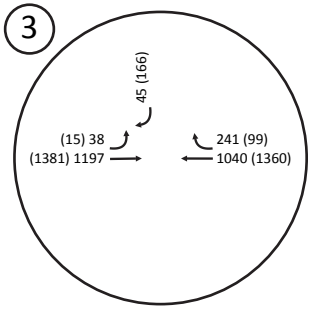
Attachment G Figure 7

Enloe Medical Office Building

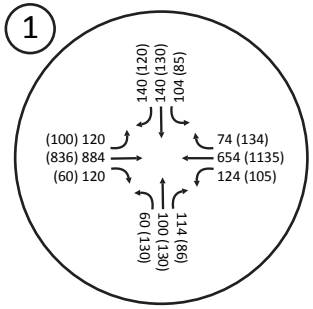
TRAFFIC IMPACT STUDY

Cumulative Traffic Volumes

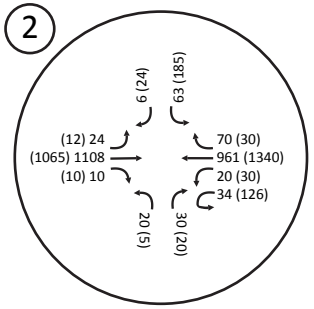
Project Site Entrance



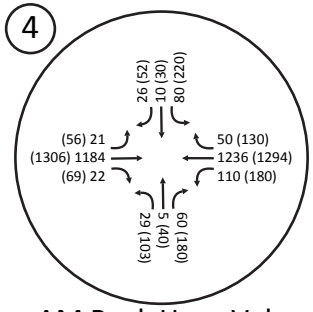
East Ave / Holly Ave / Cussick Ave



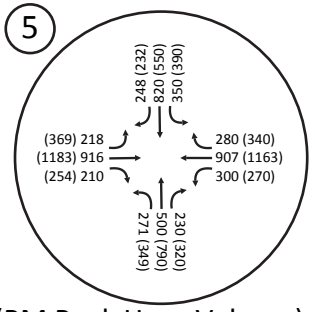
East Ave / Harvest Park Ct



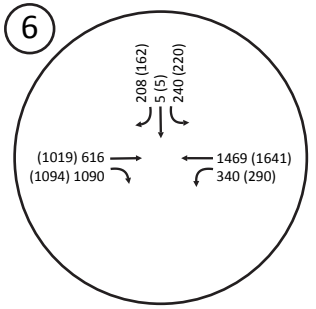
East Ave / Raley's Dwy / Save Mart Dwy



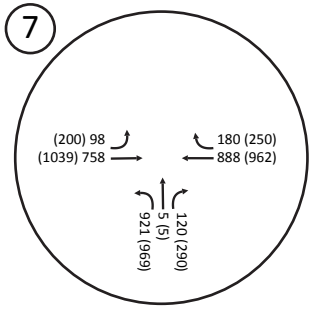
East Ave / Esplanade



East Ave / SR 99 SB Ramps



East Ave / SR 99 NB Ramps



AM Peak Hour Volume (PM Peak Hour Volume)

TRAFFIC WORKS

NO SCALE

Attachment G Figure 8

Enloe Medical Office Building

TRAFFIC IMPACT STUDY

Cumulative Plus Project Traffic Volumes

Appendix A
Existing LOS Calculations

TRAFFIC WORKS LLC

Attachment G

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	92	691	92	97	486	56	44	78	76	74	111	109
Future Volume (veh/h)	92	691	92	97	486	56	44	78	76	74	111	109
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	100	751	54	105	528	52	48	85	47	80	121	84
Adj No. of Lanes	1	2	1	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	188	1259	563	193	1047	103	122	168	93	168	180	125
Arrive On Green	0.11	0.36	0.36	0.11	0.32	0.32	0.07	0.15	0.15	0.09	0.18	0.18
Sat Flow, veh/h	1774	3539	1583	1774	3256	320	1774	1129	624	1774	1025	712
Grp Volume(v), veh/h	100	751	54	105	286	294	48	0	132	80	0	205
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1806	1774	0	1753	1774	0	1737
Q Serve(g_s), s	2.6	8.5	1.1	2.7	6.4	6.5	1.3	0.0	3.4	2.1	0.0	5.4
Cycle Q Clear(g_c), s	2.6	8.5	1.1	2.7	6.4	6.5	1.3	0.0	3.4	2.1	0.0	5.4
Prop In Lane	1.00		1.00	1.00		0.18	1.00		0.36	1.00		0.41
Lane Grp Cap(c), veh/h	188	1259	563	193	569	581	122	0	261	168	0	305
V/C Ratio(X)	0.53	0.60	0.10	0.54	0.50	0.51	0.39	0.00	0.51	0.48	0.00	0.67
Avail Cap(c_a), veh/h	543	2888	1292	543	722	737	615	0	894	543	0	886
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.7	12.9	10.5	20.7	13.5	13.5	21.9	0.0	19.2	21.0	0.0	18.9
Incr Delay (d2), s/veh	0.9	0.2	0.0	0.9	0.3	0.3	0.8	0.0	0.6	0.8	0.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	4.1	0.5	1.4	3.1	3.2	0.6	0.0	1.7	1.1	0.0	2.6
LnGrp Delay(d),s/veh	21.6	13.1	10.6	21.6	13.7	13.7	22.6	0.0	19.8	21.8	0.0	19.9
LnGrp LOS	C	B	B	C	B	B	C		B	C		B
Approach Vol, veh/h		905			685			180			285	
Approach Delay, s/veh		13.9			14.9			20.5			20.4	
Approach LOS		B			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.3	22.2	6.4	12.1	10.0	20.6	7.6	10.8
Change Period (Y+Rc), s	3.0	4.8	3.0	3.5	4.8	* 4.8	3.0	3.5
Max Green Setting (Gmax), s	15.0	40.0	17.0	25.0	15.0	* 20	15.0	25.0
Max Q Clear Time (g_c+I1), s	4.7	10.5	3.3	7.4	4.6	8.5	4.1	5.4
Green Ext Time (p_c), s	0.1	6.9	0.0	1.2	0.1	4.9	0.1	1.3

Intersection Summary	
HCM 2010 Ctrl Delay	15.7
HCM 2010 LOS	B

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	849	2	14	727	62	14	0	27	24	0	3
Future Volume (veh/h)	16	849	2	14	727	62	14	0	27	24	0	3
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	18	954	1	16	817	44	16	0	0	27	0	0
Adj No. of Lanes	1	2	1	1	2	1	1	1	0	1	1	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	56	2172	972	50	2122	949	250	120	0	250	120	0
Arrive On Green	0.03	0.61	0.61	0.03	0.60	0.60	0.06	0.00	0.00	0.06	0.00	0.00
Sat Flow, veh/h	1774	3539	1583	1774	3539	1583	1412	1863	0	1412	1863	0
Grp Volume(v), veh/h	18	954	1	16	817	44	16	0	0	27	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1412	1863	0	1412	1863	0
Q Serve(g_s), s	0.4	6.5	0.0	0.4	5.4	0.5	0.5	0.0	0.0	0.8	0.0	0.0
Cycle Q Clear(g_c), s	0.4	6.5	0.0	0.4	5.4	0.5	0.5	0.0	0.0	0.8	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.00	1.00		0.00
Lane Grp Cap(c), veh/h	56	2172	972	50	2122	949	250	120	0	250	120	0
V/C Ratio(X)	0.32	0.44	0.00	0.32	0.39	0.05	0.06	0.00	0.00	0.11	0.00	0.00
Avail Cap(c_a), veh/h	783	2735	1223	783	2735	1223	1125	1275	0	1125	1275	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	21.5	4.6	3.4	21.6	4.7	3.7	20.0	0.0	0.0	20.2	0.0	0.0
Incr Delay (d2), s/veh	1.2	0.2	0.0	1.3	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	3.1	0.0	0.2	2.7	0.2	0.2	0.0	0.0	0.3	0.0	0.0
LnGrp Delay(d),s/veh	22.7	4.8	3.4	22.9	4.9	3.8	20.1	0.0	0.0	20.3	0.0	0.0
LnGrp LOS	C	A	A	C	A	A	C			C		
Approach Vol, veh/h		973			877			16			27	
Approach Delay, s/veh		5.2			5.2			20.1			20.3	
Approach LOS		A			A			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.3	33.1		6.9	5.9	32.5		6.9
Change Period (Y+Rc), s	4.0	5.3		4.0	4.5	5.3		4.0
Max Green Setting (Gmax), s	20.0	35.0		31.0	20.0	35.0		31.0
Max Q Clear Time (g_c+I1), s	2.4	8.5		2.8	2.4	7.4		2.5
Green Ext Time (p_c), s	0.0	19.2		0.1	0.0	19.7		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	5.5
HCM 2010 LOS	A

Notes
User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	17	826	20	74	763	42	17	4	60	71	6	13
Future Volume (veh/h)	17	826	20	74	763	42	17	4	60	71	6	13
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	20	972	11	87	898	29	20	5	0	84	7	0
Adj No. of Lanes	1	2	1	1	2	1	0	1	1	0	1	1
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	60	2105	942	168	2320	1038	248	49	169	272	13	169
Arrive On Green	0.03	0.59	0.59	0.09	0.66	0.66	0.11	0.11	0.00	0.11	0.11	0.00
Sat Flow, veh/h	1774	3539	1583	1774	3539	1583	1193	458	1583	1348	125	1583
Grp Volume(v), veh/h	20	972	11	87	898	29	25	0	0	91	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1651	0	1583	1473	0	1583
Q Serve(g_s), s	0.6	8.3	0.2	2.5	6.3	0.3	0.0	0.0	0.0	2.4	0.0	0.0
Cycle Q Clear(g_c), s	0.6	8.3	0.2	2.5	6.3	0.3	0.7	0.0	0.0	3.1	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.80		1.00	0.92		1.00
Lane Grp Cap(c), veh/h	60	2105	942	168	2320	1038	297	0	169	286	0	169
V/C Ratio(X)	0.34	0.46	0.01	0.52	0.39	0.03	0.08	0.00	0.00	0.32	0.00	0.00
Avail Cap(c_a), veh/h	493	2623	1174	493	2623	1174	877	0	792	849	0	792
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	25.5	6.1	4.5	23.3	4.3	3.3	21.8	0.0	0.0	22.8	0.0	0.0
Incr Delay (d2), s/veh	1.2	0.2	0.0	0.9	0.2	0.0	0.0	0.0	0.0	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	4.0	0.1	1.3	3.0	0.1	0.3	0.0	0.0	1.3	0.0	0.0
LnGrp Delay(d),s/veh	26.7	6.3	4.5	24.2	4.4	3.3	21.9	0.0	0.0	23.1	0.0	0.0
LnGrp LOS	C	A	A	C	A	A	C			C		
Approach Vol, veh/h		1003			1014			25			91	
Approach Delay, s/veh		6.7			6.1			21.9			23.1	
Approach LOS		A			A			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.1	36.6		9.3	4.8	39.9		9.3
Change Period (Y+Rc), s	3.0	4.5		3.5	3.0	4.5		3.5
Max Green Setting (Gmax), s	15.0	40.0		27.0	15.0	40.0		27.0
Max Q Clear Time (g_c+I1), s	4.5	10.3		5.1	2.6	8.3		2.7
Green Ext Time (p_c), s	0.1	21.8		0.3	0.0	22.9		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	7.3
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	167	656	148	221	579	198	159	393	166	262	649	171
Future Volume (veh/h)	167	656	148	221	579	198	159	393	166	262	649	171
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	201	790	117	266	698	137	192	473	155	316	782	134
Adj No. of Lanes	2	2	1	2	2	1	2	2	1	2	2	1
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	291	1189	659	393	1294	766	277	917	591	407	1051	604
Arrive On Green	0.08	0.34	0.34	0.11	0.37	0.37	0.08	0.26	0.26	0.12	0.30	0.30
Sat Flow, veh/h	3442	3539	1583	3442	3539	1583	3442	3539	1583	3442	3539	1583
Grp Volume(v), veh/h	201	790	117	266	698	137	192	473	155	316	782	134
Grp Sat Flow(s),veh/h/ln	1721	1770	1583	1721	1770	1583	1721	1770	1583	1721	1770	1583
Q Serve(g_s), s	5.3	17.8	4.3	6.9	14.5	4.6	5.1	10.7	6.3	8.3	18.6	5.3
Cycle Q Clear(g_c), s	5.3	17.8	4.3	6.9	14.5	4.6	5.1	10.7	6.3	8.3	18.6	5.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	291	1189	659	393	1294	766	277	917	591	407	1051	604
V/C Ratio(X)	0.69	0.66	0.18	0.68	0.54	0.18	0.69	0.52	0.26	0.78	0.74	0.22
Avail Cap(c_a), veh/h	922	1328	721	922	1328	781	922	1100	673	922	1138	643
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.5	26.5	17.2	39.7	23.4	13.6	41.8	29.6	20.3	39.9	29.6	19.5
Incr Delay (d2), s/veh	2.9	1.3	0.2	4.3	0.6	0.2	2.3	0.6	0.3	2.4	2.8	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	8.9	1.9	3.5	7.2	2.0	2.5	5.3	2.8	4.1	9.4	2.4
LnGrp Delay(d),s/veh	44.4	27.8	17.3	44.0	24.0	13.8	44.1	30.2	20.6	42.3	32.4	19.8
LnGrp LOS	D	C	B	D	C	B	D	C	C	D	C	B
Approach Vol, veh/h		1108			1101			820			1232	
Approach Delay, s/veh		29.7			27.5			31.7			33.5	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.3	36.1	11.1	31.8	11.5	38.9	14.6	28.3
Change Period (Y+Rc), s	3.6	4.8	3.6	4.1	3.6	4.8	3.6	4.1
Max Green Setting (Gmax), s	25.0	35.0	25.0	30.0	25.0	35.0	25.0	29.0
Max Q Clear Time (g_c+I1), s	8.9	19.8	7.1	20.6	7.3	16.5	10.3	12.7
Green Ext Time (p_c), s	1.7	11.5	0.4	7.1	0.6	13.5	0.7	11.1

Intersection Summary	
HCM 2010 Ctrl Delay	30.6
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	471	742	214	1057	0	0	0	0	169	2	128
Future Volume (veh/h)	0	471	742	214	1057	0	0	0	0	169	2	128
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	1863	1863	0				1900	1863	1863
Adj Flow Rate, veh/h	0	554	0	252	1244	0				199	2	37
Adj No. of Lanes	0	2	1	1	2	0				0	1	1
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85				0.85	0.85	0.85
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	729	326	744	2486	0				252	3	227
Arrive On Green	0.00	0.21	0.00	0.42	0.70	0.00				0.14	0.14	0.14
Sat Flow, veh/h	0	3632	1583	1774	3632	0				1757	18	1583
Grp Volume(v), veh/h	0	554	0	252	1244	0				201	0	37
Grp Sat Flow(s),veh/h/ln	0	1770	1583	1774	1770	0				1775	0	1583
Q Serve(g_s), s	0.0	9.6	0.0	6.2	10.5	0.0				7.1	0.0	1.3
Cycle Q Clear(g_c), s	0.0	9.6	0.0	6.2	10.5	0.0				7.1	0.0	1.3
Prop In Lane	0.00		1.00	1.00		0.00				0.99		1.00
Lane Grp Cap(c), veh/h	0	729	326	744	2486	0				255	0	227
V/C Ratio(X)	0.00	0.76	0.00	0.34	0.50	0.00				0.79	0.00	0.16
Avail Cap(c_a), veh/h	0	1143	512	744	2486	0				601	0	536
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.70	0.00	0.82	0.82	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	24.3	0.0	12.8	4.4	0.0				26.9	0.0	24.4
Incr Delay (d2), s/veh	0.0	5.2	0.0	0.1	0.6	0.0				2.1	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	5.2	0.0	3.0	5.2	0.0				3.6	0.0	0.6
LnGrp Delay(d),s/veh	0.0	29.5	0.0	12.8	5.0	0.0				28.9	0.0	24.5
LnGrp LOS		C		B	A					C		C
Approach Vol, veh/h		554			1496						238	
Approach Delay, s/veh		29.5			6.3						28.3	
Approach LOS		C			A						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	32.3	18.4		14.3		50.7		
Change Period (Y+Rc), s	* 5	* 5		* 5		* 5		
Max Green Setting (Gmax), s	* 8	* 21		* 22		* 33		
Max Q Clear Time (g_c+I1), s	8.2	11.6		9.1		12.5		
Green Ext Time (p_c), s	0.0	1.8		0.4		6.5		

Intersection Summary	
HCM 2010 Ctrl Delay	14.2
HCM 2010 LOS	B

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	59	581	0	0	682	125	589	3	86	0	0	0
Future Volume (veh/h)	59	581	0	0	682	125	589	3	86	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1863	1863	1863	1863			
Adj Flow Rate, veh/h	69	676	0	0	793	72	687	0	15			
Adj No. of Lanes	1	2	0	0	2	1	2	0	1			
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	492	2200	0	0	947	424	796	0	355			
Arrive On Green	0.55	1.00	0.00	0.00	0.27	0.27	0.22	0.00	0.22			
Sat Flow, veh/h	1774	3632	0	0	3632	1583	3548	0	1583			
Grp Volume(v), veh/h	69	676	0	0	793	72	687	0	15			
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1770	1583	1774	0	1583			
Q Serve(g_s), s	1.2	0.0	0.0	0.0	13.7	2.3	12.1	0.0	0.5			
Cycle Q Clear(g_c), s	1.2	0.0	0.0	0.0	13.7	2.3	12.1	0.0	0.5			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	492	2200	0	0	947	424	796	0	355			
V/C Ratio(X)	0.14	0.31	0.00	0.00	0.84	0.17	0.86	0.00	0.04			
Avail Cap(c_a), veh/h	492	2200	0	0	1089	487	1365	0	609			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.94	0.94	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	10.7	0.0	0.0	0.0	22.5	18.3	24.2	0.0	19.7			
Incr Delay (d2), s/veh	0.0	0.3	0.0	0.0	8.7	0.9	1.2	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.6	0.1	0.0	0.0	7.9	1.1	6.0	0.0	0.2			
LnGrp Delay(d),s/veh	10.8	0.3	0.0	0.0	31.2	19.1	25.4	0.0	19.8			
LnGrp LOS	B	A			C	B	C		B			
Approach Vol, veh/h		745			865			702				
Approach Delay, s/veh		1.3			30.2			25.3				
Approach LOS		A			C			C				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		45.4			23.0	22.4		19.6
Change Period (Y+Rc), s		* 5			* 5	* 5		5.0
Max Green Setting (Gmax), s		* 30			* 5	* 20		25.0
Max Q Clear Time (g_c+I1), s		2.0			3.2	15.7		14.1
Green Ext Time (p_c), s		3.2			0.7	1.7		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	19.4
HCM 2010 LOS	B

Notes
User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	77	659	50	72	884	98	104	102	62	65	102	97
Future Volume (veh/h)	77	659	50	72	884	98	104	102	62	65	102	97
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	83	709	17	77	951	96	112	110	45	70	110	71
Adj No. of Lanes	1	2	1	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	163	1370	613	157	1138	115	186	223	91	149	165	107
Arrive On Green	0.09	0.39	0.39	0.09	0.35	0.35	0.11	0.18	0.18	0.08	0.16	0.16
Sat Flow, veh/h	1774	3539	1583	1774	3247	328	1774	1258	514	1774	1059	683
Grp Volume(v), veh/h	83	709	17	77	518	529	112	0	155	70	0	181
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1805	1774	0	1772	1774	0	1742
Q Serve(g_s), s	2.4	8.3	0.4	2.2	14.6	14.6	3.3	0.0	4.3	2.0	0.0	5.3
Cycle Q Clear(g_c), s	2.4	8.3	0.4	2.2	14.6	14.6	3.3	0.0	4.3	2.0	0.0	5.3
Prop In Lane	1.00		1.00	1.00		0.18	1.00		0.29	1.00		0.39
Lane Grp Cap(c), veh/h	163	1370	613	157	620	632	186	0	314	149	0	272
V/C Ratio(X)	0.51	0.52	0.03	0.49	0.84	0.84	0.60	0.00	0.49	0.47	0.00	0.67
Avail Cap(c_a), veh/h	490	2606	1166	490	652	665	555	0	815	490	0	802
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.5	12.8	10.3	23.6	16.2	16.2	23.2	0.0	20.2	23.7	0.0	21.6
Incr Delay (d2), s/veh	0.9	0.1	0.0	0.9	8.3	8.2	1.2	0.0	0.4	0.9	0.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	4.1	0.2	1.1	8.5	8.6	1.6	0.0	2.1	1.0	0.0	2.6
LnGrp Delay(d),s/veh	24.4	12.9	10.3	24.5	24.5	24.4	24.4	0.0	20.6	24.6	0.0	22.6
LnGrp LOS	C	B	B	C	C	C	C		C	C		C
Approach Vol, veh/h		809			1124			267			251	
Approach Delay, s/veh		14.0			24.4			22.2			23.2	
Approach LOS		B			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.8	25.8	8.7	12.0	9.8	23.8	7.6	13.1
Change Period (Y+Rc), s	3.0	4.8	3.0	3.5	4.8	* 4.8	3.0	3.5
Max Green Setting (Gmax), s	15.0	40.0	17.0	25.0	15.0	* 20	15.0	25.0
Max Q Clear Time (g_c+I1), s	4.2	10.3	5.3	7.3	4.4	16.6	4.0	6.3
Green Ext Time (p_c), s	0.1	9.9	0.1	1.2	0.1	2.4	0.0	1.2

Intersection Summary	
HCM 2010 Ctrl Delay	20.6
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	842	1	21	1026	23	3	0	17	57	0	16
Future Volume (veh/h)	8	842	1	21	1026	23	3	0	17	57	0	16
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	8	859	1	21	1047	14	3	0	2	58	0	2
Adj No. of Lanes	1	2	1	1	2	1	1	1	0	1	1	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	26	2127	952	63	2164	968	240	0	134	240	0	134
Arrive On Green	0.01	0.60	0.60	0.04	0.61	0.61	0.08	0.00	0.08	0.08	0.00	0.08
Sat Flow, veh/h	1774	3539	1583	1774	3539	1583	1071	0	1583	1071	0	1583
Grp Volume(v), veh/h	8	859	1	21	1047	14	3	0	2	58	0	2
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1071	0	1583	1071	0	1583
Q Serve(g_s), s	0.2	6.1	0.0	0.6	7.8	0.2	0.1	0.0	0.1	2.5	0.0	0.1
Cycle Q Clear(g_c), s	0.2	6.1	0.0	0.6	7.8	0.2	0.2	0.0	0.1	2.6	0.0	0.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	26	2127	952	63	2164	968	240	0	134	240	0	134
V/C Ratio(X)	0.31	0.40	0.00	0.33	0.48	0.01	0.01	0.00	0.01	0.24	0.00	0.01
Avail Cap(c_a), veh/h	743	2595	1161	743	2595	1161	845	0	1028	845	0	1028
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.3	5.0	3.8	22.5	5.1	3.6	20.1	0.0	20.0	21.2	0.0	20.0
Incr Delay (d2), s/veh	2.4	0.2	0.0	1.1	0.2	0.0	0.0	0.0	0.0	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	2.9	0.0	0.3	3.7	0.1	0.0	0.0	0.0	0.8	0.0	0.0
LnGrp Delay(d),s/veh	25.7	5.2	3.8	23.6	5.4	3.6	20.1	0.0	20.1	21.6	0.0	20.1
LnGrp LOS	C	A	A	C	A	A	C		C	C		C
Approach Vol, veh/h		868			1082			5			60	
Approach Delay, s/veh		5.4			5.7			20.1			21.5	
Approach LOS		A			A			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.7	34.0		8.0	5.2	34.5		8.0
Change Period (Y+Rc), s	4.0	5.3		4.0	4.5	5.3		4.0
Max Green Setting (Gmax), s	20.0	35.0		31.0	20.0	35.0		31.0
Max Q Clear Time (g_c+I1), s	2.6	8.1		4.6	2.2	9.8		2.2
Green Ext Time (p_c), s	0.0	20.4		0.2	0.0	19.4		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	6.1
HCM 2010 LOS	A

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	42	737	57	172	890	110	92	33	149	201	21	48
Future Volume (vph)	42	737	57	172	890	110	92	33	149	201	21	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	4.5	4.5	3.0	4.5	4.5		3.5	3.5		3.5	3.5
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.96	1.00		0.96	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583		1797	1583		1782	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00		0.63	1.00		0.65	1.00
Satd. Flow (perm)	1770	3539	1583	1770	3539	1583		1176	1583		1216	1583
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	43	760	59	177	918	113	95	34	154	207	22	49
RTOR Reduction (vph)	0	0	31	0	0	57	0	0	111	0	0	35
Lane Group Flow (vph)	43	760	28	177	918	56	0	129	43	0	229	14
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases			2			6	8		8	4		4
Actuated Green, G (s)	3.9	24.7	24.7	11.2	32.0	32.0		18.1	18.1		18.1	18.1
Effective Green, g (s)	3.9	24.7	24.7	11.2	32.0	32.0		18.1	18.1		18.1	18.1
Actuated g/C Ratio	0.06	0.38	0.38	0.17	0.49	0.49		0.28	0.28		0.28	0.28
Clearance Time (s)	3.0	4.5	4.5	3.0	4.5	4.5		3.5	3.5		3.5	3.5
Vehicle Extension (s)	2.0	4.0	4.0	2.0	4.0	4.0		2.0	2.0		2.0	2.0
Lane Grp Cap (vph)	106	1344	601	304	1742	779		327	440		338	440
v/s Ratio Prot	0.02	0.21		c0.10	c0.26							
v/s Ratio Perm			0.02			0.04		0.11	0.03		c0.19	0.01
v/c Ratio	0.41	0.57	0.05	0.58	0.53	0.07		0.39	0.10		0.68	0.03
Uniform Delay, d1	29.4	15.9	12.7	24.7	11.3	8.7		19.0	17.4		20.9	17.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2	0.9	0.7	0.0	1.8	0.4	0.1		0.3	0.0		4.2	0.0
Delay (s)	30.4	16.6	12.8	26.6	11.7	8.7		19.3	17.4		25.1	17.1
Level of Service	C	B	B	C	B	A		B	B		C	B
Approach Delay (s)		17.0			13.6			18.3			23.6	
Approach LOS		B			B			B			C	

Intersection Summary			
HCM 2000 Control Delay	16.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	59.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	270	749	142	212	878	266	253	627	239	289	434	175
Future Volume (veh/h)	270	749	142	212	878	266	253	627	239	289	434	175
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	278	772	64	219	905	227	261	646	202	298	447	128
Adj No. of Lanes	2	2	1	2	2	1	2	2	1	2	2	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	371	1266	726	334	1228	727	347	939	573	386	978	608
Arrive On Green	0.11	0.36	0.36	0.10	0.35	0.35	0.10	0.27	0.27	0.11	0.28	0.28
Sat Flow, veh/h	3442	3539	1583	3442	3539	1583	3442	3539	1583	3442	3539	1583
Grp Volume(v), veh/h	278	772	64	219	905	227	261	646	202	298	447	128
Grp Sat Flow(s),veh/h/ln	1721	1770	1583	1721	1770	1583	1721	1770	1583	1721	1770	1583
Q Serve(g_s), s	7.5	17.2	2.2	5.9	21.5	8.7	7.1	15.7	8.9	8.1	10.0	5.2
Cycle Q Clear(g_c), s	7.5	17.2	2.2	5.9	21.5	8.7	7.1	15.7	8.9	8.1	10.0	5.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	371	1266	726	334	1228	727	347	939	573	386	978	608
V/C Ratio(X)	0.75	0.61	0.09	0.66	0.74	0.31	0.75	0.69	0.35	0.77	0.46	0.21
Avail Cap(c_a), veh/h	898	1293	738	898	1293	756	898	1071	633	898	1108	666
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.5	25.3	14.6	41.7	27.5	16.4	41.9	31.6	22.3	41.4	28.7	19.8
Incr Delay (d2), s/veh	3.0	1.0	0.1	4.6	2.4	0.3	2.5	1.9	0.5	2.5	0.5	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	8.5	1.0	3.0	10.8	3.8	3.5	8.0	4.0	4.0	5.0	2.3
LnGrp Delay(d),s/veh	44.5	26.2	14.7	46.4	29.8	16.7	44.4	33.5	22.9	43.8	29.2	20.0
LnGrp LOS	D	C	B	D	C	B	D	C	C	D	C	C
Approach Vol, veh/h		1114			1351			1109			873	
Approach Delay, s/veh		30.1			30.3			34.1			32.8	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.9	39.1	13.3	30.6	13.9	38.0	14.3	29.5
Change Period (Y+Rc), s	3.6	4.8	3.6	4.1	3.6	4.8	3.6	4.1
Max Green Setting (Gmax), s	25.0	35.0	25.0	30.0	25.0	35.0	25.0	29.0
Max Q Clear Time (g_c+I1), s	7.9	19.2	9.1	12.0	9.5	23.5	10.1	17.7
Green Ext Time (p_c), s	1.4	12.9	0.6	10.8	0.8	9.7	0.7	7.7

Intersection Summary	
HCM 2010 Ctrl Delay	31.7
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	777	720	204	1269	0	0	0	0	155	3	103
Future Volume (veh/h)	0	777	720	204	1269	0	0	0	0	155	3	103
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	1863	1863	0				1900	1863	1863
Adj Flow Rate, veh/h	0	793	0	208	1295	0				158	3	14
Adj No. of Lanes	0	2	1	1	2	0				0	1	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98				0.98	0.98	0.98
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	957	428	676	2579	0				205	4	186
Arrive On Green	0.00	0.27	0.00	0.38	0.73	0.00				0.12	0.12	0.12
Sat Flow, veh/h	0	3632	1583	1774	3632	0				1743	33	1583
Grp Volume(v), veh/h	0	793	0	208	1295	0				161	0	14
Grp Sat Flow(s),veh/h/ln	0	1770	1583	1774	1770	0				1776	0	1583
Q Serve(g_s), s	0.0	13.7	0.0	5.3	10.2	0.0				5.7	0.0	0.5
Cycle Q Clear(g_c), s	0.0	13.7	0.0	5.3	10.2	0.0				5.7	0.0	0.5
Prop In Lane	0.00		1.00	1.00		0.00				0.98		1.00
Lane Grp Cap(c), veh/h	0	957	428	676	2579	0				209	0	186
V/C Ratio(X)	0.00	0.83	0.00	0.31	0.50	0.00				0.77	0.00	0.08
Avail Cap(c_a), veh/h	0	1143	512	676	2579	0				601	0	536
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.77	0.00	0.75	0.75	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	22.3	0.0	14.1	3.8	0.0				27.8	0.0	25.5
Incr Delay (d2), s/veh	0.0	6.4	0.0	0.1	0.5	0.0				2.3	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	7.5	0.0	2.6	5.0	0.0				2.9	0.0	0.2
LnGrp Delay(d),s/veh	0.0	28.7	0.0	14.2	4.3	0.0				30.1	0.0	25.6
LnGrp LOS		C		B	A					C		C
Approach Vol, veh/h		793			1503						175	
Approach Delay, s/veh		28.7			5.7						29.7	
Approach LOS		C			A						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	29.8	22.6		12.6		52.4		
Change Period (Y+Rc), s	* 5	* 5		* 5		* 5		
Max Green Setting (Gmax), s	* 8	* 21		* 22		* 33		
Max Q Clear Time (g_c+I1), s	7.3	15.7		7.7		12.2		
Green Ext Time (p_c), s	0.5	1.9		0.3		6.9		

Intersection Summary	
HCM 2010 Ctrl Delay	14.8
HCM 2010 LOS	B

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	128	804	0	0	805	173	668	2	204	0	0	0
Future Volume (veh/h)	128	804	0	0	805	173	668	2	204	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1863	1863	1863	1863			
Adj Flow Rate, veh/h	131	820	0	0	821	108	683	0	121			
Adj No. of Lanes	1	2	0	0	2	1	2	0	1			
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	481	2202	0	0	971	434	794	0	355			
Arrive On Green	0.54	1.00	0.00	0.00	0.27	0.27	0.22	0.00	0.22			
Sat Flow, veh/h	1774	3632	0	0	3632	1583	3548	0	1583			
Grp Volume(v), veh/h	131	820	0	0	821	108	683	0	121			
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1770	1583	1774	0	1583			
Q Serve(g_s), s	2.6	0.0	0.0	0.0	14.2	3.5	12.0	0.0	4.2			
Cycle Q Clear(g_c), s	2.6	0.0	0.0	0.0	14.2	3.5	12.0	0.0	4.2			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	481	2202	0	0	971	434	794	0	355			
V/C Ratio(X)	0.27	0.37	0.00	0.00	0.85	0.25	0.86	0.00	0.34			
Avail Cap(c_a), veh/h	481	2202	0	0	1089	487	1365	0	609			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.90	0.90	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	11.4	0.0	0.0	0.0	22.3	18.4	24.2	0.0	21.2			
Incr Delay (d2), s/veh	0.1	0.4	0.0	0.0	9.0	1.4	1.1	0.0	0.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	1.2	0.1	0.0	0.0	8.2	1.7	6.0	0.0	1.8			
LnGrp Delay(d),s/veh	11.5	0.4	0.0	0.0	31.3	19.7	25.3	0.0	21.4			
LnGrp LOS	B	A			C	B	C		C			
Approach Vol, veh/h		951			929			804				
Approach Delay, s/veh		2.0			30.0			24.8				
Approach LOS		A			C			C				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		45.4			22.6	22.8		19.6
Change Period (Y+Rc), s		* 5			* 5	* 5		5.0
Max Green Setting (Gmax), s		* 30			* 5	* 20		25.0
Max Q Clear Time (g_c+I1), s		2.0			4.6	16.2		14.0
Green Ext Time (p_c), s		4.0			0.2	1.6		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	18.5
HCM 2010 LOS	B

Notes
User approved volume balancing among the lanes for turning movement.

Appendix B
Existing Plus Project LOS Calculations

TRAFFIC WORKS LLC

Attachment G

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	92	705	92	101	490	60	44	78	90	88	111	109
Future Volume (veh/h)	92	705	92	101	490	60	44	78	90	88	111	109
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	100	766	54	110	533	55	48	85	56	96	121	84
Adj No. of Lanes	1	2	1	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	187	1271	569	195	1062	109	121	148	98	183	181	125
Arrive On Green	0.11	0.36	0.36	0.11	0.33	0.33	0.07	0.14	0.14	0.10	0.18	0.18
Sat Flow, veh/h	1774	3539	1583	1774	3240	333	1774	1049	691	1774	1025	712
Grp Volume(v), veh/h	100	766	54	110	290	298	48	0	141	96	0	205
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1804	1774	0	1741	1774	0	1737
Q Serve(g_s), s	2.7	8.8	1.1	2.9	6.6	6.6	1.3	0.0	3.8	2.6	0.0	5.5
Cycle Q Clear(g_c), s	2.7	8.8	1.1	2.9	6.6	6.6	1.3	0.0	3.8	2.6	0.0	5.5
Prop In Lane	1.00		1.00	1.00		0.18	1.00		0.40	1.00		0.41
Lane Grp Cap(c), veh/h	187	1271	569	195	580	591	121	0	246	183	0	306
V/C Ratio(X)	0.54	0.60	0.09	0.56	0.50	0.50	0.40	0.00	0.57	0.52	0.00	0.67
Avail Cap(c_a), veh/h	534	2839	1270	534	710	723	605	0	873	534	0	871
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	21.2	13.1	10.6	21.1	13.5	13.5	22.3	0.0	20.0	21.2	0.0	19.2
Incr Delay (d2), s/veh	0.9	0.2	0.0	1.0	0.2	0.2	0.8	0.0	0.8	0.9	0.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	4.3	0.5	1.5	3.3	3.3	0.7	0.0	1.9	1.3	0.0	2.7
LnGrp Delay(d),s/veh	22.0	13.2	10.6	22.0	13.7	13.7	23.0	0.0	20.8	22.1	0.0	20.1
LnGrp LOS	C	B	B	C	B	B	C		C	C		C
Approach Vol, veh/h		920			698			189			301	
Approach Delay, s/veh		14.0			15.0			21.4			20.8	
Approach LOS		B			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.5	22.7	6.4	12.3	10.0	21.1	8.1	10.5
Change Period (Y+Rc), s	3.0	4.8	3.0	3.5	4.8	* 4.8	3.0	3.5
Max Green Setting (Gmax), s	15.0	40.0	17.0	25.0	15.0	* 20	15.0	25.0
Max Q Clear Time (g_c+I1), s	4.9	10.8	3.3	7.5	4.7	8.6	4.6	5.8
Green Ext Time (p_c), s	0.1	7.1	0.0	1.3	0.1	4.9	0.1	1.3

Intersection Summary	
HCM 2010 Ctrl Delay	16.0
HCM 2010 LOS	B

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	20	887	2	34	14	738	62	14	0	27	57	0
Future Volume (vph)	20	887	2	34	14	738	62	14	0	27	57	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	5.3	5.3		4.0	5.3	5.3	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	1.00		1.00	0.95	1.00	1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.85		1.00	1.00	0.85	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00
Satd. Flow (prot)	1770	3539	1583		1770	3539	1583	1770	1583		1770	1583
Flt Permitted	0.95	1.00	1.00		0.95	1.00	1.00	0.87	1.00		0.87	1.00
Satd. Flow (perm)	1770	3539	1583		1770	3539	1583	1620	1583		1620	1583
Peak-hour factor, PHF	0.89	0.89	0.89	0.92	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	22	997	2	37	16	829	70	16	0	30	64	0
RTOR Reduction (vph)	0	0	1	0	0	0	21	0	27	0	0	4
Lane Group Flow (vph)	22	997	1	0	53	829	49	16	3	0	64	0
Turn Type	Prot	NA	Perm	Prot	Prot	NA	Perm	Perm	NA		Perm	NA
Protected Phases	5	2		1	1	6			8			4
Permitted Phases			2				6	8			4	
Actuated Green, G (s)	1.0	30.2	30.2		3.6	32.3	32.3	4.6	4.6		4.6	4.6
Effective Green, g (s)	1.0	30.2	30.2		3.6	32.3	32.3	4.6	4.6		4.6	4.6
Actuated g/C Ratio	0.02	0.58	0.58		0.07	0.62	0.62	0.09	0.09		0.09	0.09
Clearance Time (s)	4.5	5.3	5.3		4.0	5.3	5.3	4.0	4.0		4.0	4.0
Vehicle Extension (s)	1.0	4.0	4.0		1.0	4.0	4.0	2.5	2.5		2.5	2.5
Lane Grp Cap (vph)	34	2067	924		123	2211	988	144	140		144	140
v/s Ratio Prot	0.01	c0.28			c0.03	0.23			0.00			0.00
v/s Ratio Perm			0.00				0.03	0.01			c0.04	
v/c Ratio	0.65	0.48	0.00		0.43	0.37	0.05	0.11	0.02		0.44	0.00
Uniform Delay, d1	25.2	6.2	4.5		23.1	4.8	3.8	21.7	21.5		22.3	21.5
Progression Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	27.5	0.2	0.0		0.9	0.1	0.0	0.2	0.0		1.6	0.0
Delay (s)	52.6	6.5	4.5		24.0	4.9	3.8	21.9	21.5		23.9	21.5
Level of Service	D	A	A		C	A	A	C	C		C	C
Approach Delay (s)		7.5				5.9			21.7			23.8
Approach LOS		A				A			C			C

Intersection Summary			
HCM 2000 Control Delay	7.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	51.7	Sum of lost time (s)	13.8
Intersection Capacity Utilization	51.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBR
Lane Configurations	
Traffic Volume (vph)	4
Future Volume (vph)	4
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.89
Adj. Flow (vph)	4
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	38	967	803	241	0	45
Future Vol, veh/h	38	967	803	241	0	45
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	41	1051	873	262	0	49

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1135	0	-	0	-	567
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	4.14	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	2.22	-	-	-	-	3.32
Pot Cap-1 Maneuver	611	-	-	-	0	467
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	611	-	-	-	-	467
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	13.6
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	611	-	-	-	467
HCM Lane V/C Ratio	0.068	-	-	-	0.105
HCM Control Delay (s)	11.3	-	-	-	13.6
HCM Lane LOS	B	-	-	-	B
HCM 95th %tile Q(veh)	0.2	-	-	-	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	890	22	74	989	42	26	4	60	71	6	19
Future Volume (veh/h)	18	890	22	74	989	42	26	4	60	71	6	19
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	21	1047	13	87	1164	29	31	5	0	84	7	0
Adj No. of Lanes	1	2	1	1	2	1	0	1	1	0	1	1
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	62	2168	970	162	2369	1060	256	33	167	264	13	167
Arrive On Green	0.03	0.61	0.61	0.09	0.67	0.67	0.11	0.11	0.00	0.11	0.11	0.00
Sat Flow, veh/h	1774	3539	1583	1774	3539	1583	1322	312	1583	1366	127	1583
Grp Volume(v), veh/h	21	1047	13	87	1164	29	36	0	0	91	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1633	0	1583	1493	0	1583
Q Serve(g_s), s	0.7	9.4	0.2	2.7	9.4	0.4	0.0	0.0	0.0	2.2	0.0	0.0
Cycle Q Clear(g_c), s	0.7	9.4	0.2	2.7	9.4	0.4	1.0	0.0	0.0	3.2	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.86		1.00	0.92		1.00
Lane Grp Cap(c), veh/h	62	2168	970	162	2369	1060	288	0	167	277	0	167
V/C Ratio(X)	0.34	0.48	0.01	0.54	0.49	0.03	0.12	0.00	0.00	0.33	0.00	0.00
Avail Cap(c_a), veh/h	461	2453	1098	461	2453	1098	815	0	741	797	0	741
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	27.2	6.1	4.4	25.1	4.7	3.2	23.6	0.0	0.0	24.5	0.0	0.0
Incr Delay (d2), s/veh	1.2	0.2	0.0	1.0	0.2	0.0	0.1	0.0	0.0	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	4.6	0.1	1.4	4.4	0.2	0.5	0.0	0.0	1.4	0.0	0.0
LnGrp Delay(d),s/veh	28.4	6.4	4.4	26.1	4.9	3.2	23.6	0.0	0.0	24.7	0.0	0.0
LnGrp LOS	C	A	A	C	A	A	C			C		
Approach Vol, veh/h		1081			1280			36			91	
Approach Delay, s/veh		6.8			6.3			23.6			24.7	
Approach LOS		A			A			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.3	39.9		9.6	5.0	43.1		9.6
Change Period (Y+Rc), s	3.0	4.5		3.5	3.0	4.5		3.5
Max Green Setting (Gmax), s	15.0	40.0		27.0	15.0	40.0		27.0
Max Q Clear Time (g_c+I1), s	4.7	11.4		5.2	2.7	11.4		3.0
Green Ext Time (p_c), s	0.1	24.0		0.4	0.0	24.0		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	7.5
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	175	692	168	221	706	198	230	393	166	262	649	199
Future Volume (veh/h)	175	692	168	221	706	198	230	393	166	262	649	199
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	211	834	143	266	851	140	277	473	158	316	782	185
Adj No. of Lanes	2	2	1	2	2	1	2	2	1	2	2	1
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	297	1176	692	386	1267	752	362	974	613	402	1016	591
Arrive On Green	0.09	0.33	0.33	0.11	0.36	0.36	0.11	0.28	0.28	0.12	0.29	0.29
Sat Flow, veh/h	3442	3539	1583	3442	3539	1583	3442	3539	1583	3442	3539	1583
Grp Volume(v), veh/h	211	834	143	266	851	140	277	473	158	316	782	185
Grp Sat Flow(s),veh/h/ln	1721	1770	1583	1721	1770	1583	1721	1770	1583	1721	1770	1583
Q Serve(g_s), s	5.9	20.3	5.5	7.3	20.0	5.0	7.7	11.0	6.7	8.8	19.9	8.2
Cycle Q Clear(g_c), s	5.9	20.3	5.5	7.3	20.0	5.0	7.7	11.0	6.7	8.8	19.9	8.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	297	1176	692	386	1267	752	362	974	613	402	1016	591
V/C Ratio(X)	0.71	0.71	0.21	0.69	0.67	0.19	0.77	0.49	0.26	0.79	0.77	0.31
Avail Cap(c_a), veh/h	874	1259	729	874	1267	752	874	1043	644	874	1079	619
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.8	28.7	17.1	42.0	26.7	14.9	42.9	29.8	20.5	42.3	32.1	21.9
Incr Delay (d2), s/veh	3.1	2.0	0.2	4.6	1.6	0.2	2.6	0.5	0.3	2.6	3.5	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	10.2	2.4	3.7	10.0	2.2	3.8	5.5	3.0	4.3	10.2	3.7
LnGrp Delay(d),s/veh	46.9	30.7	17.3	46.7	28.3	15.0	45.4	30.4	20.8	44.8	35.7	22.3
LnGrp LOS	D	C	B	D	C	B	D	C	C	D	D	C
Approach Vol, veh/h		1188			1257			908			1283	
Approach Delay, s/veh		31.9			30.7			33.3			36.0	
Approach LOS		C			C			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.6	37.5	13.9	32.3	12.1	40.0	15.1	31.2
Change Period (Y+Rc), s	3.6	4.8	3.6	4.1	3.6	4.8	3.6	4.1
Max Green Setting (Gmax), s	25.0	35.0	25.0	30.0	25.0	35.0	25.0	29.0
Max Q Clear Time (g_c+I1), s	9.3	22.3	9.7	21.9	7.9	22.0	10.8	13.0
Green Ext Time (p_c), s	1.7	10.4	0.6	6.3	0.6	10.9	0.7	11.1

Intersection Summary	
HCM 2010 Ctrl Delay	33.0
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	487	762	214	1156	0	0	0	0	169	2	156
Future Volume (veh/h)	0	487	762	214	1156	0	0	0	0	169	2	156
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	1863	1863	0				1900	1863	1863
Adj Flow Rate, veh/h	0	573	0	252	1360	0				199	2	70
Adj No. of Lanes	0	2	1	1	2	0				0	1	1
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85				0.85	0.85	0.85
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	749	335	733	2483	0				254	3	229
Arrive On Green	0.00	0.21	0.00	0.41	0.70	0.00				0.14	0.14	0.14
Sat Flow, veh/h	0	3632	1583	1774	3632	0				1757	18	1583
Grp Volume(v), veh/h	0	573	0	252	1360	0				201	0	70
Grp Sat Flow(s),veh/h/ln	0	1770	1583	1774	1770	0				1775	0	1583
Q Serve(g_s), s	0.0	9.9	0.0	6.3	12.1	0.0				7.1	0.0	2.6
Cycle Q Clear(g_c), s	0.0	9.9	0.0	6.3	12.1	0.0				7.1	0.0	2.6
Prop In Lane	0.00		1.00	1.00		0.00				0.99		1.00
Lane Grp Cap(c), veh/h	0	749	335	733	2483	0				257	0	229
V/C Ratio(X)	0.00	0.77	0.00	0.34	0.55	0.00				0.78	0.00	0.31
Avail Cap(c_a), veh/h	0	1143	512	733	2483	0				601	0	536
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.67	0.00	0.75	0.75	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	24.1	0.0	13.1	4.7	0.0				26.8	0.0	24.9
Incr Delay (d2), s/veh	0.0	5.0	0.0	0.1	0.7	0.0				2.0	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	5.4	0.0	3.1	6.1	0.0				3.6	0.0	1.1
LnGrp Delay(d),s/veh	0.0	29.1	0.0	13.1	5.4	0.0				28.8	0.0	25.2
LnGrp LOS		C		B	A					C		C
Approach Vol, veh/h		573			1612						271	
Approach Delay, s/veh		29.1			6.6						27.9	
Approach LOS		C			A						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	31.8	18.8		14.4		50.6		
Change Period (Y+Rc), s	* 5	* 5		* 5		* 5		
Max Green Setting (Gmax), s	* 8	* 21		* 22		* 33		
Max Q Clear Time (g_c+I1), s	8.3	11.9		9.1		14.1		
Green Ext Time (p_c), s	0.0	1.9		0.4		7.1		

Intersection Summary	
HCM 2010 Ctrl Delay	14.2
HCM 2010 LOS	B

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	67	589	0	0	710	125	660	3	86	0	0	0
Future Volume (veh/h)	67	589	0	0	710	125	660	3	86	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1863	1863	1863	1863			
Adj Flow Rate, veh/h	78	685	0	0	826	66	769	0	17			
Adj No. of Lanes	1	2	0	0	2	1	2	0	1			
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	438	2119	0	0	973	435	878	0	392			
Arrive On Green	0.49	1.00	0.00	0.00	0.27	0.27	0.25	0.00	0.25			
Sat Flow, veh/h	1774	3632	0	0	3632	1583	3548	0	1583			
Grp Volume(v), veh/h	78	685	0	0	826	66	769	0	17			
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1770	1583	1774	0	1583			
Q Serve(g_s), s	1.6	0.0	0.0	0.0	14.3	2.1	13.5	0.0	0.5			
Cycle Q Clear(g_c), s	1.6	0.0	0.0	0.0	14.3	2.1	13.5	0.0	0.5			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	438	2119	0	0	973	435	878	0	392			
V/C Ratio(X)	0.18	0.32	0.00	0.00	0.85	0.15	0.88	0.00	0.04			
Avail Cap(c_a), veh/h	438	2119	0	0	1089	487	1365	0	609			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.94	0.94	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	12.8	0.0	0.0	0.0	22.3	17.8	23.5	0.0	18.6			
Incr Delay (d2), s/veh	0.1	0.4	0.0	0.0	9.2	0.7	2.7	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.8	0.1	0.0	0.0	8.2	1.0	7.0	0.0	0.2			
LnGrp Delay(d),s/veh	12.9	0.4	0.0	0.0	31.5	18.6	26.2	0.0	18.6			
LnGrp LOS	B	A			C	B	C		B			
Approach Vol, veh/h		763			892			786				
Approach Delay, s/veh		1.7			30.5			26.1				
Approach LOS		A			C			C				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		43.9			21.1	22.9		21.1
Change Period (Y+Rc), s		* 5			* 5	* 5		5.0
Max Green Setting (Gmax), s		* 30			* 5	* 20		25.0
Max Q Clear Time (g_c+I1), s		2.0			3.6	16.3		15.5
Green Ext Time (p_c), s		3.3			0.5	1.5		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	20.1
HCM 2010 LOS	C

Notes
User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	77	665	50	87	899	112	104	102	68	70	102	97
Future Volume (veh/h)	77	665	50	87	899	112	104	102	68	70	102	97
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	83	715	17	94	967	111	112	110	49	75	110	71
Adj No. of Lanes	1	2	1	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	163	1346	602	173	1130	130	186	212	95	154	165	107
Arrive On Green	0.09	0.38	0.38	0.10	0.35	0.35	0.10	0.17	0.17	0.09	0.16	0.16
Sat Flow, veh/h	1774	3539	1583	1774	3200	367	1774	1222	544	1774	1059	683
Grp Volume(v), veh/h	83	715	17	94	535	543	112	0	159	75	0	181
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1798	1774	0	1767	1774	0	1742
Q Serve(g_s), s	2.4	8.6	0.4	2.8	15.3	15.3	3.3	0.0	4.5	2.2	0.0	5.4
Cycle Q Clear(g_c), s	2.4	8.6	0.4	2.8	15.3	15.3	3.3	0.0	4.5	2.2	0.0	5.4
Prop In Lane	1.00		1.00	1.00		0.20	1.00		0.31	1.00		0.39
Lane Grp Cap(c), veh/h	163	1346	602	173	625	635	186	0	307	154	0	272
V/C Ratio(X)	0.51	0.53	0.03	0.54	0.86	0.86	0.60	0.00	0.52	0.49	0.00	0.67
Avail Cap(c_a), veh/h	487	2589	1158	487	647	658	552	0	808	487	0	796
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.7	13.2	10.6	23.5	16.4	16.4	23.4	0.0	20.5	23.8	0.0	21.7
Incr Delay (d2), s/veh	0.9	0.1	0.0	1.0	10.1	9.9	1.2	0.0	0.5	0.9	0.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	4.2	0.2	1.4	9.2	9.3	1.7	0.0	2.2	1.1	0.0	2.6
LnGrp Delay(d),s/veh	24.6	13.3	10.6	24.5	26.5	26.3	24.6	0.0	21.0	24.7	0.0	22.8
LnGrp LOS	C	B	B	C	C	C	C		C	C		C
Approach Vol, veh/h		815			1172			271			256	
Approach Delay, s/veh		14.4			26.2			22.5			23.3	
Approach LOS		B			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.3	25.6	8.7	12.0	9.8	24.1	7.8	13.0
Change Period (Y+Rc), s	3.0	4.8	3.0	3.5	4.8	* 4.8	3.0	3.5
Max Green Setting (Gmax), s	15.0	40.0	17.0	25.0	15.0	* 20	15.0	25.0
Max Q Clear Time (g_c+I1), s	4.8	10.6	5.3	7.4	4.4	17.3	4.2	6.5
Green Ext Time (p_c), s	0.1	10.2	0.1	1.2	0.1	2.0	0.1	1.2

Intersection Summary	
HCM 2010 Ctrl Delay	21.7
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	10	857	1	126	21	1066	23	3	0	17	182	0
Future Volume (vph)	10	857	1	126	21	1066	23	3	0	17	182	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	5.3	5.3		4.0	5.3	5.3	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	1.00		1.00	0.95	1.00	1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.85		1.00	1.00	0.85	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00
Satd. Flow (prot)	1770	3539	1583		1770	3539	1583	1770	1583		1770	1583
Flt Permitted	0.95	1.00	1.00		0.95	1.00	1.00	0.74	1.00		0.75	1.00
Satd. Flow (perm)	1770	3539	1583		1770	3539	1583	1386	1583		1390	1583
Peak-hour factor, PHF	0.98	0.98	0.98	0.92	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	10	874	1	137	21	1088	23	3	0	17	186	0
RTOR Reduction (vph)	0	0	1	0	0	0	11	0	13	0	0	15
Lane Group Flow (vph)	10	874	0	0	158	1088	12	3	4	0	186	5
Turn Type	Prot	NA	Perm	Prot	Prot	NA	Perm	Perm	NA		Perm	NA
Protected Phases	5	2		1	1	6			8			4
Permitted Phases			2				6	8			4	
Actuated Green, G (s)	1.0	28.8	28.8		10.9	38.2	38.2	17.6	17.6		17.6	17.6
Effective Green, g (s)	1.0	28.8	28.8		10.9	38.2	38.2	17.6	17.6		17.6	17.6
Actuated g/C Ratio	0.01	0.41	0.41		0.15	0.54	0.54	0.25	0.25		0.25	0.25
Clearance Time (s)	4.5	5.3	5.3		4.0	5.3	5.3	4.0	4.0		4.0	4.0
Vehicle Extension (s)	1.0	4.0	4.0		1.0	4.0	4.0	2.5	2.5		2.5	2.5
Lane Grp Cap (vph)	25	1443	645		273	1914	856	345	394		346	394
v/s Ratio Prot	0.01	0.25			c0.09	c0.31			0.00			0.00
v/s Ratio Perm			0.00				0.01	0.00			c0.13	
v/c Ratio	0.40	0.61	0.00		0.58	0.57	0.01	0.01	0.01		0.54	0.01
Uniform Delay, d1	34.5	16.4	12.4		27.7	10.7	7.5	19.9	19.9		23.0	20.0
Progression Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	3.8	0.8	0.0		1.8	0.5	0.0	0.0	0.0		1.3	0.0
Delay (s)	38.3	17.3	12.4		29.6	11.2	7.5	19.9	20.0		24.2	20.0
Level of Service	D	B	B		C	B	A	B	B		C	B
Approach Delay (s)		17.5				13.4			20.0			23.8
Approach LOS		B				B			B			C

Intersection Summary			
HCM 2000 Control Delay	15.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	70.6	Sum of lost time (s)	13.8
Intersection Capacity Utilization	63.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBR
Lane Configurations	
Traffic Volume (vph)	20
Future Volume (vph)	20
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.98
Adj. Flow (vph)	20
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	15	1167	1070	99	0	166
Future Vol, veh/h	15	1167	1070	99	0	166
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	1268	1163	108	0	180

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1271	0	-	0	-	635
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	4.14	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	2.22	-	-	-	-	3.32
Pot Cap-1 Maneuver	542	-	-	-	0	421
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	542	-	-	-	-	421
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	19.8
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	542	-	-	-	421
HCM Lane V/C Ratio	0.03	-	-	-	0.429
HCM Control Delay (s)	11.8	-	-	-	19.8
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	2.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	48	973	66	172	984	110	95	33	149	201	21	50
Future Volume (vph)	48	973	66	172	984	110	95	33	149	201	21	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	4.5	4.5	3.0	4.5	4.5		3.5	3.5		3.5	3.5
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.96	1.00		0.96	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583		1796	1583		1782	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00		0.58	1.00		0.63	1.00
Satd. Flow (perm)	1770	3539	1583	1770	3539	1583		1073	1583		1169	1583
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	49	1003	68	177	1014	113	98	34	154	207	22	52
RTOR Reduction (vph)	0	0	25	0	0	53	0	0	114	0	0	38
Lane Group Flow (vph)	49	1003	43	177	1014	60	0	132	40	0	229	14
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases			2			6	8		8	4		4
Actuated Green, G (s)	4.2	31.8	31.8	11.6	39.2	39.2		19.2	19.2		19.2	19.2
Effective Green, g (s)	4.2	31.8	31.8	11.6	39.2	39.2		19.2	19.2		19.2	19.2
Actuated g/C Ratio	0.06	0.43	0.43	0.16	0.53	0.53		0.26	0.26		0.26	0.26
Clearance Time (s)	3.0	4.5	4.5	3.0	4.5	4.5		3.5	3.5		3.5	3.5
Vehicle Extension (s)	2.0	4.0	4.0	2.0	4.0	4.0		2.0	2.0		2.0	2.0
Lane Grp Cap (vph)	101	1529	683	278	1884	843		279	412		304	412
v/s Ratio Prot	0.03	c0.28		c0.10	0.29							
v/s Ratio Perm			0.03			0.04		0.12	0.03		c0.20	0.01
v/c Ratio	0.49	0.66	0.06	0.64	0.54	0.07		0.47	0.10		0.75	0.03
Uniform Delay, d1	33.7	16.6	12.2	29.0	11.3	8.4		22.9	20.6		25.0	20.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2	1.3	1.1	0.1	3.5	0.4	0.0		0.5	0.0		9.0	0.0
Delay (s)	35.0	17.7	12.3	32.5	11.6	8.4		23.4	20.7		34.0	20.3
Level of Service	C	B	B	C	B	A		C	C		C	C
Approach Delay (s)		18.1			14.2			21.9			31.5	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	18.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	73.6	Sum of lost time (s)	11.0
Intersection Capacity Utilization	65.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	299	882	216	212	931	266	282	627	239	289	434	187
Future Volume (veh/h)	299	882	216	212	931	266	282	627	239	289	434	187
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	308	909	139	219	960	235	291	646	205	298	447	152
Adj No. of Lanes	2	2	1	2	2	1	2	2	1	2	2	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	401	1291	751	331	1219	722	377	929	568	384	937	604
Arrive On Green	0.12	0.36	0.36	0.10	0.34	0.34	0.11	0.26	0.26	0.11	0.26	0.26
Sat Flow, veh/h	3442	3539	1583	3442	3539	1583	3442	3539	1583	3442	3539	1583
Grp Volume(v), veh/h	308	909	139	219	960	235	291	646	205	298	447	152
Grp Sat Flow(s),veh/h/ln	1721	1770	1583	1721	1770	1583	1721	1770	1583	1721	1770	1583
Q Serve(g_s), s	8.5	21.4	4.9	6.0	23.8	9.3	8.0	16.1	9.3	8.2	10.4	6.4
Cycle Q Clear(g_c), s	8.5	21.4	4.9	6.0	23.8	9.3	8.0	16.1	9.3	8.2	10.4	6.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	401	1291	751	331	1219	722	377	929	568	384	937	604
V/C Ratio(X)	0.77	0.70	0.19	0.66	0.79	0.33	0.77	0.70	0.36	0.78	0.48	0.25
Avail Cap(c_a), veh/h	881	1291	751	881	1269	744	881	1051	623	881	1087	671
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.8	26.5	14.8	42.6	28.8	17.0	42.3	32.5	23.1	42.2	30.2	20.7
Incr Delay (d2), s/veh	3.1	1.9	0.2	4.8	3.5	0.4	2.5	2.0	0.5	2.5	0.5	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	10.8	2.2	3.1	12.2	4.1	3.9	8.1	4.2	4.0	5.2	2.9
LnGrp Delay(d),s/veh	45.0	28.4	15.0	47.3	32.3	17.3	44.8	34.5	23.6	44.7	30.7	21.0
LnGrp LOS	D	C	B	D	C	B	D	C	C	D	C	C
Approach Vol, veh/h		1356			1414			1142			897	
Approach Delay, s/veh		30.8			32.1			35.2			33.7	
Approach LOS		C			C			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	40.4	14.3	30.0	15.0	38.4	14.5	29.7
Change Period (Y+Rc), s	3.6	4.8	3.6	4.1	3.6	4.8	3.6	4.1
Max Green Setting (Gmax), s	25.0	35.0	25.0	30.0	25.0	35.0	25.0	29.0
Max Q Clear Time (g_c+I1), s	8.0	23.4	10.0	12.4	10.5	25.8	10.2	18.1
Green Ext Time (p_c), s	1.4	10.3	0.7	10.8	0.9	7.8	0.7	7.6

Intersection Summary	
HCM 2010 Ctrl Delay	32.8
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	836	794	204	1310	0	0	0	0	155	3	115
Future Volume (veh/h)	0	836	794	204	1310	0	0	0	0	155	3	115
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	1863	1863	0				1900	1863	1863
Adj Flow Rate, veh/h	0	853	0	208	1337	0				158	3	16
Adj No. of Lanes	0	2	1	1	2	0				0	1	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98				0.98	0.98	0.98
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1006	450	651	2578	0				205	4	186
Arrive On Green	0.00	0.28	0.00	0.37	0.73	0.00				0.12	0.12	0.12
Sat Flow, veh/h	0	3632	1583	1774	3632	0				1743	33	1583
Grp Volume(v), veh/h	0	853	0	208	1337	0				161	0	16
Grp Sat Flow(s),veh/h/ln	0	1770	1583	1774	1770	0				1776	0	1583
Q Serve(g_s), s	0.0	14.8	0.0	5.5	10.7	0.0				5.7	0.0	0.6
Cycle Q Clear(g_c), s	0.0	14.8	0.0	5.5	10.7	0.0				5.7	0.0	0.6
Prop In Lane	0.00		1.00	1.00		0.00				0.98		1.00
Lane Grp Cap(c), veh/h	0	1006	450	651	2578	0				209	0	186
V/C Ratio(X)	0.00	0.85	0.00	0.32	0.52	0.00				0.77	0.00	0.09
Avail Cap(c_a), veh/h	0	1143	512	651	2578	0				601	0	536
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.70	0.00	0.71	0.71	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	21.9	0.0	14.7	3.9	0.0				27.8	0.0	25.6
Incr Delay (d2), s/veh	0.0	6.4	0.0	0.1	0.5	0.0				2.3	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	8.1	0.0	2.7	5.2	0.0				2.9	0.0	0.3
LnGrp Delay(d),s/veh	0.0	28.3	0.0	14.8	4.4	0.0				30.1	0.0	25.6
LnGrp LOS		C		B	A					C		C
Approach Vol, veh/h		853			1545						177	
Approach Delay, s/veh		28.3			5.8						29.7	
Approach LOS		C			A						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	28.9	23.5		12.7		52.3		
Change Period (Y+Rc), s	* 5	* 5		* 5		* 5		
Max Green Setting (Gmax), s	* 8	* 21		* 22		* 33		
Max Q Clear Time (g_c+I1), s	7.5	16.8		7.7		12.7		
Green Ext Time (p_c), s	0.4	1.7		0.3		7.2		

Intersection Summary	
HCM 2010 Ctrl Delay	14.9
HCM 2010 LOS	B

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	158	833	0	0	817	173	697	2	204	0	0	0
Future Volume (veh/h)	158	833	0	0	817	173	697	2	204	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1863	1863	1863	1863			
Adj Flow Rate, veh/h	161	850	0	0	834	105	712	0	122			
Adj No. of Lanes	1	2	0	0	2	1	2	0	1			
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	462	2174	0	0	980	439	823	0	367			
Arrive On Green	0.52	1.00	0.00	0.00	0.28	0.28	0.23	0.00	0.23			
Sat Flow, veh/h	1774	3632	0	0	3632	1583	3548	0	1583			
Grp Volume(v), veh/h	161	850	0	0	834	105	712	0	122			
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1770	1583	1774	0	1583			
Q Serve(g_s), s	3.5	0.0	0.0	0.0	14.5	3.3	12.5	0.0	4.2			
Cycle Q Clear(g_c), s	3.5	0.0	0.0	0.0	14.5	3.3	12.5	0.0	4.2			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	462	2174	0	0	980	439	823	0	367			
V/C Ratio(X)	0.35	0.39	0.00	0.00	0.85	0.24	0.86	0.00	0.33			
Avail Cap(c_a), veh/h	462	2174	0	0	1089	487	1365	0	609			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.88	0.88	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	12.4	0.0	0.0	0.0	22.2	18.2	24.0	0.0	20.8			
Incr Delay (d2), s/veh	0.1	0.5	0.0	0.0	9.2	1.3	1.6	0.0	0.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	1.7	0.1	0.0	0.0	8.3	1.6	6.3	0.0	1.8			
LnGrp Delay(d),s/veh	12.5	0.5	0.0	0.0	31.4	19.5	25.6	0.0	21.0			
LnGrp LOS	B	A			C	B	C		C			
Approach Vol, veh/h		1011			939			834				
Approach Delay, s/veh		2.4			30.1			24.9				
Approach LOS		A			C			C				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		44.9			21.9	23.0		20.1
Change Period (Y+Rc), s		* 5			* 5	* 5		5.0
Max Green Setting (Gmax), s		* 30			* 5	* 20		25.0
Max Q Clear Time (g_c+I1), s		2.0			5.5	16.5		14.5
Green Ext Time (p_c), s		4.2			0.0	1.5		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	18.5
HCM 2010 LOS	B

Notes
User approved volume balancing among the lanes for turning movement.

Appendix C
Cumulative No Project LOS Calculations

TRAFFIC WORKS LLC

Attachment G

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	870	120	120	650	70	60	100	100	90	140	140
Future Volume (veh/h)	120	870	120	120	650	70	60	100	100	90	140	140
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	130	946	84	130	707	68	65	109	72	98	152	116
Adj No. of Lanes	1	2	1	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	180	1364	610	180	1162	112	135	197	130	164	200	153
Arrive On Green	0.10	0.39	0.39	0.10	0.36	0.36	0.08	0.19	0.19	0.09	0.20	0.20
Sat Flow, veh/h	1774	3539	1583	1774	3263	314	1774	1048	692	1774	982	749
Grp Volume(v), veh/h	130	946	84	130	383	392	65	0	181	98	0	268
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1807	1774	0	1741	1774	0	1731
Q Serve(g_s), s	4.4	13.8	2.1	4.4	10.9	11.0	2.2	0.0	5.8	3.3	0.0	9.0
Cycle Q Clear(g_c), s	4.4	13.8	2.1	4.4	10.9	11.0	2.2	0.0	5.8	3.3	0.0	9.0
Prop In Lane	1.00		1.00	1.00		0.17	1.00		0.40	1.00		0.43
Lane Grp Cap(c), veh/h	180	1364	610	180	630	643	135	0	327	164	0	353
V/C Ratio(X)	0.72	0.69	0.14	0.72	0.61	0.61	0.48	0.00	0.55	0.60	0.00	0.76
Avail Cap(c_a), veh/h	433	2304	1031	433	630	643	491	0	708	433	0	704
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.8	15.8	12.3	26.8	16.3	16.3	27.2	0.0	22.6	26.8	0.0	23.0
Incr Delay (d2), s/veh	2.0	0.2	0.0	2.0	1.2	1.2	1.0	0.0	0.5	1.3	0.0	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	6.7	0.9	2.2	5.5	5.7	1.1	0.0	2.8	1.7	0.0	4.4
LnGrp Delay(d),s/veh	28.8	16.1	12.3	28.8	17.5	17.5	28.2	0.0	23.2	28.1	0.0	24.3
LnGrp LOS	C	B	B	C	B	B	C		C	C		C
Approach Vol, veh/h		1160			905			246			366	
Approach Delay, s/veh		17.2			19.1			24.5			25.3	
Approach LOS		B			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.2	28.5	7.7	16.0	11.0	26.7	8.7	15.0
Change Period (Y+Rc), s	3.0	4.8	3.0	3.5	4.8	* 4.8	3.0	3.5
Max Green Setting (Gmax), s	15.0	40.0	17.0	25.0	15.0	* 20	15.0	25.0
Max Q Clear Time (g_c+I1), s	6.4	15.8	4.2	11.0	6.4	13.0	5.3	7.8
Green Ext Time (p_c), s	0.1	7.9	0.0	1.6	0.1	4.5	0.1	1.7

Intersection Summary	
HCM 2010 Ctrl Delay	19.6
HCM 2010 LOS	B

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	1070	10	20	950	70	20	0	30	30	0	5
Future Volume (vph)	20	1070	10	20	950	70	20	0	30	30	0	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	5.3	5.3	4.0	5.3	5.3	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.85		1.00	0.85	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	1583		1770	1583	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00		1.00	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3539	1583	1863	1583		1863	1583	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	22	1163	11	22	1033	76	22	0	33	33	0	5
RTOR Reduction (vph)	0	0	4	0	0	20	0	30	0	0	5	0
Lane Group Flow (vph)	22	1163	7	22	1033	56	22	3	0	33	0	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases			2			6	8			4		
Actuated Green, G (s)	1.0	32.3	32.3	1.0	31.8	31.8	4.0	4.0		4.0	4.0	
Effective Green, g (s)	1.0	32.3	32.3	1.0	31.8	31.8	4.0	4.0		4.0	4.0	
Actuated g/C Ratio	0.02	0.64	0.64	0.02	0.63	0.63	0.08	0.08		0.08	0.08	
Clearance Time (s)	4.5	5.3	5.3	4.0	5.3	5.3	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	1.0	4.0	4.0	1.0	4.0	4.0	2.5	2.5		2.5	2.5	
Lane Grp Cap (vph)	34	2259	1010	34	2224	994	147	125		147	125	
v/s Ratio Prot	c0.01	c0.33		0.01	0.29			0.00			0.00	
v/s Ratio Perm			0.00			0.04	0.01			c0.02		
v/c Ratio	0.65	0.51	0.01	0.65	0.46	0.06	0.15	0.02		0.22	0.00	
Uniform Delay, d1	24.6	4.9	3.3	24.6	4.9	3.6	21.7	21.5		21.8	21.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	27.5	0.3	0.0	27.5	0.2	0.0	0.3	0.0		0.6	0.0	
Delay (s)	52.1	5.2	3.3	52.1	5.1	3.7	22.1	21.5		22.4	21.5	
Level of Service	D	A	A	D	A	A	C	C		C	C	
Approach Delay (s)		6.0			6.0			21.7			22.3	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	6.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	50.6	Sum of lost time (s)	13.8
Intersection Capacity Utilization	45.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	1120	20	110	1010	50	20	5	60	80	10	20
Future Volume (veh/h)	20	1120	20	110	1010	50	20	5	60	80	10	20
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	22	1217	12	120	1098	34	22	5	3	87	11	1
Adj No. of Lanes	1	2	1	1	2	1	0	1	1	0	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	61	1791	801	154	1978	885	95	13	407	99	7	407
Arrive On Green	0.03	0.51	0.51	0.09	0.56	0.56	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	1774	3539	1583	1774	3539	1583	22	50	1583	23	28	1583
Grp Volume(v), veh/h	22	1217	12	120	1098	34	27	0	3	98	0	1
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	71	0	1583	51	0	1583
Q Serve(g_s), s	0.9	19.0	0.3	4.9	14.6	0.7	0.3	0.0	0.1	0.3	0.0	0.0
Cycle Q Clear(g_c), s	0.9	19.0	0.3	4.9	14.6	0.7	18.9	0.0	0.1	18.9	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.81		1.00	0.89		1.00
Lane Grp Cap(c), veh/h	61	1791	801	154	1978	885	107	0	407	106	0	407
V/C Ratio(X)	0.36	0.68	0.01	0.78	0.56	0.04	0.25	0.00	0.01	0.93	0.00	0.00
Avail Cap(c_a), veh/h	363	1930	863	363	1978	885	270	0	583	266	0	583
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	34.6	13.6	9.0	32.8	10.4	7.3	28.7	0.0	20.3	35.4	0.0	20.3
Incr Delay (d2), s/veh	1.3	1.0	0.0	3.2	0.4	0.0	0.5	0.0	0.0	12.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	9.4	0.1	2.5	7.1	0.3	0.6	0.0	0.0	2.3	0.0	0.0
LnGrp Delay(d),s/veh	36.0	14.7	9.0	36.0	10.8	7.3	29.1	0.0	20.3	47.9	0.0	20.3
LnGrp LOS	D	B	A	D	B	A	C		C	D		C
Approach Vol, veh/h		1251			1252			30			99	
Approach Delay, s/veh		15.0			13.1			28.2			47.6	
Approach LOS		B			B			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.4	41.6		22.7	5.5	45.5		22.7
Change Period (Y+Rc), s	3.0	4.5		3.5	3.0	4.5		3.5
Max Green Setting (Gmax), s	15.0	40.0		27.0	15.0	40.0		27.0
Max Q Clear Time (g_c+I1), s	6.9	21.0		20.9	2.9	16.6		20.9
Green Ext Time (p_c), s	0.1	16.2		0.2	0.0	20.7		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	15.5
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	210	880	190	300	780	280	200	500	230	350	820	220
Future Volume (veh/h)	210	880	190	300	780	280	200	500	230	350	820	220
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	228	957	173	326	848	236	217	543	221	380	891	172
Adj No. of Lanes	2	2	1	2	2	1	2	2	1	2	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	313	1143	648	450	1284	789	296	891	606	466	1066	621
Arrive On Green	0.09	0.32	0.32	0.13	0.36	0.36	0.09	0.25	0.25	0.14	0.30	0.30
Sat Flow, veh/h	3442	3539	1583	3442	3539	1583	3442	3539	1583	3442	3539	1583
Grp Volume(v), veh/h	228	957	173	326	848	236	217	543	221	380	891	172
Grp Sat Flow(s),veh/h/ln	1721	1770	1583	1721	1770	1583	1721	1770	1583	1721	1770	1583
Q Serve(g_s), s	6.5	25.4	7.3	9.2	20.3	8.9	6.2	13.7	10.1	10.9	23.8	7.5
Cycle Q Clear(g_c), s	6.5	25.4	7.3	9.2	20.3	8.9	6.2	13.7	10.1	10.9	23.8	7.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	313	1143	648	450	1284	789	296	891	606	466	1066	621
V/C Ratio(X)	0.73	0.84	0.27	0.72	0.66	0.30	0.73	0.61	0.36	0.82	0.84	0.28
Avail Cap(c_a), veh/h	850	1224	684	850	1284	789	850	1014	661	850	1066	621
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.8	31.8	19.8	42.2	27.0	15.0	45.1	33.5	22.4	42.5	33.0	21.0
Incr Delay (d2), s/veh	3.3	5.3	0.3	4.7	1.4	0.3	2.6	1.1	0.5	2.7	6.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	13.2	3.3	4.7	10.1	3.9	3.1	6.9	4.5	5.3	12.5	3.3
LnGrp Delay(d),s/veh	48.1	37.1	20.2	46.9	28.5	15.3	47.7	34.6	22.9	45.2	39.2	21.3
LnGrp LOS	D	D	C	D	C	B	D	C	C	D	D	C
Approach Vol, veh/h		1358			1410			981			1443	
Approach Delay, s/veh		36.8			30.5			34.9			38.6	
Approach LOS		D			C			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.8	37.5	12.3	34.6	12.8	41.5	17.3	29.6
Change Period (Y+Rc), s	3.6	4.8	3.6	4.1	3.6	4.8	3.6	4.1
Max Green Setting (Gmax), s	25.0	35.0	25.0	30.0	25.0	35.0	25.0	29.0
Max Q Clear Time (g_c+I1), s	11.2	27.4	8.2	25.8	8.5	22.3	12.9	15.7
Green Ext Time (p_c), s	2.0	5.3	0.5	3.7	0.7	11.1	0.8	9.8

Intersection Summary	
HCM 2010 Ctrl Delay	35.2
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	600	1070	340	1370	0	0	0	0	240	5	180
Future Volume (veh/h)	0	600	1070	340	1370	0	0	0	0	240	5	180
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	1863	1863	0				1900	1863	1863
Adj Flow Rate, veh/h	0	652	0	370	1489	0				261	5	95
Adj No. of Lanes	0	2	1	1	2	0				0	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	828	370	627	2350	0				317	6	288
Arrive On Green	0.00	0.23	0.00	0.35	0.66	0.00				0.18	0.18	0.18
Sat Flow, veh/h	0	3632	1583	1774	3632	0				1742	33	1583
Grp Volume(v), veh/h	0	652	0	370	1489	0				266	0	95
Grp Sat Flow(s),veh/h/ln	0	1770	1583	1774	1770	0				1776	0	1583
Q Serve(g_s), s	0.0	11.2	0.0	11.1	15.9	0.0				9.4	0.0	3.4
Cycle Q Clear(g_c), s	0.0	11.2	0.0	11.1	15.9	0.0				9.4	0.0	3.4
Prop In Lane	0.00		1.00	1.00		0.00				0.98		1.00
Lane Grp Cap(c), veh/h	0	828	370	627	2350	0				323	0	288
V/C Ratio(X)	0.00	0.79	0.00	0.59	0.63	0.00				0.82	0.00	0.33
Avail Cap(c_a), veh/h	0	1143	512	627	2350	0				601	0	536
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.57	0.00	0.62	0.62	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	23.4	0.0	17.2	6.3	0.0				25.6	0.0	23.1
Incr Delay (d2), s/veh	0.0	4.4	0.0	0.6	0.8	0.0				2.0	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	5.9	0.0	5.5	7.9	0.0				4.8	0.0	1.5
LnGrp Delay(d),s/veh	0.0	27.8	0.0	17.8	7.1	0.0				27.6	0.0	23.4
LnGrp LOS		C		B	A					C		C
Approach Vol, veh/h		652			1859						361	
Approach Delay, s/veh		27.8			9.3						26.5	
Approach LOS		C			A						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	28.0	20.2		16.8		48.2		
Change Period (Y+Rc), s	* 5	* 5		* 5		* 5		
Max Green Setting (Gmax), s	* 8	* 21		* 22		* 33		
Max Q Clear Time (g_c+I1), s	13.1	13.2		11.4		17.9		
Green Ext Time (p_c), s	0.0	2.0		0.5		7.2		

Intersection Summary	
HCM 2010 Ctrl Delay	15.6
HCM 2010 LOS	B

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	750	0	0	860	180	850	5	120	0	0	0
Future Volume (veh/h)	90	750	0	0	860	180	850	5	120	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1863	1863	1863	1863			
Adj Flow Rate, veh/h	98	815	0	0	935	118	928	0	44			
Adj No. of Lanes	1	2	0	0	2	1	2	0	1			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	322	1963	0	0	1049	469	1034	0	461			
Arrive On Green	0.36	1.00	0.00	0.00	0.30	0.30	0.29	0.00	0.29			
Sat Flow, veh/h	1774	3632	0	0	3632	1583	3548	0	1583			
Grp Volume(v), veh/h	98	815	0	0	935	118	928	0	44			
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1770	1583	1774	0	1583			
Q Serve(g_s), s	2.6	0.0	0.0	0.0	16.4	3.7	16.3	0.0	1.3			
Cycle Q Clear(g_c), s	2.6	0.0	0.0	0.0	16.4	3.7	16.3	0.0	1.3			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	322	1963	0	0	1049	469	1034	0	461			
V/C Ratio(X)	0.30	0.42	0.00	0.00	0.89	0.25	0.90	0.00	0.10			
Avail Cap(c_a), veh/h	322	1963	0	0	1089	487	1365	0	609			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.92	0.92	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	17.8	0.0	0.0	0.0	21.9	17.4	22.1	0.0	16.8			
Incr Delay (d2), s/veh	0.2	0.6	0.0	0.0	11.4	1.3	5.6	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	1.2	0.2	0.0	0.0	9.6	1.8	8.8	0.0	0.6			
LnGrp Delay(d),s/veh	17.9	0.6	0.0	0.0	33.3	18.7	27.7	0.0	16.8			
LnGrp LOS	B	A			C	B	C		B			
Approach Vol, veh/h		913			1053			972				
Approach Delay, s/veh		2.5			31.7			27.2				
Approach LOS		A			C			C				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		41.1			16.8	24.3		23.9
Change Period (Y+Rc), s		* 5			* 5	* 5		5.0
Max Green Setting (Gmax), s		* 30			* 5	* 20		25.0
Max Q Clear Time (g_c+I1), s		2.0			4.6	18.4		18.3
Green Ext Time (p_c), s		4.1			0.2	0.8		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	21.1
HCM 2010 LOS	C

Notes
User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	830	60	90	1120	120	130	130	80	80	130	120
Future Volume (veh/h)	100	830	60	90	1120	120	130	130	80	80	130	120
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	108	892	21	97	1204	121	140	140	66	86	140	97
Adj No. of Lanes	1	2	1	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	169	1380	617	162	1161	116	182	241	114	155	191	132
Arrive On Green	0.10	0.39	0.39	0.09	0.36	0.36	0.10	0.20	0.20	0.09	0.19	0.19
Sat Flow, veh/h	1774	3539	1583	1774	3249	326	1774	1198	565	1774	1026	711
Grp Volume(v), veh/h	108	892	21	97	655	670	140	0	206	86	0	237
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1805	1774	0	1763	1774	0	1737
Q Serve(g_s), s	3.6	12.8	0.5	3.3	22.2	22.2	4.8	0.0	6.6	2.9	0.0	8.0
Cycle Q Clear(g_c), s	3.6	12.8	0.5	3.3	22.2	22.2	4.8	0.0	6.6	2.9	0.0	8.0
Prop In Lane	1.00		1.00	1.00		0.18	1.00		0.32	1.00		0.41
Lane Grp Cap(c), veh/h	169	1380	617	162	632	645	182	0	355	155	0	323
V/C Ratio(X)	0.64	0.65	0.03	0.60	1.04	1.04	0.77	0.00	0.58	0.56	0.00	0.73
Avail Cap(c_a), veh/h	428	2278	1019	428	632	645	485	0	709	428	0	699
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	27.1	15.5	11.7	27.1	20.0	20.0	27.2	0.0	22.4	27.2	0.0	23.9
Incr Delay (d2), s/veh	1.5	0.2	0.0	1.3	45.1	46.0	2.6	0.0	0.6	1.2	0.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	6.2	0.2	1.6	18.6	19.2	2.5	0.0	3.3	1.5	0.0	3.9
LnGrp Delay(d),s/veh	28.6	15.7	11.7	28.4	65.1	66.0	29.7	0.0	23.0	28.4	0.0	25.1
LnGrp LOS	C	B	B	C	F	F	C		C	C		C
Approach Vol, veh/h		1021			1422			346			323	
Approach Delay, s/veh		16.9			63.0			25.7			26.0	
Approach LOS		B			E			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.7	29.0	9.4	15.0	10.7	27.0	8.4	16.0
Change Period (Y+Rc), s	3.0	4.8	3.0	3.5	4.8	* 4.8	3.0	3.5
Max Green Setting (Gmax), s	15.0	40.0	17.0	25.0	15.0	* 20	15.0	25.0
Max Q Clear Time (g_c+I1), s	5.3	14.8	6.8	10.0	5.6	24.2	4.9	8.6
Green Ext Time (p_c), s	0.1	9.5	0.1	1.6	0.1	0.0	0.1	1.6

Intersection Summary	
HCM 2010 Ctrl Delay	39.9
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	1050	10	30	1300	30	5	0	20	60	0	20
Future Volume (vph)	10	1050	10	30	1300	30	5	0	20	60	0	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	5.3	5.3	4.0	5.3	5.3	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.85		1.00	0.85	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	1583		1770	1583	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.74	1.00		0.74	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3539	1583	1386	1583		1386	1583	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	10	1071	10	31	1327	31	5	0	20	61	0	20
RTOR Reduction (vph)	0	0	4	0	0	12	0	16	0	0	16	0
Lane Group Flow (vph)	10	1071	6	31	1327	19	5	4	0	61	4	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases			2			6	8			4		
Actuated Green, G (s)	1.1	45.1	45.1	2.3	45.8	45.8	13.4	13.4		13.4	13.4	
Effective Green, g (s)	1.1	45.1	45.1	2.3	45.8	45.8	13.4	13.4		13.4	13.4	
Actuated g/C Ratio	0.01	0.61	0.61	0.03	0.62	0.62	0.18	0.18		0.18	0.18	
Clearance Time (s)	4.5	5.3	5.3	4.0	5.3	5.3	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	1.0	4.0	4.0	1.0	4.0	4.0	2.5	2.5		2.5	2.5	
Lane Grp Cap (vph)	26	2153	963	54	2187	978	250	286		250	286	
v/s Ratio Prot	0.01	0.30		c0.02	c0.37			0.00			0.00	
v/s Ratio Perm			0.00			0.01	0.00			c0.04		
v/c Ratio	0.38	0.50	0.01	0.57	0.61	0.02	0.02	0.01		0.24	0.01	
Uniform Delay, d1	36.2	8.1	5.7	35.4	8.6	5.5	25.0	24.9		26.0	24.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	3.4	0.2	0.0	8.8	0.6	0.0	0.0	0.0		0.4	0.0	
Delay (s)	39.6	8.4	5.7	44.3	9.2	5.5	25.0	24.9		26.4	24.9	
Level of Service	D	A	A	D	A	A	C	C		C	C	
Approach Delay (s)		8.6			9.9			24.9			26.0	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	10.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	74.1	Sum of lost time (s)	13.8
Intersection Capacity Utilization	53.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	1070	60	180	1200	130	100	40	180	220	30	50
Future Volume (vph)	50	1070	60	180	1200	130	100	40	180	220	30	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	4.5	4.5	3.0	4.5	4.5		3.5	3.5		3.5	3.5
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.97	1.00		0.96	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583		1798	1583		1784	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00		0.53	1.00		0.61	1.00
Satd. Flow (perm)	1770	3539	1583	1770	3539	1583		990	1583		1132	1583
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	52	1103	62	186	1237	134	103	41	186	227	31	52
RTOR Reduction (vph)	0	0	23	0	0	63	0	0	135	0	0	38
Lane Group Flow (vph)	52	1103	39	186	1237	71	0	144	51	0	258	14
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases			2			6	8		8	4		4
Actuated Green, G (s)	4.4	35.0	35.0	12.1	42.7	42.7		22.0	22.0		22.0	22.0
Effective Green, g (s)	4.4	35.0	35.0	12.1	42.7	42.7		22.0	22.0		22.0	22.0
Actuated g/C Ratio	0.05	0.44	0.44	0.15	0.53	0.53		0.27	0.27		0.27	0.27
Clearance Time (s)	3.0	4.5	4.5	3.0	4.5	4.5		3.5	3.5		3.5	3.5
Vehicle Extension (s)	2.0	4.0	4.0	2.0	4.0	4.0		2.0	2.0		2.0	2.0
Lane Grp Cap (vph)	97	1546	691	267	1886	843		271	434		310	434
v/s Ratio Prot	0.03	c0.31		c0.11	0.35							
v/s Ratio Perm			0.02			0.05		0.15	0.03		c0.23	0.01
v/c Ratio	0.54	0.71	0.06	0.70	0.66	0.08		0.53	0.12		0.83	0.03
Uniform Delay, d1	36.9	18.4	13.0	32.3	13.4	9.1		24.7	21.8		27.3	21.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2	2.8	1.7	0.0	6.2	0.9	0.1		1.0	0.0		16.4	0.0
Delay (s)	39.7	20.1	13.1	38.5	14.3	9.2		25.7	21.8		43.7	21.3
Level of Service	D	C	B	D	B	A		C	C		D	C
Approach Delay (s)		20.6			16.8			23.5			40.0	
Approach LOS		C			B			C			D	

Intersection Summary			
HCM 2000 Control Delay	20.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	80.1	Sum of lost time (s)	11.0
Intersection Capacity Utilization	70.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	340	1050	180	270	1110	340	320	790	320	390	550	220
Future Volume (veh/h)	340	1050	180	270	1110	340	320	790	320	390	550	220
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	351	1082	132	278	1144	325	330	814	302	402	567	198
Adj No. of Lanes	2	2	1	2	2	1	2	2	1	2	2	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	436	1195	722	387	1144	734	408	924	591	482	1000	648
Arrive On Green	0.13	0.34	0.34	0.11	0.32	0.32	0.12	0.26	0.26	0.14	0.28	0.28
Sat Flow, veh/h	3442	3539	1583	3442	3539	1583	3442	3539	1583	3442	3539	1583
Grp Volume(v), veh/h	351	1082	132	278	1144	325	330	814	302	402	567	198
Grp Sat Flow(s),veh/h/ln	1721	1770	1583	1721	1770	1583	1721	1770	1583	1721	1770	1583
Q Serve(g_s), s	10.7	31.6	5.4	8.4	35.0	15.0	10.1	23.9	16.0	12.3	14.8	9.1
Cycle Q Clear(g_c), s	10.7	31.6	5.4	8.4	35.0	15.0	10.1	23.9	16.0	12.3	14.8	9.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	436	1195	722	387	1144	734	408	924	591	482	1000	648
V/C Ratio(X)	0.80	0.91	0.18	0.72	1.00	0.44	0.81	0.88	0.51	0.83	0.57	0.31
Avail Cap(c_a), veh/h	795	1195	722	795	1144	734	795	948	602	795	1000	648
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.0	34.2	17.5	46.4	36.6	19.6	46.5	38.4	26.2	45.3	33.2	21.6
Incr Delay (d2), s/veh	3.5	10.1	0.2	5.3	26.5	0.6	2.9	9.8	1.0	3.1	0.9	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.3	17.0	2.4	4.3	21.2	6.6	5.0	12.9	7.1	6.1	7.4	4.0
LnGrp Delay(d),s/veh	49.5	44.3	17.6	51.7	63.2	20.2	49.4	48.1	27.2	48.4	34.1	22.0
LnGrp LOS	D	D	B	D	E	C	D	D	C	D	C	C
Approach Vol, veh/h		1565			1747			1446			1167	
Approach Delay, s/veh		43.2			53.3			44.1			37.0	
Approach LOS		D			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.8	41.4	16.4	34.7	17.3	39.8	18.8	32.4
Change Period (Y+Rc), s	3.6	4.8	3.6	4.1	3.6	4.8	3.6	4.1
Max Green Setting (Gmax), s	25.0	35.0	25.0	30.0	25.0	35.0	25.0	29.0
Max Q Clear Time (g_c+I1), s	10.4	33.6	12.1	16.8	12.7	37.0	14.3	25.9
Green Ext Time (p_c), s	1.7	1.4	0.7	10.4	1.0	0.0	0.8	2.4

Intersection Summary	
HCM 2010 Ctrl Delay	45.2
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	960	1020	290	1600	0	0	0	0	220	5	150
Future Volume (veh/h)	0	960	1020	290	1600	0	0	0	0	220	5	150
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	1863	1863	0				1900	1863	1863
Adj Flow Rate, veh/h	0	980	0	296	1633	0				224	5	56
Adj No. of Lanes	0	2	1	1	2	0				0	1	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98				0.98	0.98	0.98
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1096	490	531	2427	0				278	6	254
Arrive On Green	0.00	0.31	0.00	0.30	0.69	0.00				0.16	0.16	0.16
Sat Flow, veh/h	0	3632	1583	1774	3632	0				1737	39	1583
Grp Volume(v), veh/h	0	980	0	296	1633	0				229	0	56
Grp Sat Flow(s),veh/h/ln	0	1770	1583	1774	1770	0				1776	0	1583
Q Serve(g_s), s	0.0	17.2	0.0	9.1	17.5	0.0				8.1	0.0	2.0
Cycle Q Clear(g_c), s	0.0	17.2	0.0	9.1	17.5	0.0				8.1	0.0	2.0
Prop In Lane	0.00		1.00	1.00		0.00				0.98		1.00
Lane Grp Cap(c), veh/h	0	1096	490	531	2427	0				285	0	254
V/C Ratio(X)	0.00	0.89	0.00	0.56	0.67	0.00				0.80	0.00	0.22
Avail Cap(c_a), veh/h	0	1143	512	531	2427	0				601	0	536
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.43	0.00	0.47	0.47	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	21.4	0.0	19.2	6.0	0.0				26.3	0.0	23.8
Incr Delay (d2), s/veh	0.0	5.3	0.0	0.4	0.7	0.0				2.0	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	9.1	0.0	4.5	8.6	0.0				4.1	0.0	0.9
LnGrp Delay(d),s/veh	0.0	26.8	0.0	19.5	6.7	0.0				28.3	0.0	23.9
LnGrp LOS		C		B	A					C		C
Approach Vol, veh/h		980			1929						285	
Approach Delay, s/veh		26.8			8.6						27.5	
Approach LOS		C			A						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	24.5	25.1		15.4		49.6		
Change Period (Y+Rc), s	* 5	* 5		* 5		* 5		
Max Green Setting (Gmax), s	* 8	* 21		* 22		* 33		
Max Q Clear Time (g_c+I1), s	11.1	19.2		10.1		19.5		
Green Ext Time (p_c), s	0.0	0.9		0.4		7.5		

Intersection Summary	
HCM 2010 Ctrl Delay	15.9
HCM 2010 LOS	B

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	170	1010	0	0	950	250	940	5	290	0	0	0
Future Volume (veh/h)	170	1010	0	0	950	250	940	5	290	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1863	1863	1863	1863			
Adj Flow Rate, veh/h	173	1031	0	0	969	174	963	0	216			
Adj No. of Lanes	1	2	0	0	2	1	2	0	1			
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	294	1927	0	0	1069	478	1071	0	478			
Arrive On Green	0.33	1.00	0.00	0.00	0.30	0.30	0.30	0.00	0.30			
Sat Flow, veh/h	1774	3632	0	0	3632	1583	3548	0	1583			
Grp Volume(v), veh/h	173	1031	0	0	969	174	963	0	216			
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1770	1583	1774	0	1583			
Q Serve(g_s), s	5.3	0.0	0.0	0.0	17.1	5.6	16.9	0.0	7.2			
Cycle Q Clear(g_c), s	5.3	0.0	0.0	0.0	17.1	5.6	16.9	0.0	7.2			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	294	1927	0	0	1069	478	1071	0	478			
V/C Ratio(X)	0.59	0.54	0.00	0.00	0.91	0.36	0.90	0.00	0.45			
Avail Cap(c_a), veh/h	294	1927	0	0	1089	487	1365	0	609			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.79	0.79	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	19.9	0.0	0.0	0.0	21.8	17.8	21.7	0.0	18.3			
Incr Delay (d2), s/veh	1.7	0.8	0.0	0.0	12.6	2.1	6.1	0.0	0.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	2.7	0.2	0.0	0.0	10.2	2.7	9.1	0.0	3.2			
LnGrp Delay(d),s/veh	21.6	0.8	0.0	0.0	34.4	19.9	27.8	0.0	18.6			
LnGrp LOS	C	A			C	B	C		B			
Approach Vol, veh/h		1204			1143			1179				
Approach Delay, s/veh		3.8			32.2			26.1				
Approach LOS		A			C			C				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		40.4			15.8	24.6		24.6
Change Period (Y+Rc), s		* 5			* 5	* 5		5.0
Max Green Setting (Gmax), s		* 30			* 5	* 20		25.0
Max Q Clear Time (g_c+I1), s		2.0			7.3	19.1		18.9
Green Ext Time (p_c), s		5.4			0.0	0.5		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	20.5
HCM 2010 LOS	C

Notes
User approved volume balancing among the lanes for turning movement.

Appendix D

Cumulative Plus Project LOS Calculations

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	884	120	124	654	74	60	100	114	104	140	140
Future Volume (veh/h)	120	884	120	124	654	74	60	100	114	104	140	140
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	130	961	85	135	711	71	65	109	82	113	152	116
Adj No. of Lanes	1	2	1	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	179	1368	612	181	1165	116	135	181	136	172	200	153
Arrive On Green	0.10	0.39	0.39	0.10	0.36	0.36	0.08	0.18	0.18	0.10	0.20	0.20
Sat Flow, veh/h	1774	3539	1583	1774	3251	324	1774	988	743	1774	982	749
Grp Volume(v), veh/h	130	961	85	135	387	395	65	0	191	113	0	268
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1805	1774	0	1732	1774	0	1731
Q Serve(g_s), s	4.4	14.2	2.2	4.6	11.1	11.1	2.2	0.0	6.3	3.8	0.0	9.0
Cycle Q Clear(g_c), s	4.4	14.2	2.2	4.6	11.1	11.1	2.2	0.0	6.3	3.8	0.0	9.0
Prop In Lane	1.00		1.00	1.00		0.18	1.00		0.43	1.00		0.43
Lane Grp Cap(c), veh/h	179	1368	612	181	634	647	135	0	318	172	0	353
V/C Ratio(X)	0.73	0.70	0.14	0.75	0.61	0.61	0.48	0.00	0.60	0.66	0.00	0.76
Avail Cap(c_a), veh/h	430	2287	1023	430	634	647	487	0	699	430	0	699
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	27.0	16.0	12.3	27.0	16.3	16.3	27.4	0.0	23.2	27.0	0.0	23.2
Incr Delay (d2), s/veh	2.1	0.2	0.0	2.3	1.2	1.2	1.0	0.0	0.7	1.6	0.0	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	6.9	1.0	2.4	5.6	5.7	1.1	0.0	3.0	1.9	0.0	4.4
LnGrp Delay(d),s/veh	29.1	16.2	12.3	29.3	17.5	17.5	28.4	0.0	23.9	28.6	0.0	24.5
LnGrp LOS	C	B	B	C	B	B	C		C	C		C
Approach Vol, veh/h		1176			917			256			381	
Approach Delay, s/veh		17.4			19.3			25.0			25.7	
Approach LOS		B			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.3	28.7	7.7	16.1	11.1	27.0	9.0	14.9
Change Period (Y+Rc), s	3.0	4.8	3.0	3.5	4.8	* 4.8	3.0	3.5
Max Green Setting (Gmax), s	15.0	40.0	17.0	25.0	15.0	* 20	15.0	25.0
Max Q Clear Time (g_c+I1), s	6.6	16.2	4.2	11.0	6.4	13.1	5.8	8.3
Green Ext Time (p_c), s	0.1	7.8	0.0	1.6	0.1	4.4	0.1	1.7

Intersection Summary	
HCM 2010 Ctrl Delay	19.9
HCM 2010 LOS	B

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	24	1108	10	34	20	961	70	20	0	30	63	0
Future Volume (vph)	24	1108	10	34	20	961	70	20	0	30	63	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	5.3	5.3		4.0	5.3	5.3	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	1.00		1.00	0.95	1.00	1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.85		1.00	1.00	0.85	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00
Satd. Flow (prot)	1770	3539	1583		1770	3539	1583	1770	1583		1770	1583
Flt Permitted	0.95	1.00	1.00		0.30	1.00	1.00	0.75	1.00		0.74	1.00
Satd. Flow (perm)	1770	3539	1583		556	3539	1583	1403	1583		1370	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	26	1204	11	37	22	1045	76	22	0	33	68	0
RTOR Reduction (vph)	0	0	5	0	0	0	18	0	30	0	0	6
Lane Group Flow (vph)	26	1204	6	0	59	1045	58	22	3	0	68	1
Turn Type	Prot	NA	Perm	custom	Prot	NA	Perm	Perm	NA		Perm	NA
Protected Phases	5	2			1	6			8			4
Permitted Phases			2	1			6	8			4	
Actuated Green, G (s)	2.4	38.0	38.0		13.4	48.5	48.5	6.8	6.8		6.8	6.8
Effective Green, g (s)	2.4	38.0	38.0		13.4	48.5	48.5	6.8	6.8		6.8	6.8
Actuated g/C Ratio	0.03	0.53	0.53		0.19	0.68	0.68	0.10	0.10		0.10	0.10
Clearance Time (s)	4.5	5.3	5.3		4.0	5.3	5.3	4.0	4.0		4.0	4.0
Vehicle Extension (s)	1.0	4.0	4.0		1.0	4.0	4.0	2.5	2.5		2.5	2.5
Lane Grp Cap (vph)	59	1880	841		104	2400	1073	133	150		130	150
v/s Ratio Prot	0.01	c0.34				0.30			0.00			0.00
v/s Ratio Perm			0.00		c0.11		0.04	0.02			c0.05	
v/c Ratio	0.44	0.64	0.01		0.57	0.44	0.05	0.17	0.02		0.52	0.00
Uniform Delay, d1	33.9	11.9	7.9		26.4	5.2	3.8	29.7	29.3		30.8	29.3
Progression Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	1.9	0.8	0.0		4.2	0.2	0.0	0.4	0.0		2.9	0.0
Delay (s)	35.8	12.7	7.9		30.6	5.4	3.9	30.2	29.4		33.7	29.3
Level of Service	D	B	A		C	A	A	C	C		C	C
Approach Delay (s)		13.2				6.6			29.7			33.3
Approach LOS		B				A			C			C

Intersection Summary			
HCM 2000 Control Delay	11.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	71.5	Sum of lost time (s)	13.8
Intersection Capacity Utilization	57.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBR
Lane Configurations	
Traffic Volume (vph)	6
Future Volume (vph)	6
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.92
Adj. Flow (vph)	7
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	38	1197	1040	241	0	45
Future Vol, veh/h	38	1197	1040	241	0	45
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	41	1301	1130	262	0	49

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1392	0	-	0	-	696
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	4.14	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	2.22	-	-	-	-	3.32
Pot Cap-1 Maneuver	487	-	-	-	0	384
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	487	-	-	-	-	384
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	15.7
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	487	-	-	-	384
HCM Lane V/C Ratio	0.085	-	-	-	0.127
HCM Control Delay (s)	13.1	-	-	-	15.7
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q(veh)	0.3	-	-	-	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	1184	22	110	1236	50	29	5	60	80	10	26
Future Volume (veh/h)	21	1184	22	110	1236	50	29	5	60	80	10	26
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	23	1287	13	120	1343	34	32	5	3	87	11	1
Adj No. of Lanes	1	2	1	1	2	1	0	1	1	0	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	62	1716	768	151	1894	847	94	9	456	95	7	456
Arrive On Green	0.03	0.48	0.48	0.09	0.54	0.54	0.29	0.29	0.29	0.29	0.29	0.29
Sat Flow, veh/h	1774	3539	1583	1774	3539	1583	25	30	1583	26	24	1583
Grp Volume(v), veh/h	23	1287	13	120	1343	34	37	0	3	98	0	1
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	55	0	1583	50	0	1583
Q Serve(g_s), s	1.0	22.8	0.3	5.1	22.0	0.8	0.5	0.0	0.1	0.5	0.0	0.0
Cycle Q Clear(g_c), s	1.0	22.8	0.3	5.1	22.0	0.8	22.3	0.0	0.1	22.3	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.86		1.00	0.89		1.00
Lane Grp Cap(c), veh/h	62	1716	768	151	1894	847	102	0	456	102	0	456
V/C Ratio(X)	0.37	0.75	0.02	0.79	0.71	0.04	0.36	0.00	0.01	0.96	0.00	0.00
Avail Cap(c_a), veh/h	343	1826	817	343	1894	847	189	0	551	189	0	551
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	36.6	16.2	10.4	34.8	13.5	8.6	34.2	0.0	19.7	37.4	0.0	19.7
Incr Delay (d2), s/veh	1.4	1.8	0.0	3.5	1.4	0.0	0.8	0.0	0.0	22.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	11.5	0.1	2.7	11.0	0.3	0.8	0.0	0.0	2.7	0.0	0.0
LnGrp Delay(d),s/veh	38.0	18.0	10.4	38.3	14.9	8.6	35.0	0.0	19.7	59.4	0.0	19.7
LnGrp LOS	D	B	B	D	B	A	D		B	E		B
Approach Vol, veh/h		1323			1497			40			99	
Approach Delay, s/veh		18.3			16.6			33.9			59.0	
Approach LOS		B			B			C			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.6	42.1		26.3	5.7	46.0		26.3
Change Period (Y+Rc), s	3.0	4.5		3.5	3.0	4.5		3.5
Max Green Setting (Gmax), s	15.0	40.0		27.0	15.0	40.0		27.0
Max Q Clear Time (g_c+I1), s	7.1	24.8		24.3	3.0	24.0		24.3
Green Ext Time (p_c), s	0.1	12.8		0.1	0.0	15.1		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	19.0
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	218	916	210	300	907	280	271	500	230	350	820	248
Future Volume (veh/h)	218	916	210	300	907	280	271	500	230	350	820	248
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	237	996	194	326	986	238	295	543	221	380	891	228
Adj No. of Lanes	2	2	1	2	2	1	2	2	1	2	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	321	1127	677	447	1257	776	376	925	619	464	1015	602
Arrive On Green	0.09	0.32	0.32	0.13	0.36	0.36	0.11	0.26	0.26	0.13	0.29	0.29
Sat Flow, veh/h	3442	3539	1583	3442	3539	1583	3442	3539	1583	3442	3539	1583
Grp Volume(v), veh/h	237	996	194	326	986	238	295	543	221	380	891	228
Grp Sat Flow(s),veh/h/ln	1721	1770	1583	1721	1770	1583	1721	1770	1583	1721	1770	1583
Q Serve(g_s), s	6.9	27.6	8.3	9.4	25.8	9.3	8.6	13.8	10.2	11.1	24.8	10.8
Cycle Q Clear(g_c), s	6.9	27.6	8.3	9.4	25.8	9.3	8.6	13.8	10.2	11.1	24.8	10.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	321	1127	677	447	1257	776	376	925	619	464	1015	602
V/C Ratio(X)	0.74	0.88	0.29	0.73	0.78	0.31	0.78	0.59	0.36	0.82	0.88	0.38
Avail Cap(c_a), veh/h	832	1197	709	832	1257	776	832	992	649	832	1026	607
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.7	33.4	19.3	43.3	29.8	15.8	44.9	33.3	22.3	43.5	35.2	23.2
Incr Delay (d2), s/veh	3.3	8.1	0.3	4.8	3.5	0.3	2.7	1.0	0.5	2.7	8.9	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	14.7	3.7	4.8	13.2	4.2	4.2	6.9	4.6	5.5	13.4	4.8
LnGrp Delay(d),s/veh	49.0	41.5	19.6	48.1	33.4	16.2	47.6	34.4	22.8	46.3	44.1	23.8
LnGrp LOS	D	D	B	D	C	B	D	C	C	D	D	C
Approach Vol, veh/h		1427			1550			1059			1499	
Approach Delay, s/veh		39.8			33.8			35.6			41.5	
Approach LOS		D			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.0	37.7	14.9	33.8	13.2	41.5	17.5	31.1
Change Period (Y+Rc), s	3.6	4.8	3.6	4.1	3.6	4.8	3.6	4.1
Max Green Setting (Gmax), s	25.0	35.0	25.0	30.0	25.0	35.0	25.0	29.0
Max Q Clear Time (g_c+I1), s	11.4	29.6	10.6	26.8	8.9	27.8	13.1	15.8
Green Ext Time (p_c), s	2.0	3.3	0.7	2.9	0.7	6.8	0.8	10.5

Intersection Summary	
HCM 2010 Ctrl Delay	37.8
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	616	1090	340	1469	0	0	0	0	240	5	208
Future Volume (veh/h)	0	616	1090	340	1469	0	0	0	0	240	5	208
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	1863	1863	0				1900	1863	1863
Adj Flow Rate, veh/h	0	670	0	370	1597	0				261	5	125
Adj No. of Lanes	0	2	1	1	2	0				0	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	845	378	617	2349	0				318	6	289
Arrive On Green	0.00	0.24	0.00	0.35	0.66	0.00				0.18	0.18	0.18
Sat Flow, veh/h	0	3632	1583	1774	3632	0				1742	33	1583
Grp Volume(v), veh/h	0	670	0	370	1597	0				266	0	125
Grp Sat Flow(s),veh/h/ln	0	1770	1583	1774	1770	0				1776	0	1583
Q Serve(g_s), s	0.0	11.6	0.0	11.2	18.0	0.0				9.4	0.0	4.6
Cycle Q Clear(g_c), s	0.0	11.6	0.0	11.2	18.0	0.0				9.4	0.0	4.6
Prop In Lane	0.00		1.00	1.00		0.00				0.98		1.00
Lane Grp Cap(c), veh/h	0	845	378	617	2349	0				324	0	289
V/C Ratio(X)	0.00	0.79	0.00	0.60	0.68	0.00				0.82	0.00	0.43
Avail Cap(c_a), veh/h	0	1143	512	617	2349	0				601	0	536
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.52	0.00	0.55	0.55	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	23.2	0.0	17.5	6.7	0.0				25.5	0.0	23.6
Incr Delay (d2), s/veh	0.0	4.1	0.0	0.6	0.9	0.0				2.0	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	6.1	0.0	5.6	8.9	0.0				4.8	0.0	2.0
LnGrp Delay(d),s/veh	0.0	27.3	0.0	18.1	7.6	0.0				27.5	0.0	24.0
LnGrp LOS		C		B	A					C		C
Approach Vol, veh/h		670			1967						391	
Approach Delay, s/veh		27.3			9.6						26.4	
Approach LOS		C			A						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	27.6	20.5		16.9		48.1		
Change Period (Y+Rc), s	* 5	* 5		* 5		* 5		
Max Green Setting (Gmax), s	* 8	* 21		* 22		* 33		
Max Q Clear Time (g_c+I1), s	13.2	13.6		11.4		20.0		
Green Ext Time (p_c), s	0.0	2.0		0.5		7.2		

Intersection Summary	
HCM 2010 Ctrl Delay	15.7
HCM 2010 LOS	B

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	98	758	0	0	888	180	921	5	120	0	0	0
Future Volume (veh/h)	98	758	0	0	888	180	921	5	120	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1863	1863	1863	1863			
Adj Flow Rate, veh/h	107	824	0	0	965	116	1005	0	46			
Adj No. of Lanes	1	2	0	0	2	1	2	0	1			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	276	1889	0	0	1066	477	1108	0	494			
Arrive On Green	0.31	1.00	0.00	0.00	0.30	0.30	0.31	0.00	0.31			
Sat Flow, veh/h	1774	3632	0	0	3632	1583	3548	0	1583			
Grp Volume(v), veh/h	107	824	0	0	965	116	1005	0	46			
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1770	1583	1774	0	1583			
Q Serve(g_s), s	3.1	0.0	0.0	0.0	17.0	3.6	17.7	0.0	1.3			
Cycle Q Clear(g_c), s	3.1	0.0	0.0	0.0	17.0	3.6	17.7	0.0	1.3			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	276	1889	0	0	1066	477	1108	0	494			
V/C Ratio(X)	0.39	0.44	0.00	0.00	0.91	0.24	0.91	0.00	0.09			
Avail Cap(c_a), veh/h	276	1889	0	0	1089	487	1365	0	609			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.91	0.91	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	19.9	0.0	0.0	0.0	21.8	17.1	21.4	0.0	15.8			
Incr Delay (d2), s/veh	0.3	0.7	0.0	0.0	12.5	1.2	7.0	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	1.5	0.2	0.0	0.0	10.2	1.7	9.7	0.0	0.6			
LnGrp Delay(d),s/veh	20.2	0.7	0.0	0.0	34.3	18.3	28.4	0.0	15.9			
LnGrp LOS	C	A			C	B	C		B			
Approach Vol, veh/h		931			1081			1051				
Approach Delay, s/veh		2.9			32.6			27.9				
Approach LOS		A			C			C				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		39.7			15.1	24.6		25.3
Change Period (Y+Rc), s		* 5			* 5	* 5		5.0
Max Green Setting (Gmax), s		* 30			* 5	* 20		25.0
Max Q Clear Time (g_c+I1), s		2.0			5.1	19.0		19.7
Green Ext Time (p_c), s		4.1			0.0	0.5		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	22.0
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	836	60	105	1135	134	130	130	86	85	130	120
Future Volume (veh/h)	100	836	60	105	1135	134	130	130	86	85	130	120
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	108	899	21	113	1220	135	140	140	69	91	140	97
Adj No. of Lanes	1	2	1	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	168	1370	613	171	1157	128	181	234	116	158	191	132
Arrive On Green	0.09	0.39	0.39	0.10	0.36	0.36	0.10	0.20	0.20	0.09	0.19	0.19
Sat Flow, veh/h	1774	3539	1583	1774	3215	355	1774	1179	581	1774	1026	711
Grp Volume(v), veh/h	108	899	21	113	670	685	140	0	209	91	0	237
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1800	1774	0	1760	1774	0	1737
Q Serve(g_s), s	3.7	13.0	0.5	3.8	22.5	22.5	4.8	0.0	6.7	3.1	0.0	8.0
Cycle Q Clear(g_c), s	3.7	13.0	0.5	3.8	22.5	22.5	4.8	0.0	6.7	3.1	0.0	8.0
Prop In Lane	1.00		1.00	1.00		0.20	1.00		0.33	1.00		0.41
Lane Grp Cap(c), veh/h	168	1370	613	171	637	648	181	0	350	158	0	323
V/C Ratio(X)	0.64	0.66	0.03	0.66	1.05	1.06	0.77	0.00	0.60	0.58	0.00	0.73
Avail Cap(c_a), veh/h	426	2265	1013	426	637	648	482	0	704	426	0	695
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	27.3	15.7	11.9	27.3	20.0	20.0	27.4	0.0	22.8	27.3	0.0	24.0
Incr Delay (d2), s/veh	1.5	0.2	0.0	1.6	50.1	51.6	2.6	0.0	0.6	1.2	0.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	6.4	0.2	2.0	19.7	20.3	2.5	0.0	3.3	1.6	0.0	3.9
LnGrp Delay(d),s/veh	28.8	15.9	11.9	28.9	70.1	71.6	30.0	0.0	23.4	28.6	0.0	25.2
LnGrp LOS	C	B	B	C	F	F	C		C	C		C
Approach Vol, veh/h		1028			1468			349			328	
Approach Delay, s/veh		17.2			67.6			26.0			26.2	
Approach LOS		B			E			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	29.0	9.4	15.1	10.7	27.3	8.6	15.9
Change Period (Y+Rc), s	3.0	4.8	3.0	3.5	4.8	* 4.8	3.0	3.5
Max Green Setting (Gmax), s	15.0	40.0	17.0	25.0	15.0	* 20	15.0	25.0
Max Q Clear Time (g_c+I1), s	5.8	15.0	6.8	10.0	5.7	24.5	5.1	8.7
Green Ext Time (p_c), s	0.1	9.2	0.1	1.6	0.1	0.0	0.1	1.6

Intersection Summary	
HCM 2010 Ctrl Delay	42.4
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	12	1065	10	126	30	1340	30	5	0	20	185	0
Future Volume (vph)	12	1065	10	126	30	1340	30	5	0	20	185	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	5.3	5.3		4.0	5.3	5.3	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	1.00		1.00	0.95	1.00	1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.85		1.00	1.00	0.85	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00
Satd. Flow (prot)	1770	3539	1583		1770	3539	1583	1770	1583		1770	1583
Flt Permitted	0.95	1.00	1.00		0.20	1.00	1.00	0.74	1.00		0.74	1.00
Satd. Flow (perm)	1770	3539	1583		363	3539	1583	1381	1583		1386	1583
Peak-hour factor, PHF	0.98	0.98	0.98	0.92	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	12	1087	10	137	31	1367	31	5	0	20	189	0
RTOR Reduction (vph)	0	0	6	0	0	0	12	0	16	0	0	19
Lane Group Flow (vph)	12	1087	4	0	168	1367	19	5	4	0	189	5
Turn Type	Prot	NA	Perm	custom	Prot	NA	Perm	Perm	NA		Perm	NA
Protected Phases	5	2			1	6			8			4
Permitted Phases			2	1			6	8			4	
Actuated Green, G (s)	1.2	35.1	35.1		20.5	53.9	53.9	19.2	19.2		19.2	19.2
Effective Green, g (s)	1.2	35.1	35.1		20.5	53.9	53.9	19.2	19.2		19.2	19.2
Actuated g/C Ratio	0.01	0.40	0.40		0.23	0.61	0.61	0.22	0.22		0.22	0.22
Clearance Time (s)	4.5	5.3	5.3		4.0	5.3	5.3	4.0	4.0		4.0	4.0
Vehicle Extension (s)	1.0	4.0	4.0		1.0	4.0	4.0	2.5	2.5		2.5	2.5
Lane Grp Cap (vph)	24	1409	630		84	2165	968	300	344		302	344
v/s Ratio Prot	0.01	c0.31				0.39			0.00			0.00
v/s Ratio Perm			0.00		c0.46		0.01	0.00			c0.14	
v/c Ratio	0.50	0.77	0.01		2.00	0.63	0.02	0.02	0.01		0.63	0.02
Uniform Delay, d1	43.2	23.0	16.0		33.8	10.8	6.7	27.0	27.0		31.2	27.0
Progression Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	5.8	2.8	0.0		489.4	0.7	0.0	0.0	0.0		3.5	0.0
Delay (s)	49.0	25.9	16.0		523.2	11.5	6.7	27.1	27.0		34.7	27.0
Level of Service	D	C	B		F	B	A	C	C		C	C
Approach Delay (s)		26.0				66.3			27.0			33.8
Approach LOS		C				E			C			C

Intersection Summary			
HCM 2000 Control Delay	48.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	88.1	Sum of lost time (s)	13.8
Intersection Capacity Utilization	71.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBR
Lane Configurations	
Traffic Volume (vph)	24
Future Volume (vph)	24
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.98
Adj. Flow (vph)	24
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	15	1381	1360	99	0	166
Future Vol, veh/h	15	1381	1360	99	0	166
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	1501	1478	108	0	180

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1586	0	-	0	-	793
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	4.14	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	2.22	-	-	-	-	3.32
Pot Cap-1 Maneuver	410	-	-	-	0	331
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	410	-	-	-	-	331
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	28.2
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	410	-	-	-	331
HCM Lane V/C Ratio	0.04	-	-	-	0.545
HCM Control Delay (s)	14.1	-	-	-	28.2
HCM Lane LOS	B	-	-	-	D
HCM 95th %tile Q(veh)	0.1	-	-	-	3.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	56	1306	69	180	1294	130	103	40	180	220	30	52
Future Volume (vph)	56	1306	69	180	1294	130	103	40	180	220	30	52
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	4.5	4.5	3.0	4.5	4.5		3.5	3.5		3.5	3.5
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.97	1.00		0.96	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583		1798	1583		1784	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00		0.51	1.00		0.59	1.00
Satd. Flow (perm)	1770	3539	1583	1770	3539	1583		944	1583		1107	1583
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	58	1346	71	186	1334	134	106	41	186	227	31	54
RTOR Reduction (vph)	0	0	22	0	0	63	0	0	136	0	0	39
Lane Group Flow (vph)	58	1346	49	186	1334	71	0	147	50	0	258	15
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases			2			6	8		8	4		4
Actuated Green, G (s)	6.3	38.7	38.7	12.3	44.7	44.7		22.9	22.9		22.9	22.9
Effective Green, g (s)	6.3	38.7	38.7	12.3	44.7	44.7		22.9	22.9		22.9	22.9
Actuated g/C Ratio	0.07	0.46	0.46	0.14	0.53	0.53		0.27	0.27		0.27	0.27
Clearance Time (s)	3.0	4.5	4.5	3.0	4.5	4.5		3.5	3.5		3.5	3.5
Vehicle Extension (s)	2.0	4.0	4.0	2.0	4.0	4.0		2.0	2.0		2.0	2.0
Lane Grp Cap (vph)	131	1613	721	256	1863	833		254	426		298	426
v/s Ratio Prot	0.03	c0.38		c0.11	0.38							
v/s Ratio Perm			0.03			0.04		0.16	0.03		c0.23	0.01
v/c Ratio	0.44	0.83	0.07	0.73	0.72	0.08		0.58	0.12		0.87	0.04
Uniform Delay, d1	37.6	20.3	13.0	34.7	15.3	10.0		26.8	23.4		29.5	22.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2	0.9	4.1	0.1	8.4	1.4	0.1		2.0	0.0		21.5	0.0
Delay (s)	38.5	24.4	13.0	43.1	16.7	10.0		28.8	23.4		51.0	22.9
Level of Service	D	C	B	D	B	B		C	C		D	C
Approach Delay (s)		24.4			19.1			25.8			46.2	
Approach LOS		C			B			C			D	

Intersection Summary			
HCM 2000 Control Delay	24.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	84.9	Sum of lost time (s)	11.0
Intersection Capacity Utilization	76.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	369	1183	254	270	1163	340	349	790	320	390	550	232
Future Volume (veh/h)	369	1183	254	270	1163	340	349	790	320	390	550	232
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	380	1220	209	278	1199	329	360	814	302	402	567	212
Adj No. of Lanes	2	2	1	2	2	1	2	2	1	2	2	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	465	1208	742	385	1126	725	438	923	590	480	967	646
Arrive On Green	0.14	0.34	0.34	0.11	0.32	0.32	0.13	0.26	0.26	0.14	0.27	0.27
Sat Flow, veh/h	3442	3539	1583	3442	3539	1583	3442	3539	1583	3442	3539	1583
Grp Volume(v), veh/h	380	1220	209	278	1199	329	360	814	302	402	567	212
Grp Sat Flow(s),veh/h/ln	1721	1770	1583	1721	1770	1583	1721	1770	1583	1721	1770	1583
Q Serve(g_s), s	11.8	37.6	8.9	8.6	35.0	15.6	11.2	24.3	16.3	12.5	15.2	10.1
Cycle Q Clear(g_c), s	11.8	37.6	8.9	8.6	35.0	15.6	11.2	24.3	16.3	12.5	15.2	10.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	465	1208	742	385	1126	725	438	923	590	480	967	646
V/C Ratio(X)	0.82	1.01	0.28	0.72	1.06	0.45	0.82	0.88	0.51	0.84	0.59	0.33
Avail Cap(c_a), veh/h	782	1208	742	782	1126	725	782	933	594	782	967	646
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.3	36.2	17.9	47.2	37.5	20.4	46.8	39.0	26.7	46.1	34.6	22.2
Incr Delay (d2), s/veh	3.6	28.3	0.3	5.4	45.8	0.6	3.0	10.1	1.0	3.4	1.1	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.8	23.0	3.9	4.4	24.2	6.9	5.5	13.2	7.3	6.2	7.6	4.4
LnGrp Delay(d),s/veh	49.9	64.5	18.2	52.6	83.3	21.0	49.7	49.1	27.8	49.5	35.7	22.7
LnGrp LOS	D	F	B	D	F	C	D	D	C	D	D	C
Approach Vol, veh/h		1809			1806			1476			1181	
Approach Delay, s/veh		56.1			67.2			44.9			38.1	
Approach LOS		E			E			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.9	42.4	17.6	34.2	18.5	39.8	19.0	32.8
Change Period (Y+Rc), s	3.6	4.8	3.6	4.1	3.6	4.8	3.6	4.1
Max Green Setting (Gmax), s	25.0	35.0	25.0	30.0	25.0	35.0	25.0	29.0
Max Q Clear Time (g_c+I1), s	10.6	39.6	13.2	17.2	13.8	37.0	14.5	26.3
Green Ext Time (p_c), s	1.7	0.0	0.8	10.2	1.0	0.0	0.8	2.4

Intersection Summary	
HCM 2010 Ctrl Delay	53.3
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1019	1094	290	1641	0	0	0	0	220	5	162
Future Volume (veh/h)	0	1019	1094	290	1641	0	0	0	0	220	5	162
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	1863	1863	0				1900	1863	1863
Adj Flow Rate, veh/h	0	1040	0	296	1674	0				224	5	68
Adj No. of Lanes	0	2	1	1	2	0				0	1	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98				0.98	0.98	0.98
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1130	506	513	2426	0				279	6	254
Arrive On Green	0.00	0.32	0.00	0.29	0.69	0.00				0.16	0.16	0.16
Sat Flow, veh/h	0	3632	1583	1774	3632	0				1737	39	1583
Grp Volume(v), veh/h	0	1040	0	296	1674	0				229	0	68
Grp Sat Flow(s),veh/h/ln	0	1770	1583	1774	1770	0				1776	0	1583
Q Serve(g_s), s	0.0	18.4	0.0	9.3	18.3	0.0				8.1	0.0	2.4
Cycle Q Clear(g_c), s	0.0	18.4	0.0	9.3	18.3	0.0				8.1	0.0	2.4
Prop In Lane	0.00		1.00	1.00		0.00				0.98		1.00
Lane Grp Cap(c), veh/h	0	1130	506	513	2426	0				285	0	254
V/C Ratio(X)	0.00	0.92	0.00	0.58	0.69	0.00				0.80	0.00	0.27
Avail Cap(c_a), veh/h	0	1143	512	513	2426	0				601	0	536
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.27	0.00	0.44	0.44	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	21.3	0.0	19.7	6.1	0.0				26.3	0.0	23.9
Incr Delay (d2), s/veh	0.0	4.4	0.0	0.5	0.7	0.0				2.0	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	9.6	0.0	4.6	9.1	0.0				4.1	0.0	1.1
LnGrp Delay(d),s/veh	0.0	25.7	0.0	20.2	6.8	0.0				28.3	0.0	24.1
LnGrp LOS		C		C	A					C		C
Approach Vol, veh/h		1040			1970						297	
Approach Delay, s/veh		25.7			8.8						27.4	
Approach LOS		C			A						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	23.8	25.8		15.4		49.6		
Change Period (Y+Rc), s	* 5	* 5		* 5		* 5		
Max Green Setting (Gmax), s	* 8	* 21		* 22		* 33		
Max Q Clear Time (g_c+I1), s	11.3	20.4		10.1		20.3		
Green Ext Time (p_c), s	0.0	0.3		0.4		7.4		

Intersection Summary	
HCM 2010 Ctrl Delay	15.8
HCM 2010 LOS	B

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	200	1039	0	0	962	250	969	5	290	0	0	0
Future Volume (veh/h)	200	1039	0	0	962	250	969	5	290	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1863	1863	1863	1863			
Adj Flow Rate, veh/h	204	1060	0	0	982	175	993	0	217			
Adj No. of Lanes	1	2	0	0	2	1	2	0	1			
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	276	1898	0	0	1075	481	1099	0	491			
Arrive On Green	0.31	1.00	0.00	0.00	0.30	0.30	0.31	0.00	0.31			
Sat Flow, veh/h	1774	3632	0	0	3632	1583	3548	0	1583			
Grp Volume(v), veh/h	204	1060	0	0	982	175	993	0	217			
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1770	1583	1774	0	1583			
Q Serve(g_s), s	6.7	0.0	0.0	0.0	17.4	5.6	17.4	0.0	7.1			
Cycle Q Clear(g_c), s	6.7	0.0	0.0	0.0	17.4	5.6	17.4	0.0	7.1			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	276	1898	0	0	1075	481	1099	0	491			
V/C Ratio(X)	0.74	0.56	0.00	0.00	0.91	0.36	0.90	0.00	0.44			
Avail Cap(c_a), veh/h	276	1898	0	0	1089	487	1365	0	609			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.75	0.75	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	21.2	0.0	0.0	0.0	21.8	17.7	21.5	0.0	17.9			
Incr Delay (d2), s/veh	6.8	0.9	0.0	0.0	13.2	2.1	6.6	0.0	0.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	3.8	0.2	0.0	0.0	10.4	2.7	9.4	0.0	3.1			
LnGrp Delay(d),s/veh	28.0	0.9	0.0	0.0	35.0	19.8	28.1	0.0	18.2			
LnGrp LOS	C	A			C	B	C		B			
Approach Vol, veh/h		1264			1157			1210				
Approach Delay, s/veh		5.3			32.7			26.3				
Approach LOS		A			C			C				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		39.9			15.1	24.7		25.1
Change Period (Y+Rc), s		* 5			* 5	* 5		5.0
Max Green Setting (Gmax), s		* 30			* 5	* 20		25.0
Max Q Clear Time (g_c+I1), s		2.0			8.7	19.4		19.4
Green Ext Time (p_c), s		5.6			0.0	0.4		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	21.0
HCM 2010 LOS	C

Notes
User approved volume balancing among the lanes for turning movement.

1 EXTERIOR ELEVATION - EAST

Scale: 1/8" = 1'-0"

2 EXTERIOR ELEVATION - SOUTH

Scale: 1/8" = 1'-0"

KAP
KELLY ARCHITECTURE & PLANNING

Client:
ENLOE MEDICAL CENTER

Facility:
Enloe Medical Center
Medical Offices Building
250 W. East Avenue
Chico, CA 95926

Project Name:
New OSHPD 3
Medical Office Building

Submittal:
ARCHITECTURAL
DESIGN REVIEW

Architect of Record
LICENSED ARCHITECT KELLY W. MAYES C27597 REN. 5/19 STATE OF CALIFORNIA

Date Signed:

Consultant

Revisions
Description

Approvals

Key Plan

N.T.S.

KAP Job No. 240.00
Scale: As Noted
Date: 04/06/2018
Drawn By: AG/RJS
Checked By: KM / SJ

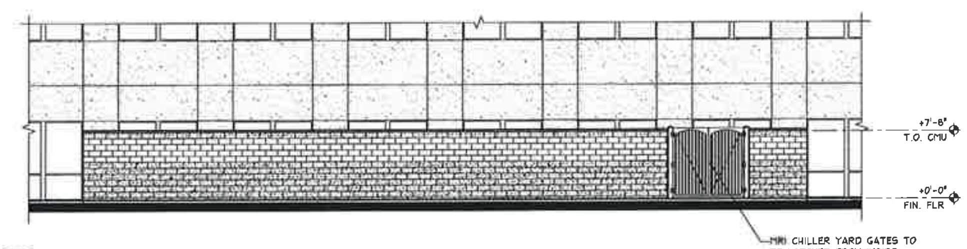
Sheet Name
EXTERIOR
ELEVATIONS

Sheet Number
A7.00

Attachment H

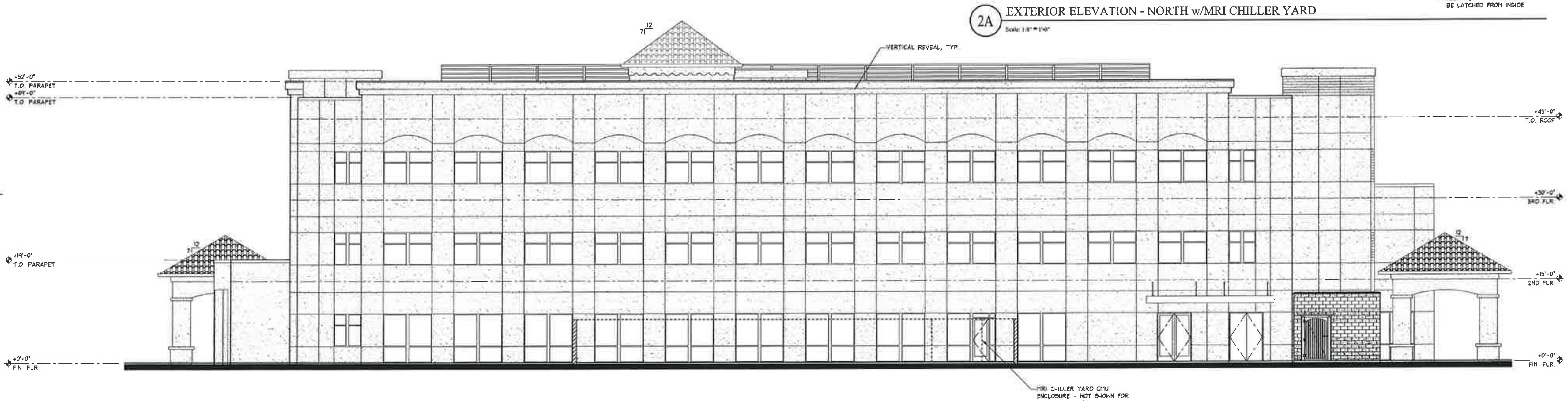
1 EXTERIOR ELEVATION - WEST

Scale: 1/8" = 1'-0"



2A EXTERIOR ELEVATION - NORTH w/MRI CHILLER YARD

Scale: 1/8" = 1'-0"



2 EXTERIOR ELEVATION - NORTH

Scale: 1/8" = 1'-0"

KAP
KELLY ARCHITECTURE & PLANNING

Client:

ENLOE MEDICAL CENTER

Facility:

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Medical Offices Building
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Submittal:

ARCHITECTURAL
DESIGN REVIEW

Architect of Record

LICENSED ARCHITECT KELLY W MAYES C27597 REN. 5/19 STATE OF CALIFORNIA

Date Signed: __/__/__

Consultant

Revisions

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Key Plan

N.T.S.

KAP Job No: 240.00
Scale: As Noted
Date: 04/06/2018
Drawn By: AG/RJS
Checked By: KM / SJ

Sheet Name

EXTERIOR
ELEVATIONS

Sheet Number

A7.01

Attachment H

TILT-UP PANEL
- COLOR #5

MNFR:
DUNN EDWARDS

COLOR:
ALABASTER DEW310

ROOF

MNFR:
McELROY METAL

STYLE:
MET-TILE

COLOR:
MISSION CLAY

STUCCO -
COLOR #3

MNFR:
DUNN EDWARDS

COLOR:
WHOLE WHEAT DE6124

COLOR #1

MNFR:
DUNN EDWARDS

COLOR:
QUICKSAND DEC754

STUCCO -
COLOR #4

MNFR:
DUNN EDWARDS

COLOR:
VERONA BEACH DE6135

COLOR #7

MNFR:
DUNN EDWARDS

COLOR:
BLACK TIE DE6357

COLOR #8

MNFR:
DUNN EDWARDS

COLOR:
WOODED ACRE DE 6130

STUCCO -
COLOR #2

MNFR:
DUNN EDWARDS

COLOR:
WOODED ACRE DE6130

SOLAR PANEL STRUCTURE
- COLOR #6

MNFR:
DUNN EDWARDS

COLOR:
HURRICANE MIST DEW371

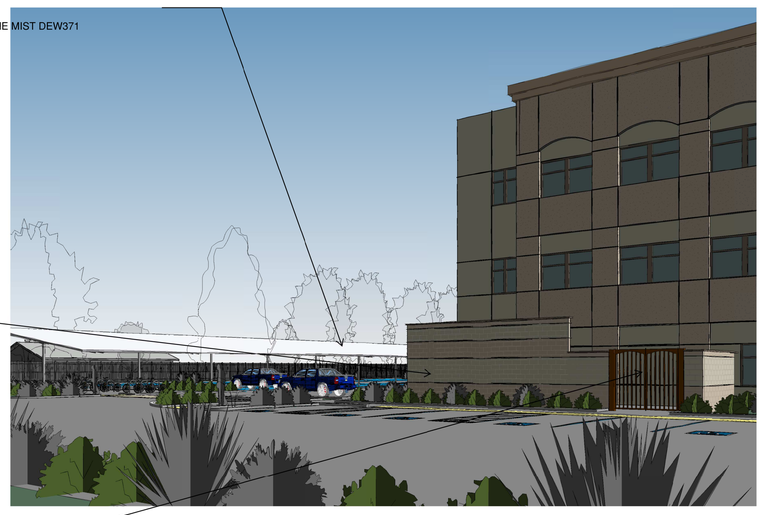
TRASH ENCLOSURE

MNFR: BASALITE

STYLE: SHOT BLAST

COLOR: 113

LIGHTWEIGHT STANDARD



GATES - COLOR #9

MNFR:
DUNN EDWARDS

COLOR:
GEORGIA CLAY DE 5181

ENLOE MEDICAL CENTER

ENLOE MEDICAL OFFICE BUILDING

CHICO, CA

Recieved 5/1/18 sc

05/01/18

KAP
KELLY ARCHITECTURE & PLANNING

Attachment I

1 SOUTHEAST VIEW

2 EAST VIEW

APR 06 2018

KAP
KELLY ARCHITECTURE & PLANNING
0525 LONETREE BOULEVARD | ROCKLIN, CA 95765
P: 916.625.7100 | WWW.KELLYKAP.COM

Client:
ENLOE MEDICAL CENTER

Facility:
Enloe Medical Center
Medical Offices Building
250 W. East Avenue
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Architect of Record
LICENSED ARCHITECT KELLY W. MAHES C27597 REN 5/19 STATE OF CALIFORNIA

Date Signed: __/__/__

Consultant

Revisions
Description
△
△
△
△
△

Approvals

Key Plan
N.T.S.

KAP Job No. 240.00
Scale: As Noted
Date: 03/30/2018
Drawn By: AG/RJS
Checked By: KM / SJ

Sheet Name
BUILDING
RENDERINGS

Sheet Number
A7.20

Attachment J

3 WEST VIEW

4 NORTHWEST VIEW

KAP
KELLY ARCHITECTURE & PLANNING
6105 LONETREE BOULEVARD | ROCKLIN, CA 95765
P: 916.797.1700 | WWW.KELLYKAP.COM

Client:
ENLOE MEDICAL CENTER

Facility:
Enloe Medical Center
Medical Offices Building
250 W, East Avenue
Chico, CA 95926

Project Name:
New OSHPD 3
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Submittal:
ARCHITECTURAL
DESIGN REVIEW

Architect of Record
LICENSED ARCHITECT KELLY W. MANES C27597 EXP. 5/19 STATE OF CALIFORNIA
Date Signed: 1/1

Consultant

Revisions
Description
△
△
△
△
△

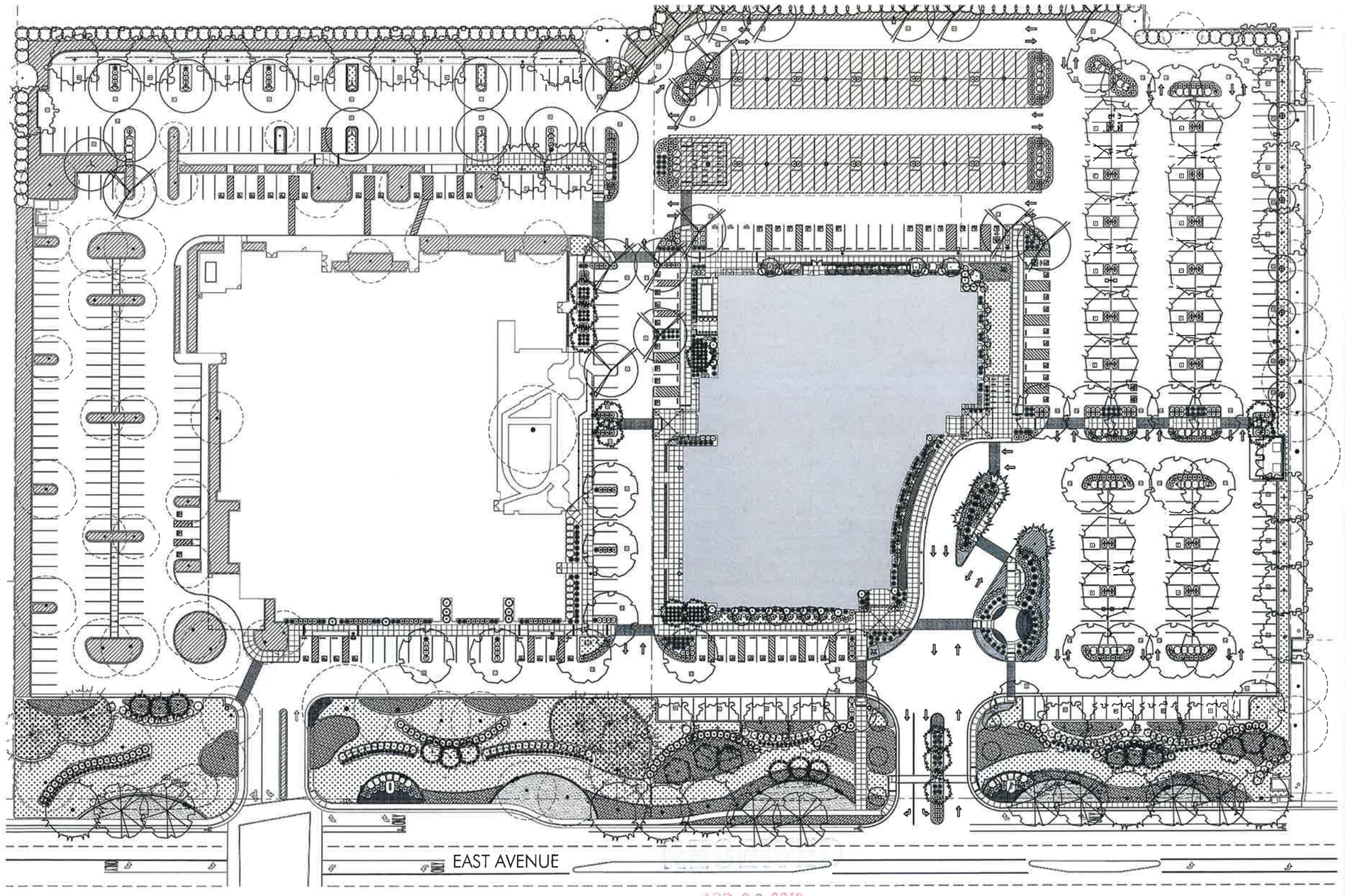
Approvals

Key Plan
N.T.S.

KAP Job No. 240.00
Scale: As Noted
Date: 03/30/2018
Drawn By: AG/RJS
Checked By: KM / SJ

Sheet Name
BUILDING
RENDERINGS

Sheet Number
A7.21
Attachment J



TREE LIST

SYMBOL	LATIN NAME/ COMMON NAME	SPREAD	CONTAINER SIZE
	CERCIS CANADENSIS EASTERN REDBUD	40'	15 GAL
	QUERCUS ILEX HOLLY OAK	40'	15 GAL
	QUERCUS LOBATA VALLEY OAK	40'	15 GAL
	QUERCUS COCCINEA SCARLET OAK	40'	15 GAL
	PISTACHIA CHINENSIS CHINESE PISTACHE	40'	15 GAL
	ULMUS PARVIFOLIA 'DRAKE' DRAKE EVERGREEN ELM	40'	15 GAL
	QUERCUS ALBA X ROBUR 'CRIMSCHMIDT' CRIMSON SPIRE OAK	10'+	15 GAL
	LAGERSTROEMIA INDICA CRAPE MYRTLE	15'+	15 GAL
	CEDRUS ATLANTICA 'GLAUCA PENDULA' WEEPING BLUE ATLAS CEDAR	15'+	15 GAL
	PINUS CANARIENSIS CANARY ISLAND PINE	20'+	15 GAL
	PICEA GLAUCA PENDULA WEEPING WHITE SPRUCE	10'	15 GAL
	CITY OF CHICO STREET TREE (DEODAR CEDAR TO MATCH EXISTING?). TO BE DETERMINED BY CITY OF CHICO URBAN FORESTER	40'	15 GAL
	CITY OF CHICO STREET TREE (PISTACHE TO MATCH EXISTING?) TO BE DETERMINED BY CITY OF CHICO URBAN FORESTER.	40'	15 GAL

SHRUB LIST

SYMBOL	LATIN NAME/ COMMON NAME	SPREAD	CONTAINER SIZE
	PITTOSPORUM TOBIRA 'VARIEGATUM' VARIEGATED JAPANESE MOCK ORANGE	5'	5 GAL
	LOROPETALUM CHINENSE 'COMPATCA' COMPACT RAZZLEBERRI FRINGE FLOWER	5'	5 GAL
	ROSA X 'NOARE' P.P.# 11308 FLOWER CARPET® RED GROUNDCOVER ROSE	5'	5 GAL
	DIETES BICOLOR FORTNIGHT LILY	3'	1 GAL
	HETEROMELES ARBUTIFOLIA TOYON	10'	5 GAL
	PODOCARPUS MACROPHYLLUS 'MAKI' SHRUBBY YEW PODOCARPUS	3'	5 GAL
	NANDINA DOMESTICA NANA PURPUREA DWARF HEAVENLY BAMBOO	18"	1 GAL
	RHAPHIOLEPIS INDICA 'BALLERINA' BALLERINA INDIAN HAWTHORN	3'	5 GAL
	PRUNUS LAUROCERASUS 'OTTO LUYKEN' OTTO LUYKEN ENGLISH LAUREL	6'	5 GAL
	TRACHELOSPERMUM JASMINOIDES STAR JASMINE	3'	1 GAL
	CHAMAECYPARIS OBTUSA 'GRACILIS' SLENDER HINOKI FALSE CYPRESS	3'	5 GAL
	OLEA EUROPAEA 'MONTRA' LITTLE OLLIE® DWARF OLIVE	6'	5 GAL
	PIERIS JAPONICA LILY OF THE VALLEY	4'	5 GAL
	HYDRANGEA QUERCIFOLIA OAKLEAF HYDRANGEA	5'	5 GAL
	CAMELLIA SASANQUA 'WHITE DOVES' (MINE-NO-YUKI) WHITE DOVES CAMELLIA	5'	5 GAL
	DAPHNE ODORA 'AUREO-MARGINATA' VARIEGATED WINTER DAPHNE	5'	5 GAL
	AZALEA SOUTHERN INDICA 'PRIDE OF DORKING' RED SUN AZALEA	5'	5 GAL
	AGAPANTHUS AFRICANUS LILY OF THE NILE	5'	5 GAL
	ACER PALMATUM DISSECTUM 'VIRIDIS' GREEN DWARF JAPANESE MAPLE	10'	15 GAL
	ACER PALMATUM DISSECTUM 'GARNET' RED DWARF JAPANESE MAPLE	8'	15 GAL
GROUNDCOVER		SPACING	
	TRACHELOSPERMUM JASMINOIDES STAR JASMINE	36"	1 GAL
	JUNIPERUS CONFERTA SHORE JUNIPER	36"	1 GAL
	NEPHROLEPIS CORDIFOLIA SOUTHERN SWORD FERN	36"	1 GAL
	TEUCRIUM CHAMAEDRYS (SEASONAL)	30"	FLATS
	ANNUAL COLOR (SEASONAL)	12"	FLATS
	BIOFILTRATION SOD NATIVE 'MOW-FREE' MIX	--	SOD OR SEED
VINES		SPACING	
	FICUS PUMILA MINIMA DWARF CREEPING FIG	--	1 GAL

APR 06 2018

CITY OF CHICO
PLANNING SERVICES

SEE SHEET 4 FOR PARKING LOT SHADE AND LANDSCAPE CALCULATIONS, LANDSCAPE IRRIGATION NOTE, SOILS STATEMENT, TOP DRESSING NOTE, AND OTHER INFORMATION.

ENLOE MEDICAL OFFICE BUILDING

PRELIMINARY LANDSCAPE PLANTING PLAN

DATE: MARCH 28, 2018
PROJECT NUMBER: 1944
DRAWN: JBB

Prepared for:

ENLOE MEDICAL CENTER

MODERN BUILDING COMPANY
PO BOX 773

KAP
KELLY ARCHITECTURE & PLANNING

SOLAR INFLUENCE

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

NORTH

Prepared by:
BRIAN FIRTH LANDSCAPE ARCHITECT, INC.
627 BROADWAY, SUITE 220, CHICO, CALIFORNIA 95928
PHONE: (530) 899-1130 www.BFLAdesign.com

EXHIBIT " "

Attachment K

COMMUNITY DEVELOPMENT
DEPARTMENT

411 Main Street - 2nd Floor
P.O. Box 3420
Chico, CA 95927
http://www.ci.chico.ca.us

PLANNING
(530) 879-6800
Fax (530) 895-4726

May 30, 2018

RE: Enloe Medical Office Building (GPA/RZ 16-01, UP 18-01, AR 18-01)
Neighborhood Meeting, staff notes

Attendees:
Applicant: Bill Seguine c/o Enloe Medical Center
Architect: Kelly Maves
Contractor: Mike Wyrauch and James Seegert, Modern Building
Engineer: Jim Stevens c/o Northstar Engineering
City Staff:
Shannon Costa, Assistant Planner
Bruce Ambo, Principal Planner

Neighbors/public: approximately 20 people

Items of discussion:

- The fence at the northwest corner of the site (opposite the residences and mobile home park) is falling down;
- Homeless folks get in from the corner hole in the fence;
- The applicant intends to fence the west and east boarders of the property;
- Want more substantial and taller wall, a wood fence doesn't abate the sound and headlights glare through the
- Wood fence openings;
- Want uniform fencing and landscaping buffering the residences;
- Want fence that extends thru access and openings to the adjoining residents in the mobile home park;
- Is the office building a 24-hour operation? Answer: The building hours will be 8-5, Monday-Friday. 8-8 prompt care 7 days a week.
- No heliport is proposed
- Don't like the 3rd Floor because the backyards can be seen.
- Landscaping is needed for screening;
- Don't want to wait 18 years for trees to reach maturity for screening purposes;
- 6-foot wood fencing is a problem and doesn't hold up to the weather and irrigation
- The applicant intends to install a good neighbor wood fence with good finishes on each side of the fence.
- 3 stories are too high; 2 stories are better
- Concerned with the garbage truck disposal noise and the route through the parking lot and proximity to residents