PLANNING COMMISSION STAFF REPORT



DUTCH BROS

July 20, 2022

Hillcrest Avenue & Wildflower Drive UP-21-08, AR-21-05



Quick Facts

Applicant:

Amardeep Sidhu

APN: 052-460-033

Zoning: C-2

GP Land Use:

Neighborhood

Community Commercial

Land Area: .95 acres

Prop. Building Area: 1,400

sq. ft.

Project Description

The applicant is seeking Use Permit and Design Review approval for a new 1,133 sq. ft. drive-through coffee business, and a 1,400 sq. ft. pad building on Hillcrest Ave. at Wildflower Drive. The subject site is a vacant .95 acre parcel and located between an existing grocery store and gas station. The business is proposed to be open Sunday-Thursday 4:30am-10pm and Friday-Saturday 4:30am-11pm. The building design includes horizontal composite siding at the tower element, stucco, brick base and steel awnings.

Requested Approvals

USE PERMIT & DESIGN REVIEW

STAFF RECOMMENDATION: APPROVE

BACKGROUND

Subject Site

The subject site is approximately .95 acres in size, and is bounded by Hillcrest Avenue to the north, Wildflower Drive to the east, and Deer Valley Road to the west. The site is currently undeveloped, and primarily flat with a slight elevation increase to the west of the property. Surrounding land uses include the previously approved Wildflower Station to the north, an ARCO gas station to the east, an undeveloped commercial parcel to the south, and a commercial shopping center that includes a Safeway to the west.



Site History

The site is parcel 2 within Tract 214, Parcel Map 26. The site does not have any previously approved site plans or other entitlements. The site has been vacant land since map recordation.

Project Timeline

- Project Submitted to City: April 13, 2021
- Project Deemed complete: September 28, 2021
- Traffic Analysis completed: May 20, 2022
- Planning Commission Consideration (tentative): July 20, 2022

Analysis

Overview

The applicant is seeking Use Permit and Design Review approval for a new 1,400 sq. ft. drive-through coffee business on Hillcrest Ave. at Wildflower Drive. The business is proposed to be open Sunday-Thursday 4:30am-10pm and Friday-Saturday 4:30am-11pm. The maximum number of employees on-site per shift at the Dutch Bros will be five. The applicant proposes a potential of two to three employees for the food pad. Additional project components include site landscaping, and trash enclosure.

General Plan, Zoning, and Land Use

The General Plan designation of the site is Neighborhood Community Commercial. The zoning of the site is C-2 (Neighborhood/Community Commercial District) which allows for commercial offices, retail stores and service establishments which are compatible with, and dependent upon residential developments. A new restaurant/ coffee shop with drive-thru is allowed on site subject to Use Permit and Design Review approval through the Planning Commission.

	Comparison of Adjacent Properties						
Vicinity	GP Land Use	Zoning	Current Use				
North	Mixed Use	Planned Development	Residential/Commercial				
South	Neighborhood Community Commercial	C-2: Neighborhood/Community Commercial District	Vacant				
East	Neighborhood Community Commercial	C-2: Neighborhood/Community Commercial District	Gas Station				
West	Neighborhood Community Commercial	C-2: Neighborhood/Community Commercial District	Commercial Shopping Center				

Site Plan, Circulation, and Parking

The proposed project will include an approximately 2,533 square foot building with two suites, a 1,400 square foot food suite, and the 1,133 square foot Dutch Bros. with drive thru. In addition to the building, the applicant proposes to fully develop the site as it currently is undeveloped. The drive thru features a double lane with a potential for 24 vehicles to queue on site. 21 parking spaces will be shared between the two suites. While one tenant is not yet determined, the Antioch Municipal Code (AMC) § 9-5.1703.1 titled Off-Street Parking Requirements by Use, calculates parking at a 1 per employee on the largest shift for general eating and drinking establishments. The parking provided was determined to be sufficient for the Dutch Bros. and, future food use. One main driveway provides access to the project site from Hillcrest Avenue, the driveway is located toward the western side of the property and will serve as access to the future food use,

and the Dutch Bros. Cross access easements with the neighboring properties allow the site to also allow traffic in and out from the neighboring gas station and commercial center. The flow of traffic for the site is designed so that vehicles entering from Hillcrest Avenue will enter the queue almost immediately. The vehicles will then travel south through the queue to the pickup window, then head north towards the driveway where they entered from to go back onto Hillcrest Avenue to exit the site.

Architecture

Pursuant to Section 9-5.2607 of the Antioch Municipal Code (AMC), all new development within the City is subject to Design Review approval. The purpose of the Design Review process is to promote the orderly development of the City, encourage high quality site design and planning, protect the stability of land values and investments, and ensure consistency with the Citywide Design Guidelines.

The building design includes horizontal composite siding at the tower element, stucco, brick base and steel awnings. The proposed building avoids blank facades by breaking up the walls with different materials and altering the depth of the walls, in addition to the steel awnings. Tower elements aide in creating varied rooflines as required by the Citywide Design Guidelines. The Color Palette for the building is a mix of neutral colors such as Desert Gray, for the food suite, and the Dutch Bros. color scheme including Custom Dutch Bros. (DB) Blue, DB Dark Grey, and DB Light Grey. In general, the project complied with the Citywide Design guidelines and staff is satisfied with the proposed design of the project.

The proposed trash enclosure is constructed of masonry walls covered with plaster and includes metal doors with an overhead covering. The trash enclosures is architecturally compatible with the project, and is painted to closely resemble the main building.

Signage and Landscaping

The proposed project includes 9 sign types including the logo, name sign, menu boards, and directional signs. In total there will be mix of 15 signs on site. The larger of the signs would be the logo and name signs. The Dutch Bros. name sign is double stacked with channel letters and totals 34 inches in height, similarly the logo is 4 feet 11 inches in height. The larger signs are located on the building, and on the most visible architectural elements on the building. Additionally, the signs are proportional to the building they are identifying. The signs are consistent with the Citywide Design Guidelines for signage.

The conceptual landscaping plan includes landscaping for the project frontage and the internal site. The existing trees along the western property line will remain, but the applicant proposes a mixture of plantings throughout the site. The applicant proposes to plant Chinese Elm in the parking lot, with "Columbia" Plane Trees utilized as the street tree for the site. A wide array of perimeter shrubs, and ground covers are proposed including, Toyon, Coffeeberry, Fortnight Lily, Rosemary, and Trailing Lantana. These plants will offer a variety of contrasting colors.

Traffic Analysis

A traffic analysis was prepared to evaluate the proposed Project's effect on traffic conditions in accordance with the City's traffic analysis procedures. The study conducted traffic counts/ trip generation analysis, queuing analysis, and analyzed levels of service at various Dutch Bros in the Northern California Area and used as case studies for the proposed project. The case study trip rates have been compared to trip rates from standardized Institute of Transportation Engineers (ITE) trip generation estimates for a similar use.

The existing Dutch Bros coffee shop sites in Northern California that were used as case study locations are located in the Cities of Vacaville, Stockton, Brentwood and Fairfield. A professional traffic data collection firm was utilized to obtain vehicle trips and drive through queue lengths at the locations in Vacaville and Stockton specifically for use in this study. The number of vehicles entering and exiting each site during the typical weekday morning (7 - 9 AM) and evening (4 - 6 PM) peak periods and during a Saturday midday (11 AM - 1 PM) peak period were collected. Drive through queue lengths were recorded during weekday morning (7 - 10 AM) and evening (3 - 6 PM) peak periods and during a Saturday midday (11 AM - 2 PM).

The proposed project was evaluated under opening day conditions. Based on the results of the LOS analyses and the criteria set forth by the City, the study intersections would operate at an acceptable levels or better during peak hours. In addition, a queuing analysis was prepared to establish the typical maximum queue length based on the proposed use. The study determined that the proposed Project's drive-thru vehicle queueing could be accommodated within the drive-thru lane with a worst-case scenario of the queue exceeding the drive-through lane by a few vehicles while remaining on-site. The Project's queue would not affect the traffic on the adjacent shared driveway or City roadways.

The proposed project was found to not create adverse effects onsite, the traffic on the adjacent shared driveway, and City roadways.

Environmental Analysis

This proposed project is Categorically Exempt from the California Environmental Quality Act (CEQA) under Article 19, Section 15332 Infill Development. Class 32 consists of projects characterized as in-fill development meeting the following conditions:

- (a) The project is consistent with the applicable general plan designation and all applicable general plan policies as well as with applicable zoning designation and regulations.
- (b) The proposed development occurs within city limits on a project site of no more than five acres substantially surrounded by urban uses.
- (c) The project site has no value, as habitat for endangered, rare or threatened species.

- (d) Approval of the project would not result in any significant effects relating to traffic, noise, air quality, or water quality.
- (e) The site can be adequately served by all required utilities and public services.

Development Engineering Review

The Development Engineering Division reviewed the proposed plans for compliance with Code and local requirements. Conditions of Approval were provided to staff and are attached to the report.

Contra Costa Fire Department Review

The Contra Costa Fire Department reviewed the proposed plans for compliance with Code and local requirements. Conditions of Approval were provided to staff and are attached to the report.

ATTACHMENTS

- **A.** Resolution approving Use Permit and Design Review with Exhibit A Conditions of Approval
- B. Project Plans & Signage
- C. Project Description
- **D.** Traffic Analysis
- E. Contra Costa Fire Comments

ATTACHMENT A RESOLUTION APPROVING A USE PERMIT, AND DESIGN REVIEW FOR A DRIVETHROUGH COFFEE BUSINESS (DUTCH BROS), AND FOOD SUITE UP-21-08, AR-21-05 WITH EXHIBIT A CONDITIONS OF APPROVAL (SEPARATE PAGE)

PLANNING COMMISSION RESOLUTION # 2022-xx

A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF ANTIOCH APPROVING A USE PERMIT AND DESIGN REVIEW FOR A DRIVE-THROUGH COFFEE BUSINESS, AND FOOD SUITE (UP-21-08, AR-21-05)

WHEREAS, the City of Antioch ("City") received an application from Amardeep Sidhu or approval of a Use Permit, and Design Review for a new drive-through coffee business (Dutch Bros.) and food use located on Hillcrest Avenue between an existing grocery store and gas station (APN: 052-460-033) on April 13, 2021; and

WHEREAS, the application was deemed complete on September 28, 2021; and

WHEREAS, a traffic analysis was prepared to analyze on-site and off-site circulation issues associated with the proposed use;

WHEREAS, the proposed project is Categorically Exempt from the California Environmental Quality Act (CEQA) under Article 19, Section 15332 Infill Development. Class 32 consists of projects characterized as in-fill development; and

WHEREAS, the Planning Commission held a public hearing and considered all public comments received, the presentation by City staff, the staff report, and all other pertinent documents regarding the proposed request; and

WHEREAS, a public hearing notice was published in the East County Times and posted in three public places pursuant to California Government Code Section 65090 on July 8, 2022 for the public hearing held on July 20, 2022.

NOW, THEREFORE, BE IT RESOLVED AND DETERMINED, that the Planning Commission hereby make the following findings for approval of the requested Use Permit pursuant to Section 9-5.2703 "Required Findings" (B) (1) of the Antioch Municipal Code:

a. The granting of such use permit will not be detrimental to the public health or welfare or injurious to the property or improvements in such zone or vicinity.

Finding: The project has been designed to comply with the City of Antioch Municipal Code requirements. The new drive-through coffee business (Dutch Bros.) and food use adheres to the standards outlined the in the City of Antioch Zoning Ordinance and will not be detrimental to the public health or welfare or injurious to the property or improvements.

b. The use applied at the location indicated is properly one for which a use permit is authorized.

Finding: The property is designated commercial, the drive-through coffee business (Dutch Bros.) and food use are appropriate for the location. The City of Antioch Zoning Ordinance requires a use permit for new drive-through uses, the coffee business functions primarily as a drive-through type use.

c. The site for the proposed use is adequate in size and shape to accommodate such use, and all yards, fences, parking, loading, landscaping, and other features required.

Finding: The project has been designed to adequately provide space for the use and related improvements. Additionally, a traffic analysis was conducted for the site and concluded that the new drive-through coffee business (Dutch Bros.) and food use there would not create adverse impacts for other uses, and traffic in the neighborhood.

d. That the site abuts streets and highways adequate in width and pavement type to carry the kind of traffic generated by the proposed use.

Finding: A traffic analysis was conducted and found that the project would not create impacts to the site and the streets in the vicinity. Potential impacts from the drive-through queue could be mitigated on site without impacting Hillcrest Avenue.

e. The granting of such use permit will not adversely affect the comprehensive General Plan because the proposed uses and design are consistent with the General Plan.

Finding: The General Plan designation for project site Neighborhood Community Commercial, which allows for the type of commercial development proposed by the project. The drive-through coffee business (Dutch Bros.) and food use proposed by this project does not adversely affect the General Plan, in addition, the conditions ensure the project is consistent with City standards.

NOW THEREFORE BE IT FURTHER RESOLVED that the Planning Commission hereby adopts the Use Permit and Design Review application (UP-21-08, AR-21-05) for a new drive-through coffee business (Dutch Bros.) and food use located on Hillcrest Avenue between an existing grocery store and gas station (APN: 052-460-033) subject to Exhibit A Conditions of Approval.

I HEREBY CERTIFY that the foregoing resolution was adopted by the Planning Commission of the City of Antioch at a regular meeting thereof held on the 20th day of July 2022, by the following vote:

	FORREST EBBS Secretary to the Planning Commission
ABSTAIN:	
ABSENT:	
NOES:	
AYES:	

EXHIBIT A CONDITIONS OF APPROVAL (SEPARATE PAGE)



	General Conditions	Regulation Source	Timing/ Implementation	Enforcement/ Monitoring	Verification (date and Signature)
1.	Project Approval. This Use Permit and Design Review approval is for APN 052-460-033, (UP-21-08, AR-21-05) as substantially shown and described on the project plans, except as required to be modified by conditions herein. Plans date received August 31, 2021, as presented to the Planning Commission on July 20, 2022 ("Approval Date."). For any condition herein that requires preparation of a Final Plan where the project applicant has submitted a conceptual plan, the project applicant shall submit final plan(s) in substantial conformance with the conceptual plan, but incorporate the modifications required by the conditions herein for approval by the City.		On-Going	Planning Department	
2.	Project Approval Expiration. This Use Permit and Design Review approval expires on July 20, 2024 (two years from the date on which this approval becomes effective) or at an alternate time specified as a condition of approval, unless a building permit has been issued and construction diligently pursued. The approval may be renewed by the Community Development Director for a period up to an additional two (2) years, provided that, at least ten (10) days before expiration of one (1) year from the date when the approval becomes effective, an application for renewal of the approval is filed with the Community Development Department. The Community Development Director may grant a renewal of an approval where there is no change in the original application, or there is no request to change any condition of approval for up to two additional years from the expiration date.		On-Going	Planning Department	



	Regulation Source	Timing/ Implementation	Enforcement/ Monitoring	Verification (date and Signature)
3. City Fees. The applicant shall pay any and all City and other related fees applicable to the property, as may be modified by conditions herein. Fees shall be based on the current fee structure in effect at the time the relevant permits are secured and shall be paid before issuance of said permit or before any City Council final action approval. Notice shall be taken specifically of Plan Check, Engineering, Fire and Inspection Fees. The project applicant shall also reimburse the City for direct costs of planning; building and engineering plan check and inspection, as mutually agreed between the City and applicant. Discretionary or ministerial permits/approvals will not be considered if the developer is not current on fees, balances, and reimbursement that are outstanding and owed to the City.	City of Antioch	On-Going	Community Development Department	
4. Pass-Through Fees. The developer shall pay all pass-through fees. Fees include but are not limited to: East Contra Costa Regional Fee and Financing Authority (ECCRFFA) Fee in effect at the time of building permit issuance. Contra Costa County Fire Protection District Fire Development Fee in place at the time of building permit issuance. Contra Costa County Map Maintenance Fee in affect at the time of recordation of the final map(s). Contra Costa County Flood Control District Drainage Area fee. School Impact Fees. Delta Diablo Sanitation Sewer Fees. Contra Costa Water District Fees.	City of Antioch	On-Going	Community Development Department	



5.	Appeals. Pursuant to Section 9-5.2509 of the Antioch Municipal Code, any decision made by the Planning Commission which would otherwise constitute final approval or denial may be appealed to the City Council. Such appeal shall be in writing and shall be filed with the City Clerk within five (5) working days after the decision. All appeals to the City Council from the Planning Commission shall be accompanied by a filing fee established by a resolution of the City Clerk.	City of Antioch	Within 5 Days of Planning Commission Action	Planning Department	
6.	Requirement for Building Permit. Approval granted by the Planning Commission does not constitute a building permit or authorization to begin any construction or demolish an existing structure. An appropriate permit issued by the Community Development Department must be obtained before constructing, enlarging, moving, converting, or demolishing any building or structure within the City.	City of Antioch	On-Going	Building Department	
7.	Modifications to Approved Plans. The project shall be constructed as approved and with any additional changes required pursuant to the Zoning Administrator or Planning Commission Conditions of Approval. Planning staff may approve minor modifications in the project design, but not the permitted land uses. A change requiring discretionary approvaland any other changes deemed appropriate by the Planning staff shall require further Planning Commission approval through the discretionary review process.	City of Antioch	On-Going	Planning Department	



		Regulation Source	Timing/ Implementation	Enforcement/ Monitoring	Verificatio n(date and Signature)
8.	Compliance Matrix. With the submittal of all grading plans, improvement plans, and building permit plans, the applicant shall submit to the Community Development Department a Conditions and Mitigation Measures Compliance Matrix that lists: each Condition of Approval and Mitigation Measure, the City division responsible for review, and how the applicant meets the Condition of Approval or Mitigation Measure. The applicant shall update the compliance matrix and provide it with each submittal.	City of Antioch	On-Going	Community Development Department	
9.	Hold Harmless Agreement/Indemnification. The applicant (including any agent thereof) shall defend, indemnify, and hold harmless, the City of Antioch and its agents, officers and employees, from any claim, action, or proceeding against the City or its agents, officers or employees to attack, set aside, void, or annul the City's approval concerning this application. The City will promptly notify the applicant of any such claim action or proceeding and cooperate fully in the defense.	City of Antioch	On-Going	Planning Department	
	Public Works Standards	Regulation Source	Timing/ Implementation	Enforcement/ Monitoring	Verification (date and Signature)
10.	City Standards . All proposed improvements shall be constructed to City standards or as otherwise approved by the City Engineer in writing.	City of Antioch	At the time of Building Permit Submittal/ On-Going	Public Works Department	



11.	Utility Construction . Public utilities shall be constructed to their ultimate size and configuration with the road construction in which they are to be located.	City of Antioch	On-Going	Public Works Department	
12.	Sewer . All sewage shall flow by gravity to the intersecting street sewer main.	City of Antioch	On-Going	Public Works Department	
13.	Hydrology Analysis. The developer shall submit hydrology and hydraulic analyses as part of the storm water control plan. The analysis shall demonstrate adequacy of the in-tract drainage system and downstream drainage system. The analysis shall be reviewed and approved by Contra Costa County Flood Control.	City of Antioch	Prior to the Recordation of the First Final Map	Public Works Department	
14.	 Public Right of Way. Retaining walls shall not be constructed in City right-of-way or other City maintained parcels unless otherwise approved by the City Engineer. Materials. All retaining walls shall be of concrete masonry unit construction. Height. All retaining walls shall be reduced in height to the maximum extent practicable and the walls shall meet the height requirements in the front yard setback and sight distance triangles as required by the City Engineer. 	City of Antioch	On-Going	Public Works Department	
	Conservation/NPDES	Regulation Source	Timing/ Implementation	Enforcement/ Monitoring	Verification (date and Signature)
15.	C.3 Compliance . Per State Regulations, all impervious surfaces including off-site roadways to be constructed as part of the	State of California	On-Going	Public Works Department	



	project are subject to C.3 requirements.				
16.	NPDES. The project shall comply with all Federal, State, and City regulations for the National Pollution Discharge Elimination System (NPDES) (AMC§6-9). (Note: Per State Regulations, NPDES Requirements are those in affect at the time of the Final Discretional Approval.)	Federal Government	At the Time of Building Permit Submittal	Public Works	
	 Under NPDES regulations, the project is subject to provision C.3: "New development and redevelopment regulations for storm water treatment." a. Requirements. Provision C.3 requires that the project include storm water treatment and source control measures, as well run-off flow controls so that post-project runoff. b. Storm Water Control Plan. C.3 regulations require the submittal of a Storm Water Control Plan (SWCP) that demonstrate plan compliance. The SWCP shall be submitted concurrently with site improvement plans. c. Operation and Maintenance Plan. For the treatment and flow-controls identified in the approved SWCP, a separate Operation and Maintenance Plan (O&M) shall be submitted to the Building Department at the time of permit submittal. d. CCRs. Both the approved SWCP and O&M plans shall be included in the project CC&Rs. Prior to building permit final and issuance of a Certificate of Occupancy, the developer shall execute any agreements identified in the Storm Water Control Plan that pertain to the transfer of ownership and/or long-term maintenance of storm water treatment or hydrograph modification BMPs. Already stated in COAs below, 5.c and 5.h.w. 				



17.	NPDES Plan Submittal Requirements. The following requirements of the federally mandated NPDES program (National Pollutant Discharge Elimination System) shall be complied with as appropriate, or as required by the City Engineer:	Federal Government	At the Time of Building Permit Submittal	Public Works	
	a. Application. Prior to issuance of permits for building, site improvements, or landscaping, the developer shall submit a permit application consistent with the developer's approved Storm Water Control Plan, and include drawings and specifications necessary for construction of site design features, measures to limit directly connected impervious area, pervious pavements, self-retaining areas, treatment BMPs, permanent source control BMPs, and other features that control storm water flow and potential storm water pollutants.				
	b. Certified Professional. The Storm Water Control Plan shall be certified by a registered civil engineer, and by a registered architect or landscape architect as applicable. Professionals certifying the Storm Water Control Plan shall be registered in the State of California and submit verification of training, on design of treatment measures for water quality, not more than three years prior to the signature date by an organization with storm water treatment measure design expertise (e.g., a university, American Society of Civil Engineers, American Society of Landscape Architects, American Public Works Association, or the California Water Environment Association), and verify understanding of groundwater protection principles applicable to the project site (see Provision C.3.i of Regional Water Quality Control Board Order R2 2003 0022).				
	c. Final Operation & Maintenance Plan. Prior to building permit final and issuance of a Certificate of Occupancy, the				



developer shall submit, for review and approval by the City, a final Storm Water BMP Operation and Maintenance Plan in accordance with City of Antioch guidelines. This O&M plan shall incorporate City comments on the draft O&M plan and any revisions resulting from changes made during construction. The O&M plan shall be incorporated into the CC&Rs for the Project.

- d. Long Term Management. Prior to building permit final and issuance of a Certificate of Occupancy, the developer shall execute and record any agreements identified in the Storm Water Control Plan which pertain to the transfer of ownership and/or long-term maintenance of storm water treatment or hydrograph modification BMPs.
- e. Design Details.
 - i. Prevent site drainage from draining across sidewalks and driveways in a concentrated manner.
 - ii. Install on all catch basins "No Dumping, Drains to River" decal buttons.
- f. Hydrology Calculations. Collect and convey all storm water entering, and/or originating from, the site to an adequate downstream drainage facility without diversion of the watershed. Submit hydrologic and hydraulic calculations with the Improvement Plans to Engineering Services for review and approval.
- g. BMP. Install appropriate clean water devices at all private storm drain locations immediately prior to entering the public storm drain system. Implement Best Management Practices (BMP's) at all times.



h. Erosion Control. Include erosion control/storm water quality measures in the final grading plan that specifically address measures to prevent soil, dirt, and debris from entering the storm drain system. Such measures may include, but are not limited to, hydro seeding, gravel bags and siltation fences and are subject to review and approval of the City Engineer. If no grading plan is required, necessary erosion control/storm water quality measures shall be shown on the site plan submitted for an on-site permit, subject to review and approval of the City Engineer. The developer shall be responsible for ensuring that all contractors and subcontractors are aware of and implement such measures.

i. On-Going Maintenance.

- i. Sweep or vacuum the parking lot(s) a minimum of once a month and prevent the accumulation of litter and debris on the site. Corners and hard to reach areas shall be swept manually.
- ii. If sidewalks are pressure washed, debris shall be trapped and collected to prevent entry into the storm drain system. No cleaning agent may be discharged into the storm drain. If any cleaning agent or degreaser is used, wash water shall be collected and discharged to the sanitary sewer, subject to the approval of the sanitary sewer District.
- iii. Ensure that the area surrounding the project such as the streets stay free and clear of construction debris such as silt, dirt, dust, and tracked mud coming in from or in any way related to project construction. Areas that are exposed for extended periods shall be watered regularly to reduce wind erosion. Paved areas and access roads shall be swept on a



	regular basis. All trucks shall be covered. iv. Clean all on-site storm drain facilities a minimum of twice a year, once immediately prior to October 15 and once in January. Additional cleaning may be required if found necessary by City Inspectors and/or City Engineer. Additional information regarding the project SWCP is necessary and modifications to the SWCP shown on the proposed Vesting Tentative Map may be required in order to comply with C.3 regulations.				
	Fire Standards	Regulation Source	Timing/ Implementation	Enforcement/ Monitoring	Verification (date and Signature)
18.	The applicant shall comply with the Contra Costa County Fire Protection District letter dated October 21, 2021.	Contra Costa Fire Protection District	On-Going	Contra Costa Fire Protection District	
	Building Permit Submittal	Regulation Source	Timing/ Implementation	Enforcement/ Monitoring	Verification (date and Signature)
19.	Requirement for Phasing Plan. The project shall be built continuously in one phase. If the project will become a phased project, then the developer shall provide a phasing plan to the Community Development Department.	City of Antioch	At the time of Building Permit Submittal	Community Development Department	
20.	Final Landscape Plans. The applicant shall submit final landscape plans that identify specific plant materials to be used, including all shrubs and groundcover, providing both common and botanical names, sizes and quantities at the time of building permit submittal. The project shall emphasize local and native species of plants in the final landscape plans.	City of Antioch	At the time of Building Permit Submittal	Building Department	



21.	Water Efficient Landscape Ordinance. Landscaping for the project shall be designed to comply with the applicable requirements of City of Antioch Ordinance No. 2162-C-S The State Model Water Efficient Landscape Ordinance (MWELO). The applicant shall demonstrate compliance with the applicable requirements of the MWELO in the landscape and irrigation plans submitted to the City.	City of Antioch	At the time of Building Permit Submittal	Community Development Department	
22.	Common Area Landscaping. Landscaping on all slopes, medians, C.3 basins and open space areas shall be approved by the City Engineer and shall be installed at the applicant's expense.	City of Antioch	At the time of Building Permit Submittal	Public Works Department	
23.	Property Drainage. The houses shall contain rain gutters and downspouts that direct water away from the foundation as approved by the City Engineer.		At the Time of Building Permit Submittal	Public Works Department	
24.	Utility Location on Private Property. All improvements for each lot (water meters, sewer cleanouts, etc.) shall be contained outside of the driveway and within the lot and the projection of its sidelines or as approved by the City Engineer.	City of Antioch	At the Time of Building Permit Submittal	Public Works Department	



	Grading Improvements	Regulation Source	Timing/ Implementation	Enforcement/ Monitoring	Verification (date and Signature)
25.	Soils. Prior to the approval of the grading plan(s), the City Engineer shall determine if a soils or structural engineer, are required to review the building permit plan set submitted for this project. If deemed necessary by the City Engineer, field inspections by such professionals will be required to verify compliance with the approved plans. Costs for these consulting services shall be incurred by the developer.	City of Antioch	At the time of Building Permit Submittal	Public Works	
	At the Time of Building Permit Issuance	Regulation Source	Timing/ Implementation	Enforcement/ Monitoring	Verification (date and Signature)
26.	Encroachment Permit . The applicant shall obtain an encroachment permit from the Engineering Division before commencing any construction activities within any public right-of-way or easement.	City of Antioch	At the time of Building Permit Issuance	Community Development Department	



	At the Time of Construction	Regulation Source	Timing/ Implementation	Enforcement/ Monitoring	Verification (date and Signature)
27.	Collection of Construction Debris. Gather all construction debris on a regular basis and place them in a Waste Management dumpster or other container that is emptied or removed on a weekly basis consistent with the Construction and Demolition Debris Ordinance. When appropriate, use tarps on the ground to collect fallen debris or splatters that could contribute to stormwater pollution.	City of Antioch	On-Going	Building Department	
28.	Construction Hours. Construction activity shall be as outlined in in the Antioch Municipal Code. Construction activity is limited to 8:00 AM to 5:00 PM Monday-Friday or as approved in writing by the City Manager. Requests for alternative construction hours shall be submitted in writing to the City Engineer. days/times restricted to the hours of 8:00 a.m. to 6:00 p.m.	City of Antioch	On-Going	Building Department/ Public Works Department	
29.	Demolition, Debris, Recycling. The project shall be in compliance with and supply all the necessary documentation for Antioch Municipal Code § 6-3.2: Construction and Demolition Debris Recycling.	City of Antioch	On-Going	Building Department/ Public Works Department	



30.	Filter Materials at Storm Drain Inlet. Install filter materials (such as sandbags, filter fabric, etc.) at the storm drain inlet nearest the downstream side of the project site prior to: a) start of the rainy season (October 1); b) site dewatering activities; c) street washing activities; d) saw cutting asphalt or concrete; and e) order to retain any debris or dirt flowing into the City storm drain system. Filter materials shall be maintained and/or replaced as necessary to ensure effectiveness and prevent street flooding. Dispose of filter particles in the trash.	City of Antioch	On-Going	Building Department	
31.	Archeological Remains. In the event subsurface archeological remains are discovered during any construction or preconstruction activities on the site, all land alteration work within 100 feet of the find shall be halted, the Community Development Department notified, and a professional archeologist, certified by the Society of California Archeology and/or the Society of Professional Archeology, shall be notified. Site work in this area shall not occur until the archeologist has had an opportunity to evaluate the significance of the find and to outline appropriate mitigation measures, if deemed necessary. If prehistoric archeological deposits are discovered during development of the site, local Native American organizations shall be consulted and involved in making resource management decisions.	City of Antioch	On-Going	Community Development Department	



		Regulation Source	Timing/ Implementation	Enforcement/ <u>Monitoring</u>	Verification (date and Signature)
32.	Erosion Control Measures. The grading operation shall take place at a time, and in a manner, so as not to allow erosion and sedimentation. The slopes shall be landscaped and reseeded as soon as possible after the grading operation ceases. Erosion measures shall be implemented during all construction phases in accordance with an approved erosion and sedimentation control plan.	City of Antioch	On-Going	Building Department/ Public Works	
33.	Dust Control. Standard dust control methods and designs shall be used to stabilize the dust generated by construction activities. The developer shall post dust control signage with a contact number of the developer, City staff, and the air quality control board.	City of Antioch	On-Going	Building Department	
34.	Debris Removal. The site shall be kept clean of all debris (boxes, junk, garbage, etc.) at all times.	City of Antioch	On-Going	Building Department	



	Prior to Issuance of Occupancy Permit	Regulation Source	Timing/ Implementation	Enforcement/ <u>Monitoring</u>	Verification (date and Signature)
35.	Planning Inspection. Planning staff shall conduct a site visit to review exterior building elevations for architectural consistency with the approved plans and landscape installation (if required). All exterior finishing details including window trim, paint, gutters, downspouts, decking, guardrails, and driveway installation shall be in place prior to scheduling the final inspection.	City of Antioch	Prior to Occupancy Permit	Planning Department	
36.	Debris Removal. All mud, dirt or construction debris carried off the construction site and shall be removed prior to scheduling the final Planning inspection. No materials shall be discharged onto a sidewalk, street, gutter, storm drain or creek.	City of Antioch	Prior to Occupancy Permit	Building Department	
37.	Fire Prevention . A final Fire inspection shall occur to inspect all fire prevention systems constructed as part of the project. Inspections shall occur prior to final occupancy permit issuance.	Contra Costa County Fire District	Prior to Occupancy Permit	Fire Department	
38.	Damage to Street Improvements. Any damage to street improvements now existing or done during construction on or adjacent to the subject property, shall be repaired to the satisfaction of the City Engineer at the full expense of the applicant. This shall include sidewalk repair, slurry seal, street reconstruction or others, as may be required by the City Engineer.	City of Antioch	Prior to Occupancy Permit	Building Department	



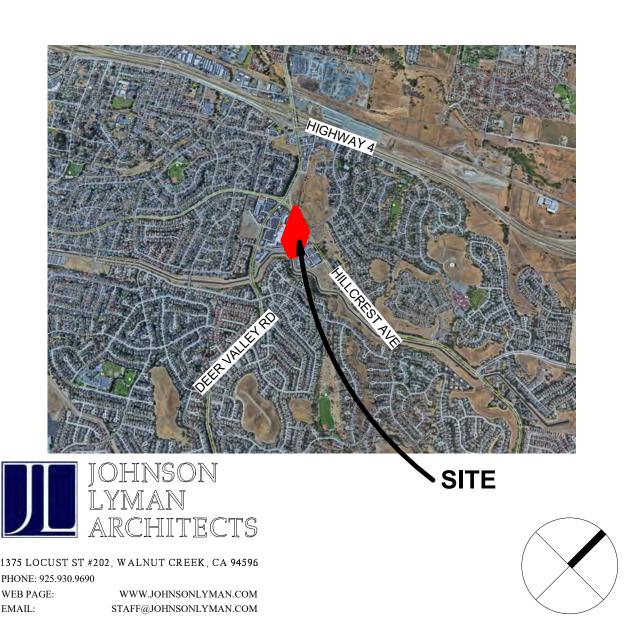
39.	Right-of-Way Construction Standards . All improvements within the public right-of-way, including curb, gutter, sidewalks, driveways, paving and utilities, shall be constructed in accordance with approved standards and/or plans and shall comply with the standard plans and specification of the City Engineer.	City of Antioch	Prior to Occupancy Permit	Public Works	
	Project Specific Conditions	Regulation Source	Timing/ Implementation	Enforcement/ <u>Monitoring</u>	Verification (date and Signature)
40.	Street Trees. Street tree species and spacing will be approved with the building permit and confirmed in the field with the public works inspector.	City of Antioch	On-Going	Public Works	
41.	Hours of Operation. Hours of Operation shall be Sunday-Thursday 4:30am-10pm and Friday-Saturday 4:30am-11pm. Any requests to modify the hours of operation shall be submitted for to the Community Development Department.	City of Antioch	On-Going	Planning Division	

ATTACHMENT B PROJECT PLANS & SIGNAGE (SEPARATE PAGE)



Antioch California

Vicinity Map



Project Summary

Project Info				
<u>Use</u>	Area	Occupancy	Const	Allowable Area
Dutch Bros	1,133 sf	A-2	VB	6,000sf
Retail	1,400 sf	M	VB	9,000sf
Parking Summary				
<u>Parking Stalls</u> Dutch Bros <u>Re</u> tail	<u>Req'd</u> 4 (1 car/3 14 (1car/	,	<u>Provided</u>	
Total	18	*	21 stalls (2 acce	essible)
<u>Bikes</u>	<u>Short Tei</u> 4 bikes	<u>rm</u>	<u>Long Term</u> 1 locker (2 bikes	s)

Project Team

Owner

Amar Sidhu 510-579-3326 amarssidhu@yahoo.com

Civil Engineer

Humann Company Inc. Civil Engineers and Land Surveyors 1021 Brown Avenue Lafayette, CA 94549 925.283.5000

Electrical Engineer

Belden Consulting Engineers 5860 W. Las Positas Blvd #15 Pleasanton, CA 94588 925.621.5300

Architect

Johnson Lyman Architects 1375 Locust Street Suite 202 Walnut Creek, CA 94596 925.930.9690 Attn: Dave Johnson Dave@JohnsonLyman.com

Landscape Architect

RW Stover & Associates, Inc. 1620 North Main Street, Suite 4 Walnut Creek, CA 94596 925.933.2583 Attn: Rick Stover rstover@rwsla.com

Sheet Index

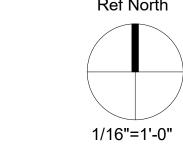
A0	Cover Sheet	SP1	Photometric Plan
SW1	Site Plan	SP2	Site Lighting Plan
A1	Floor Plan	C01	Prelim Grading & Drainage
A3	Roof Plan	C02	Prelim Utility Plan
A4.1	Elevations	C03	Site Cross Sections
A4.2	Elevations	C04	Site Cross Sections
A4.3	Trash Enclosure	C05	Stormwater Control Plan
A 5	Sections	C06	Existing Topo
СВ	Color / Materials Bd		
L1	Preliminary Landscape Plan		AO
L2	Shading & Hydrozone Plans		
L3	Preliminary Plant Images		08/26/21



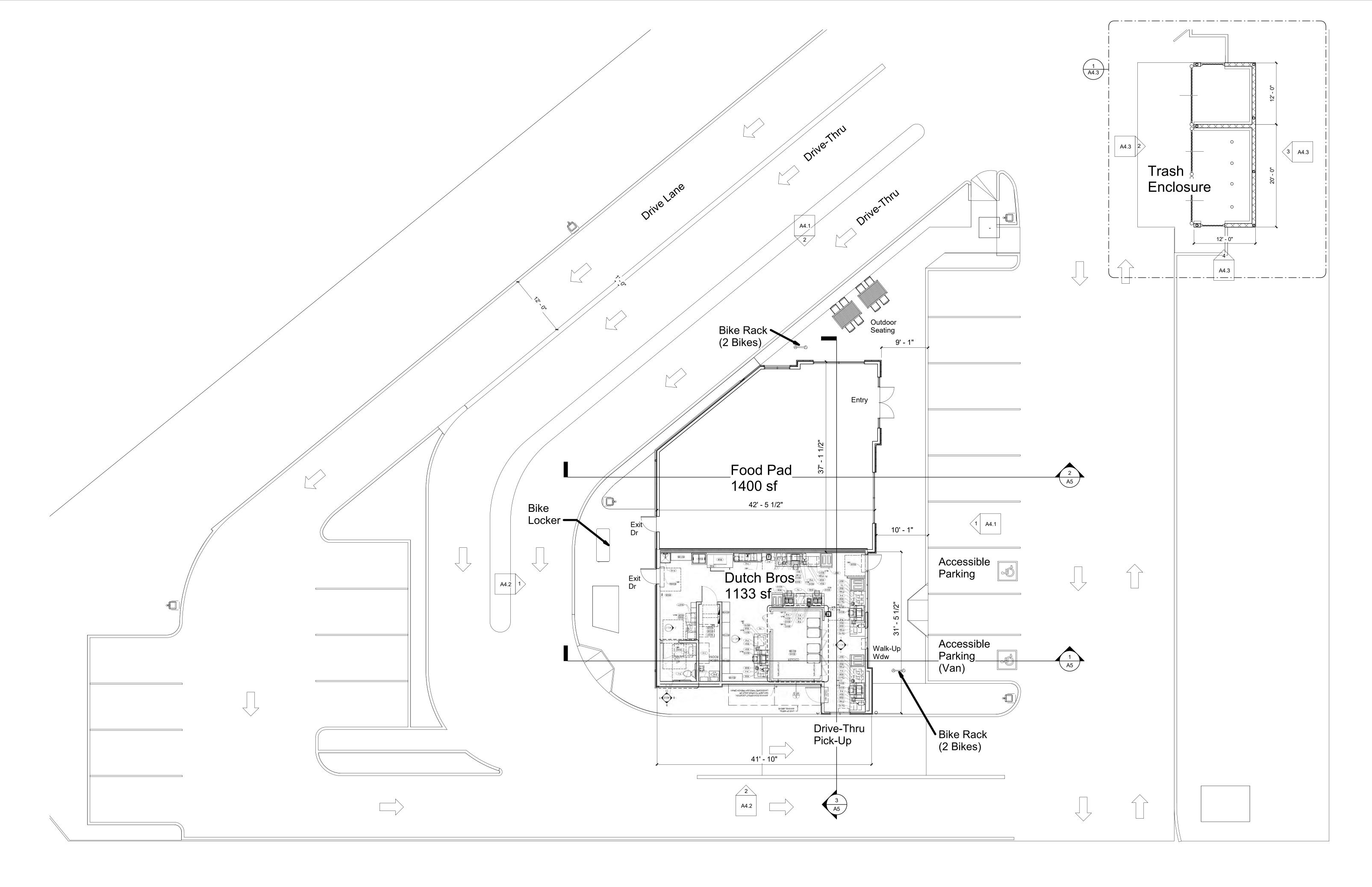
LYMAN
ARCHITECTS

1375 LOCUST ST #202, WALNUT CREEK, CA 94596
PHONE: 925.930.9690
WEB PAGE:
WWW.JOHNSONLYMAN.COM
FMAIL:
STAFF@JOHNSONLYMAN.COM

Hillcrest Ave

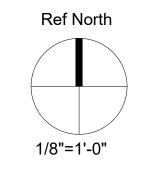


Site Plan

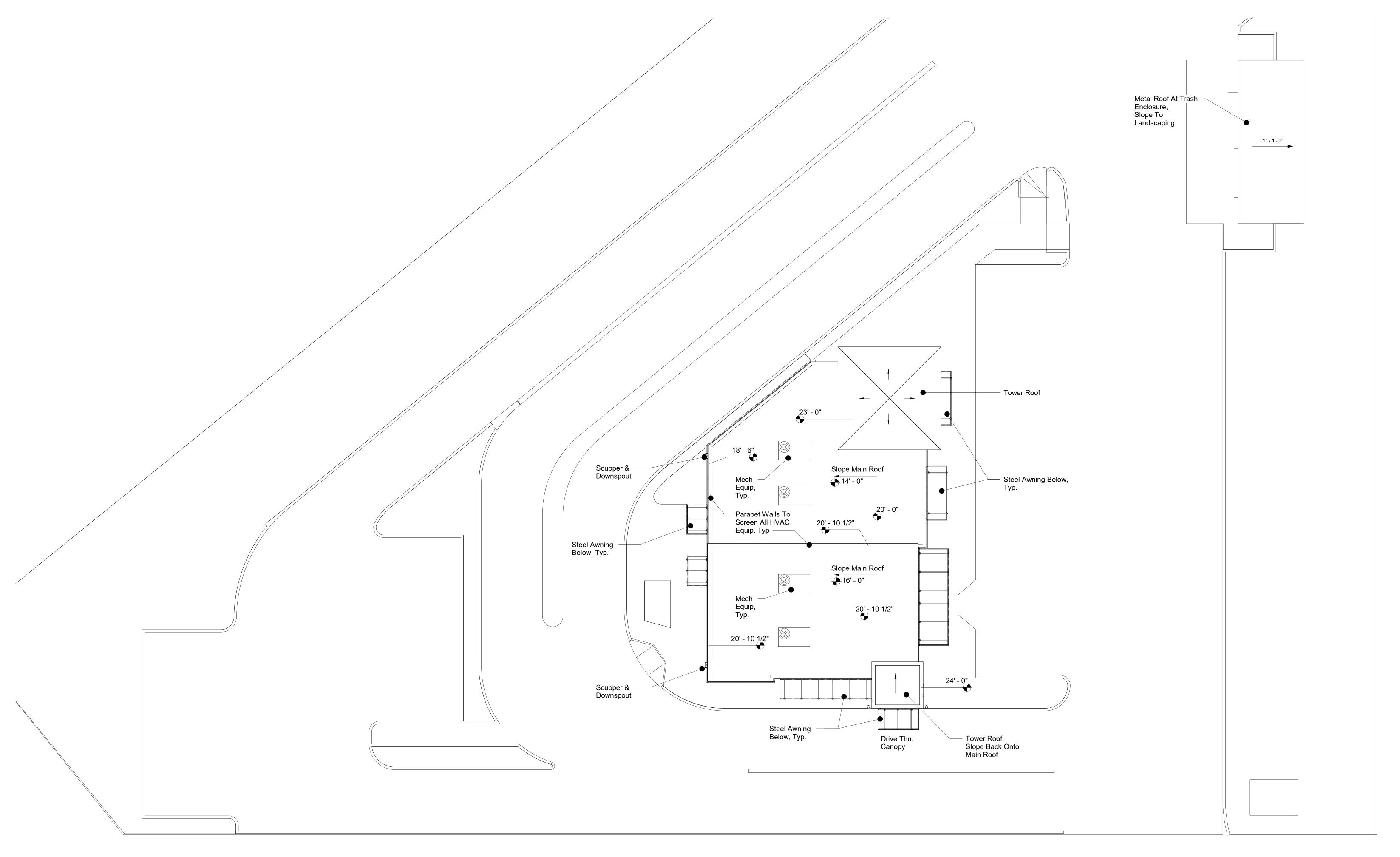




Hillcrest Ave

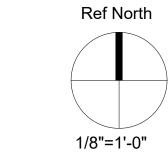


Floor Plan



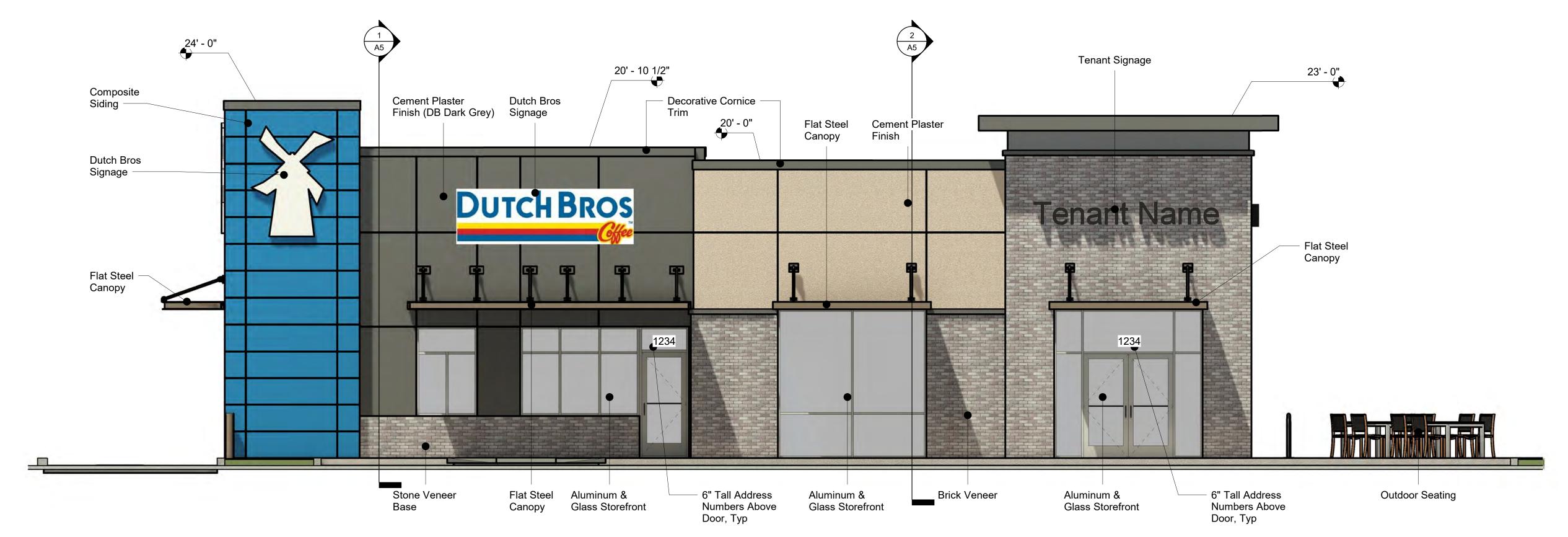


Hillcrest Ave

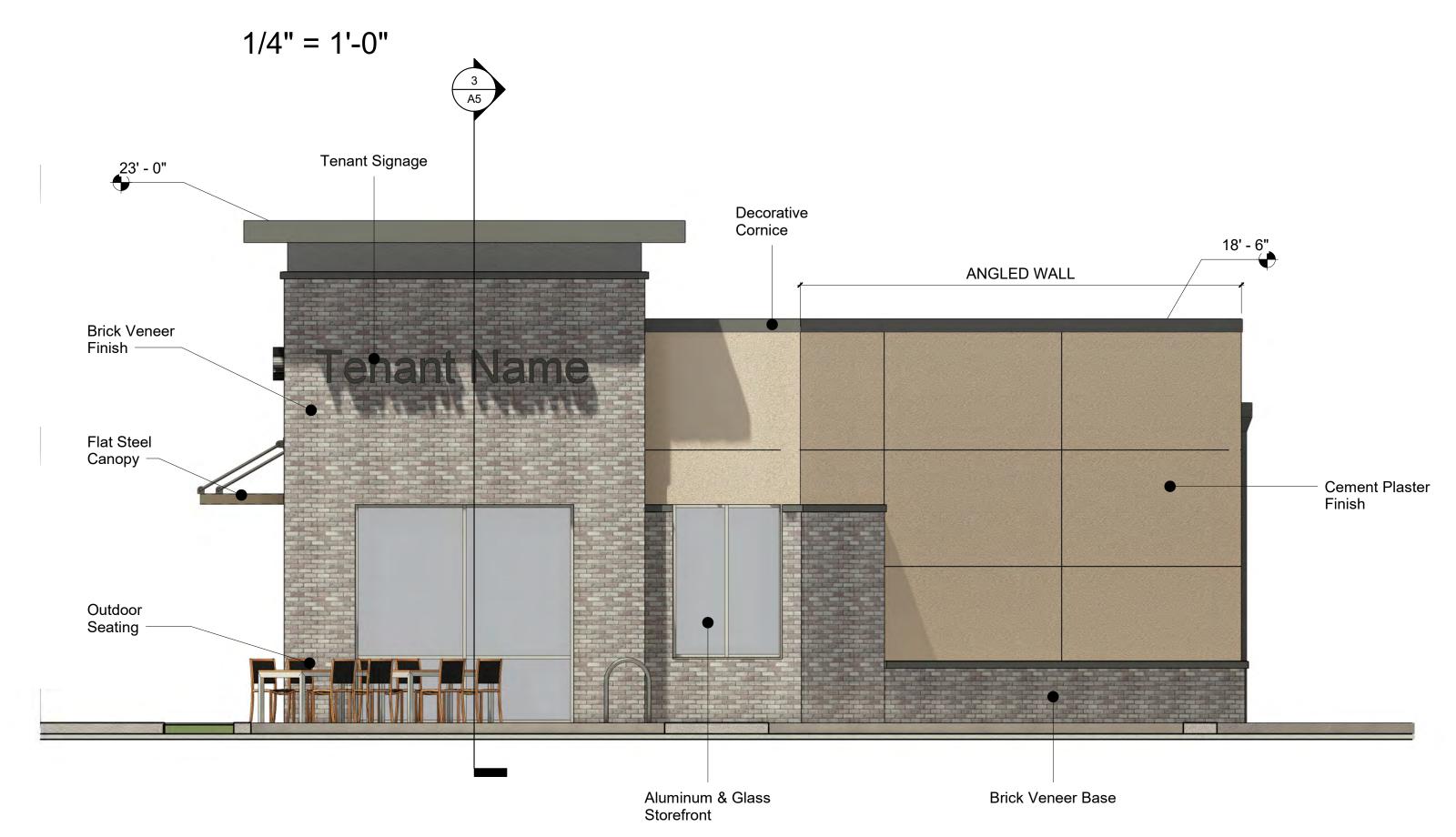


Roof Plan

A308/26/21



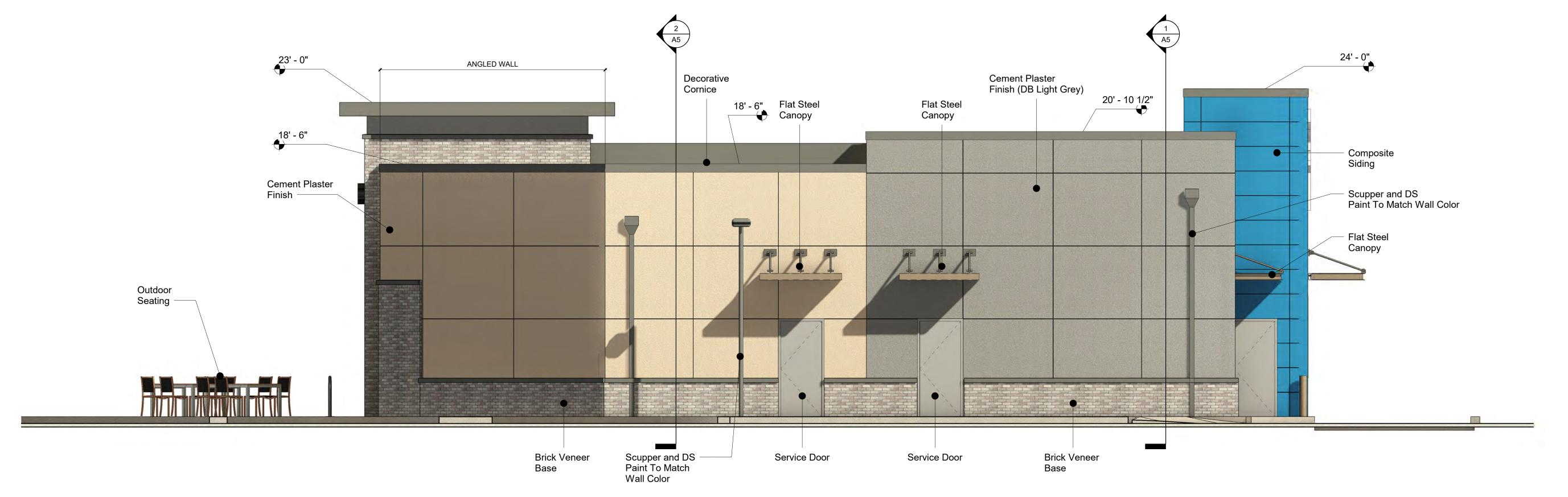
East Elevation



North Elevation

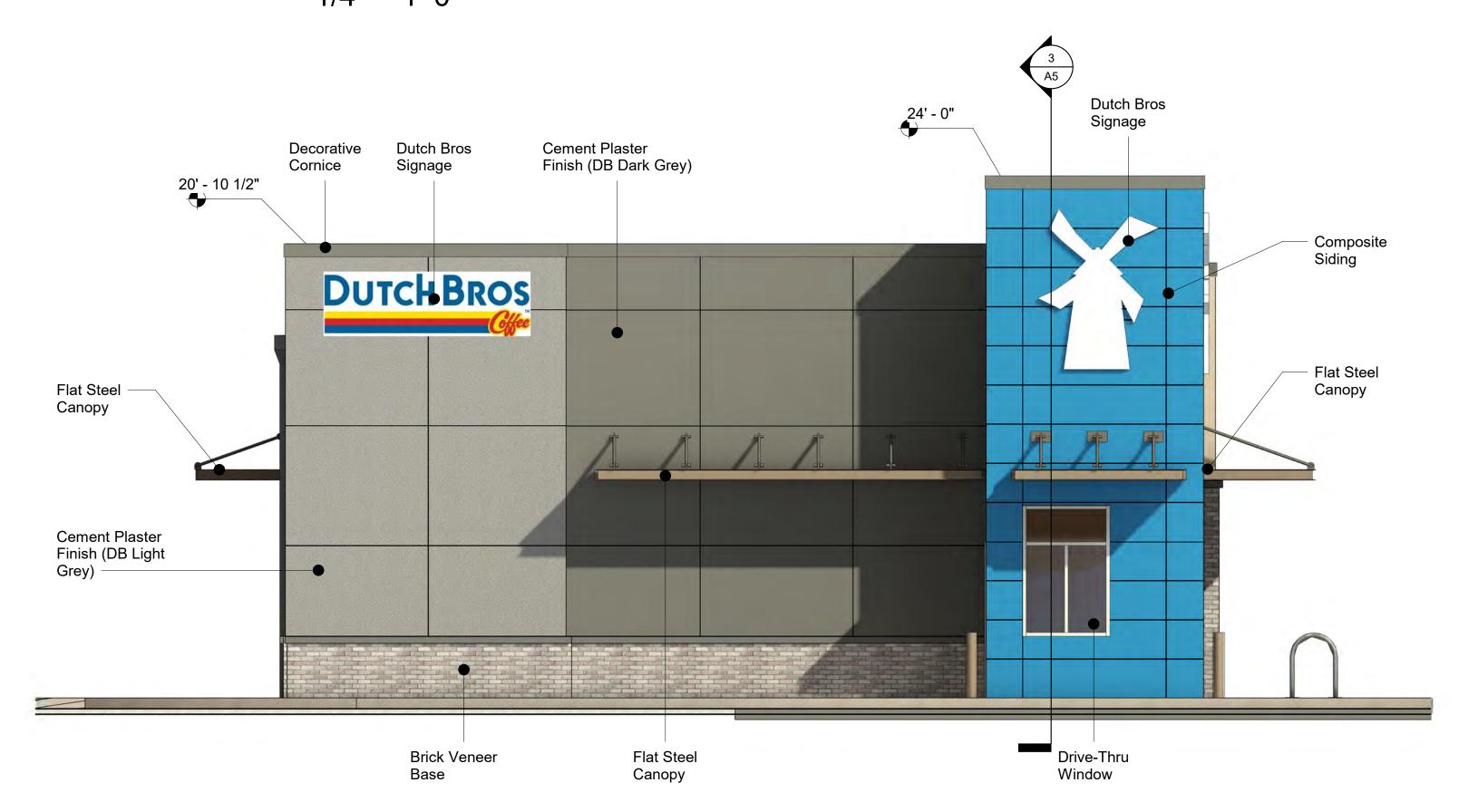
1/4" = 1'-0"





West Elevation

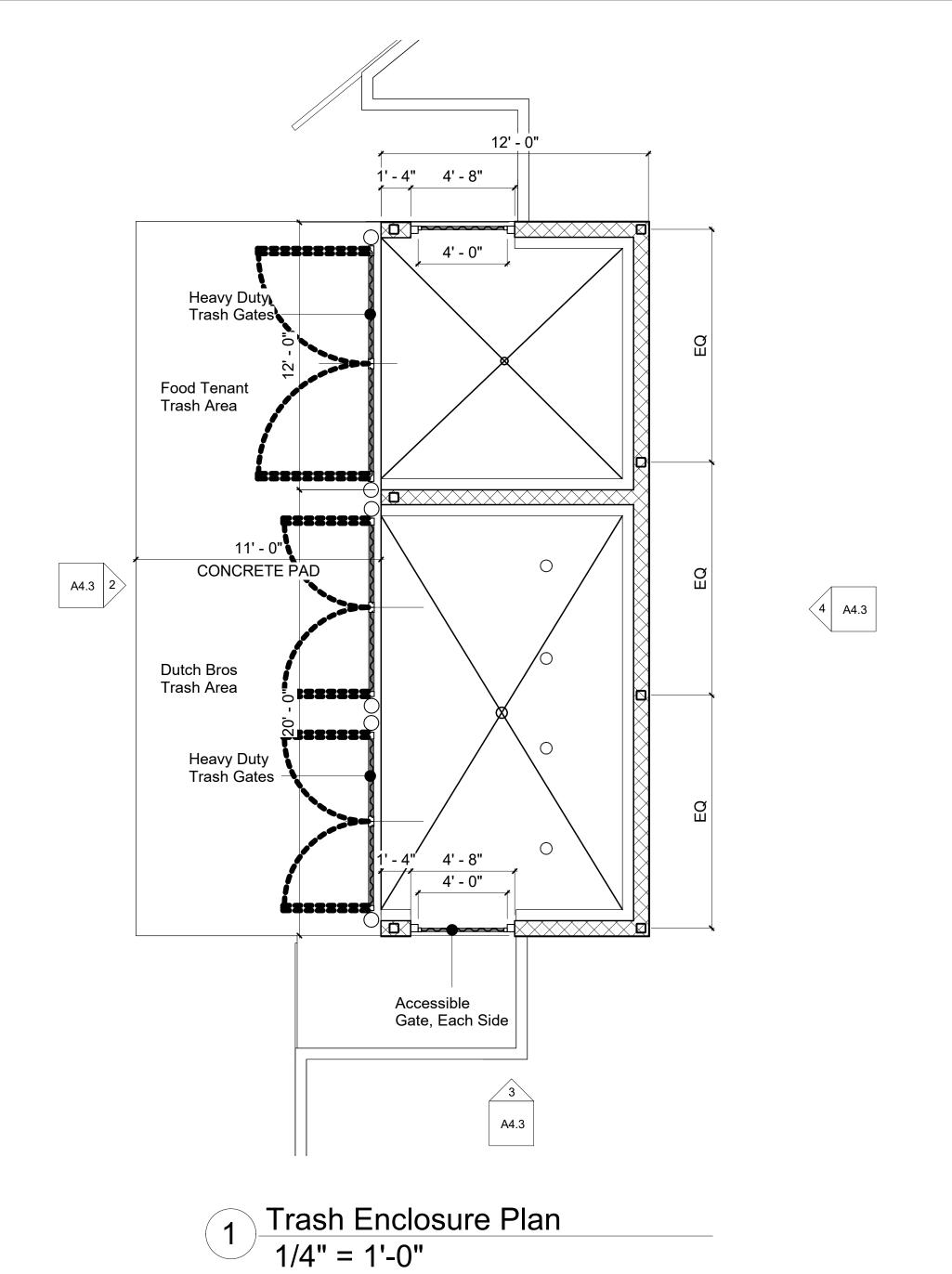
1/4" = 1'-0"



South Elevation 1/4" = 1'-0"

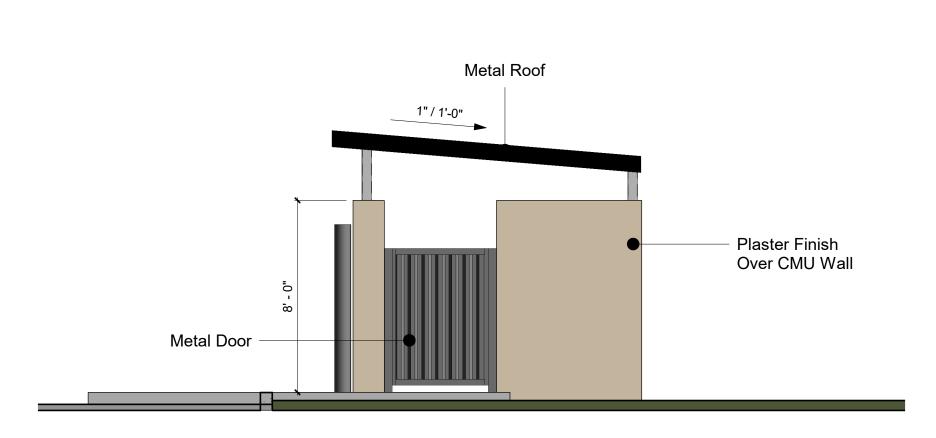
Hillcrest Ave

08/26/21



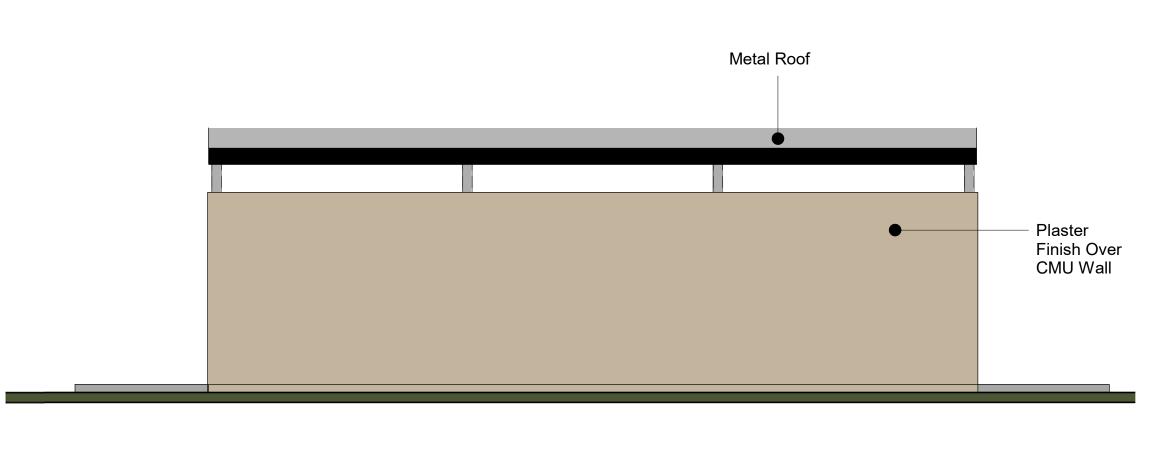
Metal Roof

Heavy Duty Gates, Dark Grey

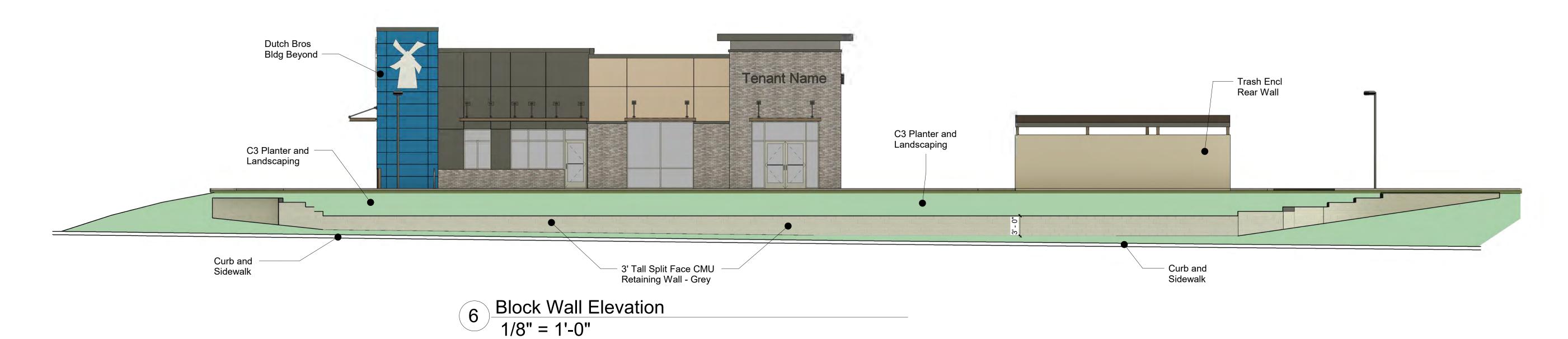


2 Front Elevation 1/4" = 1'-0"

3 Side Elevation 1/4" = 1'-0"



4 Rear Elevation 1/4" = 1'-0"



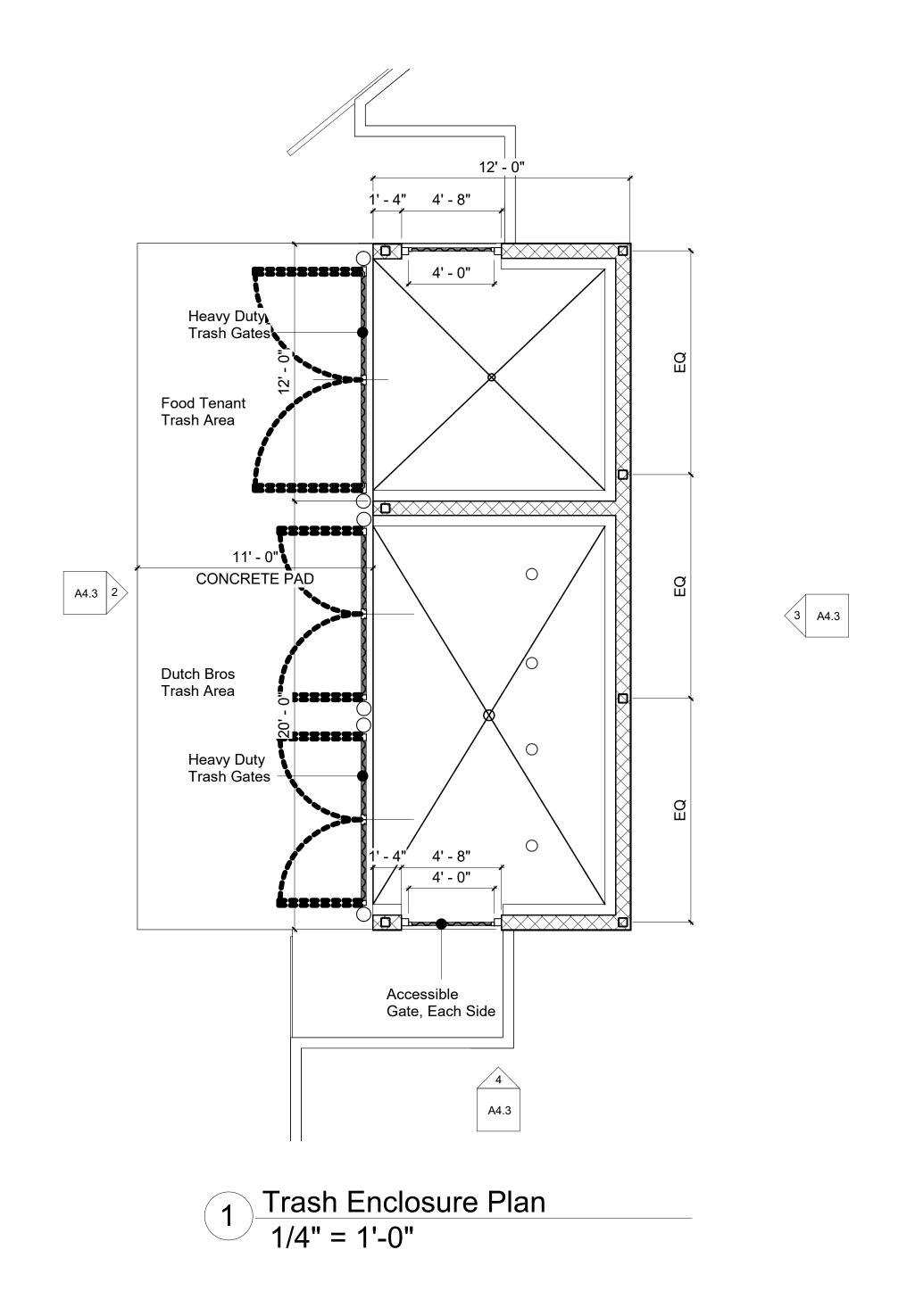


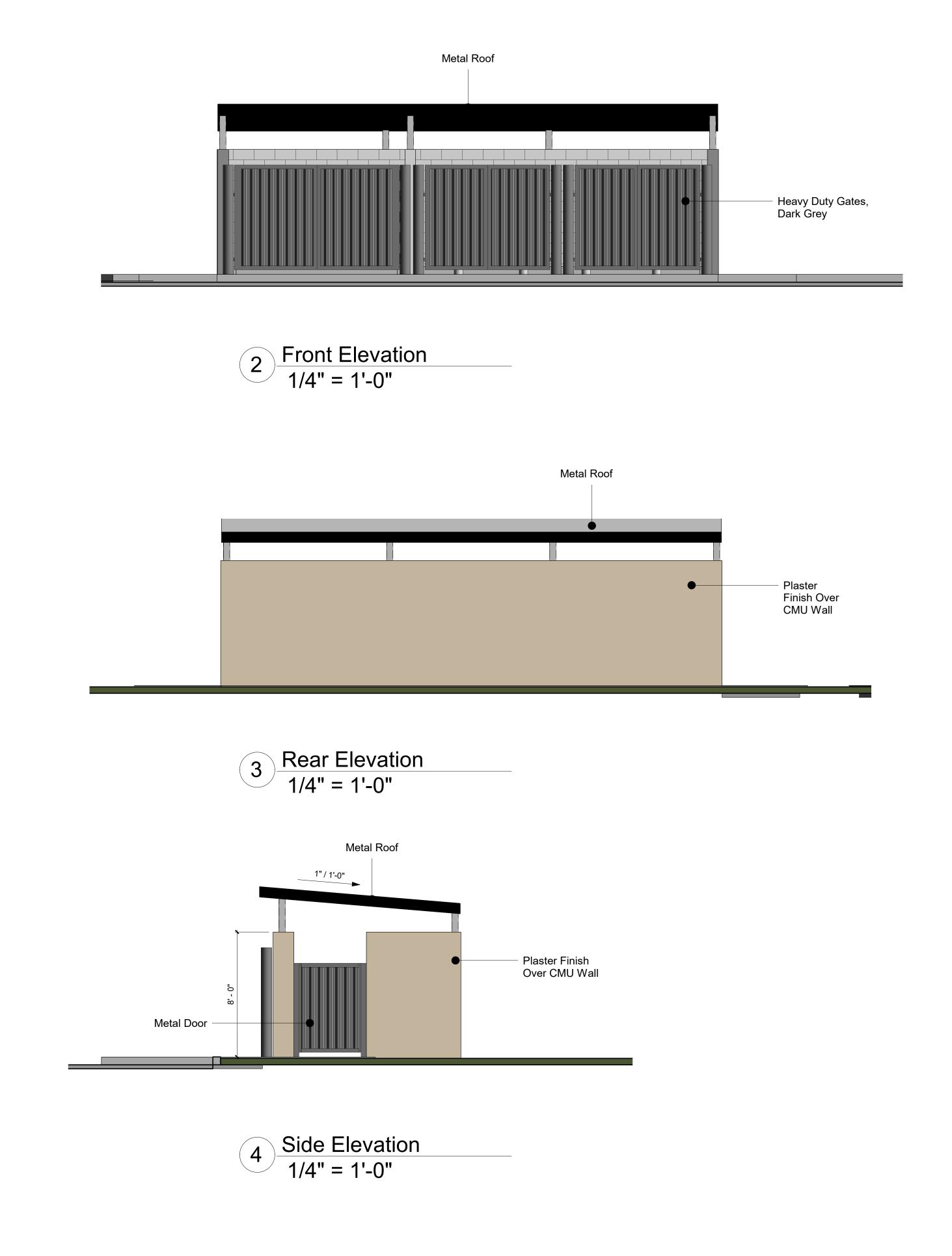
Hillcrest Ave

Antioch, CA

Trash Enclosure

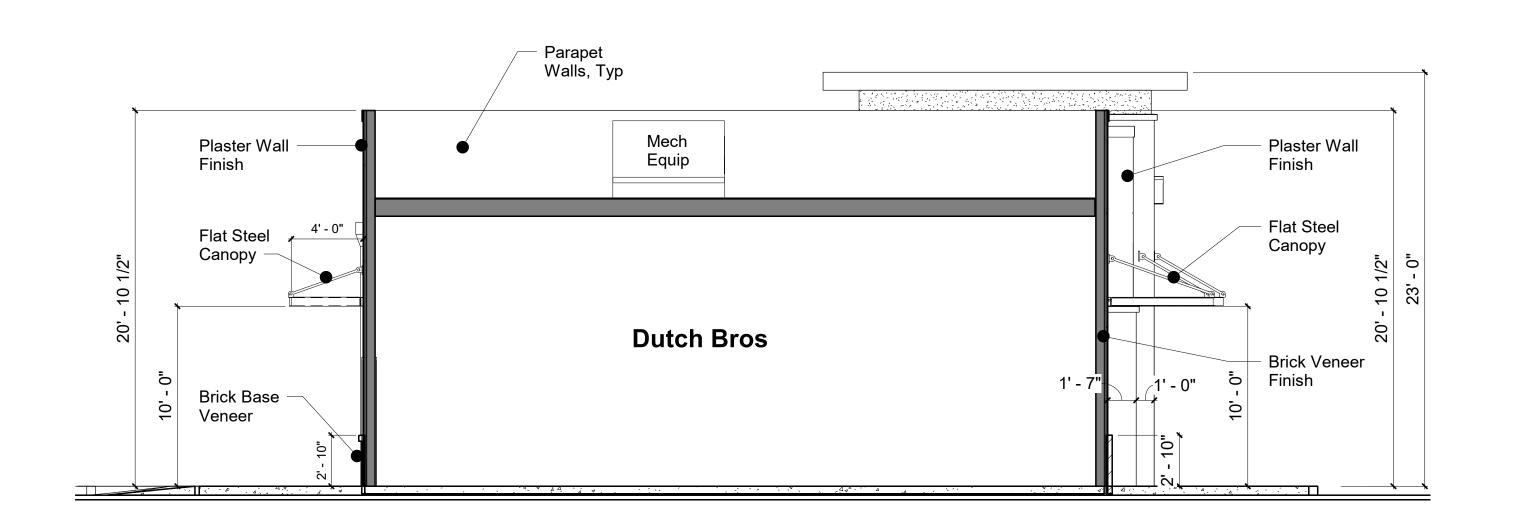
A4.3

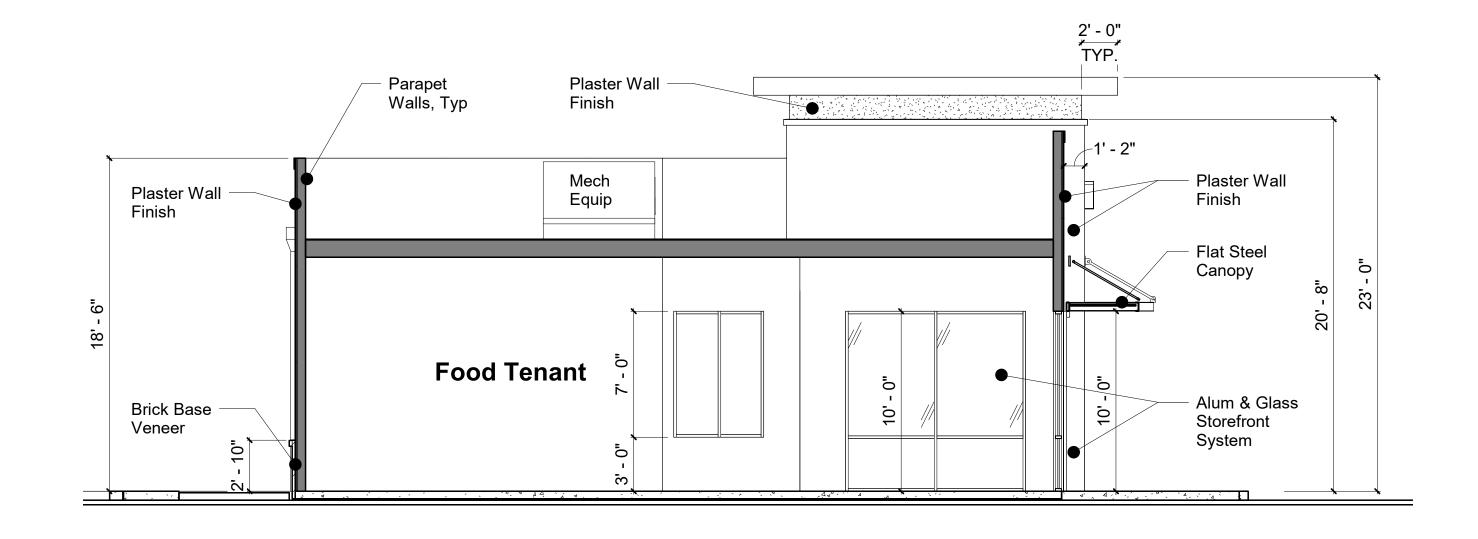






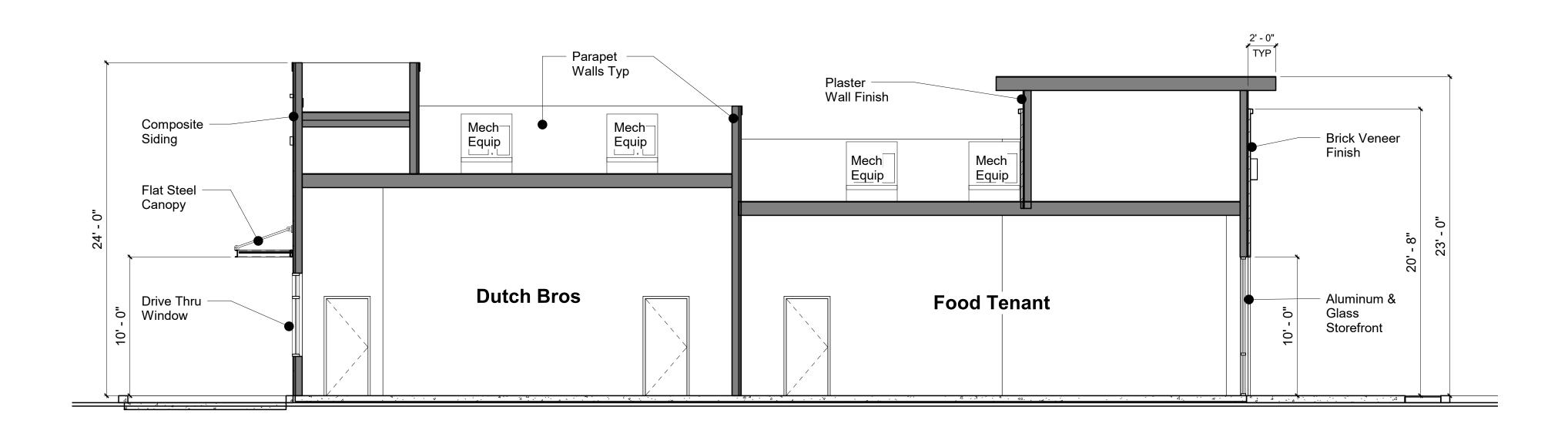
Hillcrest Ave





1 Building Section 1 3/16" = 1'-0"

2 Building Section 2 3/16" = 1'-0"



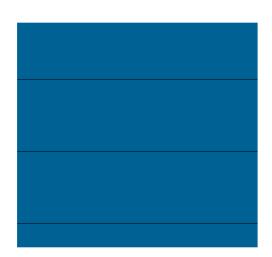
 $3 \frac{\text{Building Section 3}}{3/16" = 1'-0"}$







Stucco Wall Finish Sherwin Williams DB Dark Grey



Composite Siding
Nichiha Illumination Series
Custom DB Blue



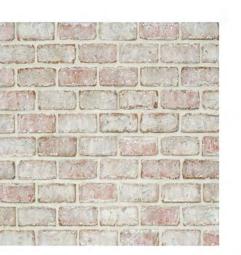
Trim & Canopy Dunn Edwards DE6356 Sheet Metal



Stucco Wall Finish
Dunn Edwards DEC760
Desert Gray



Stucco Wall Finish Sherwin Williams DB Light Grey



Stone Veneer McNear Brick Veneer Berkshire

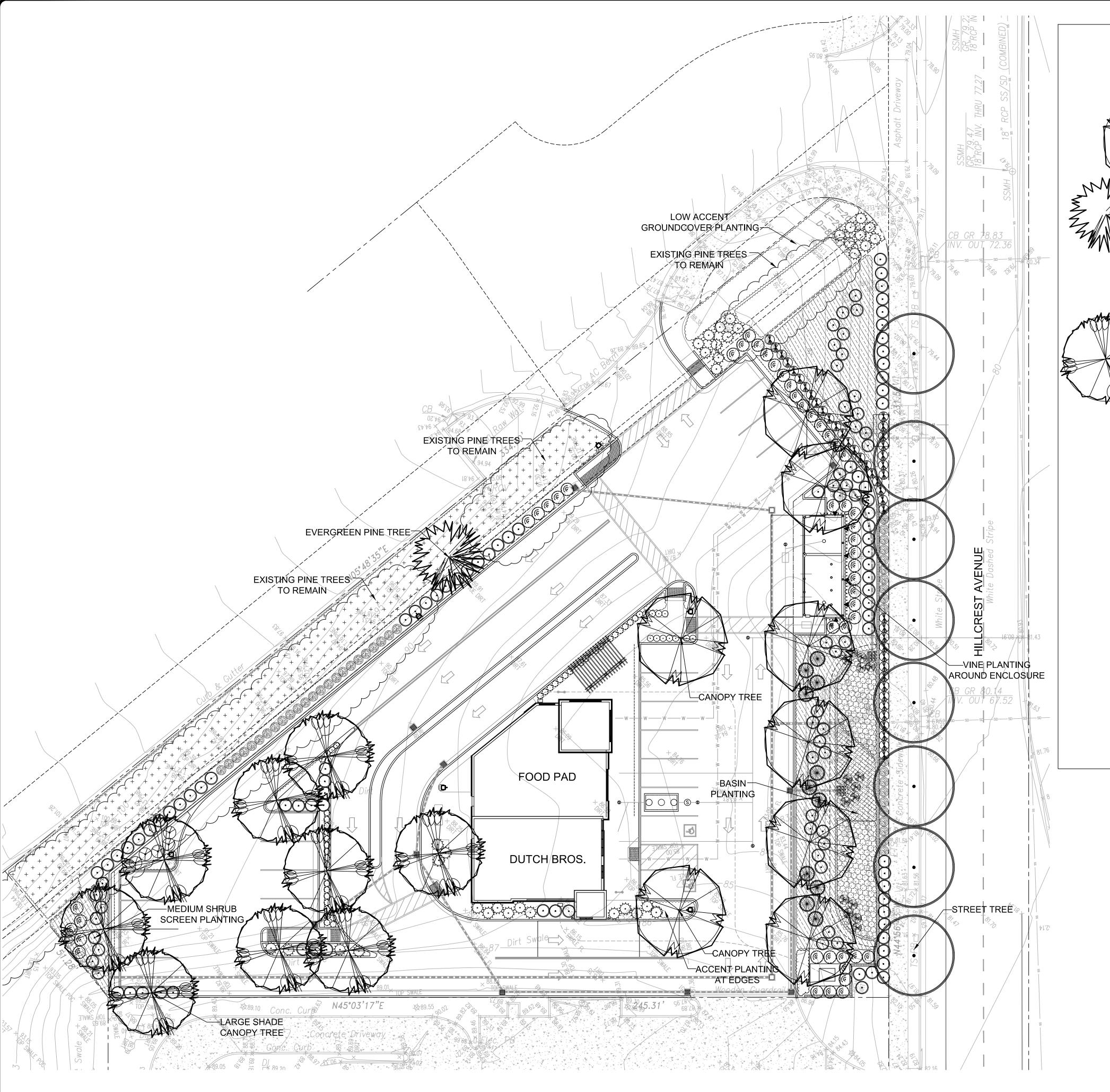


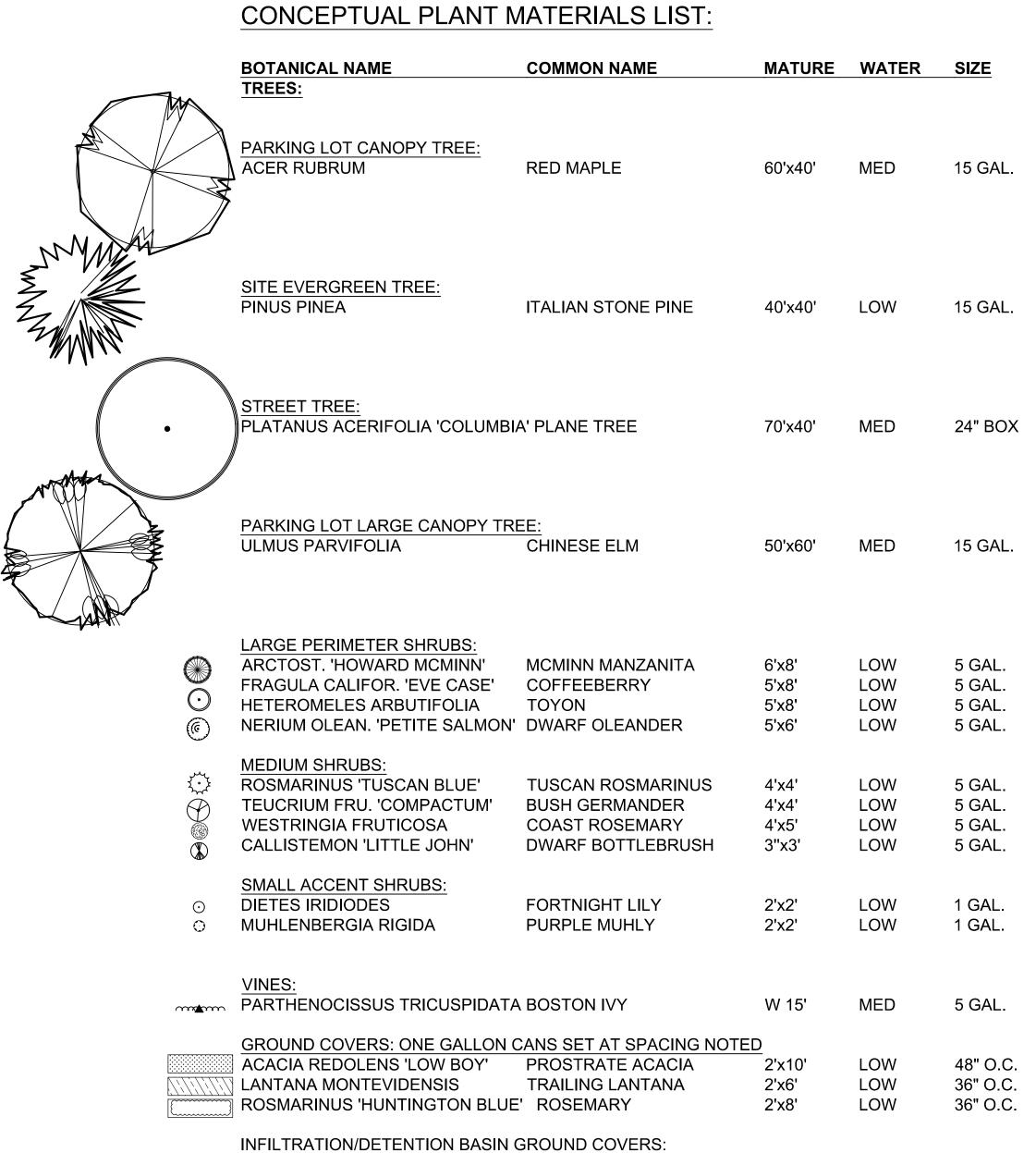
Bike Rack Timberform



Signage Call-Outs See Sign Drawings by Others



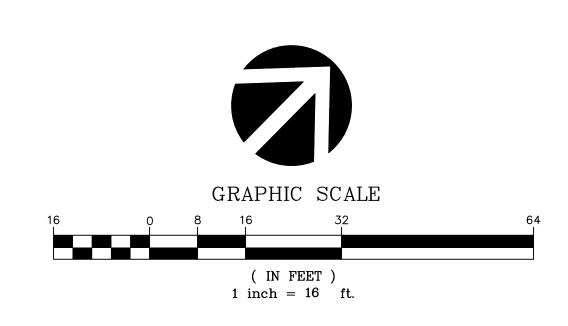




LEATHER LEAF SEDGE

CALIFORNIA GRAY RUSH

CAREX BUCHANANII
JUNCUS PATENS



LOW

LOW

2'x2'

2'x2'

1 GAL.

1 GAL.

REFER TO L2 FOR SHADING CALCULATIONS AND SHEET L3 FOR TREE IMAGES

ape Architecture

Main Street, Suite 4
ek, CA 94596
583

RW Stover & Associates

Landscape Architecture

1620 North Main Street, Suite 4

Walnut Creek, CA 94596

UTCH BROS
REST AVE & WILDFLOWER DR

PRELIMINARY ANDSCAPE

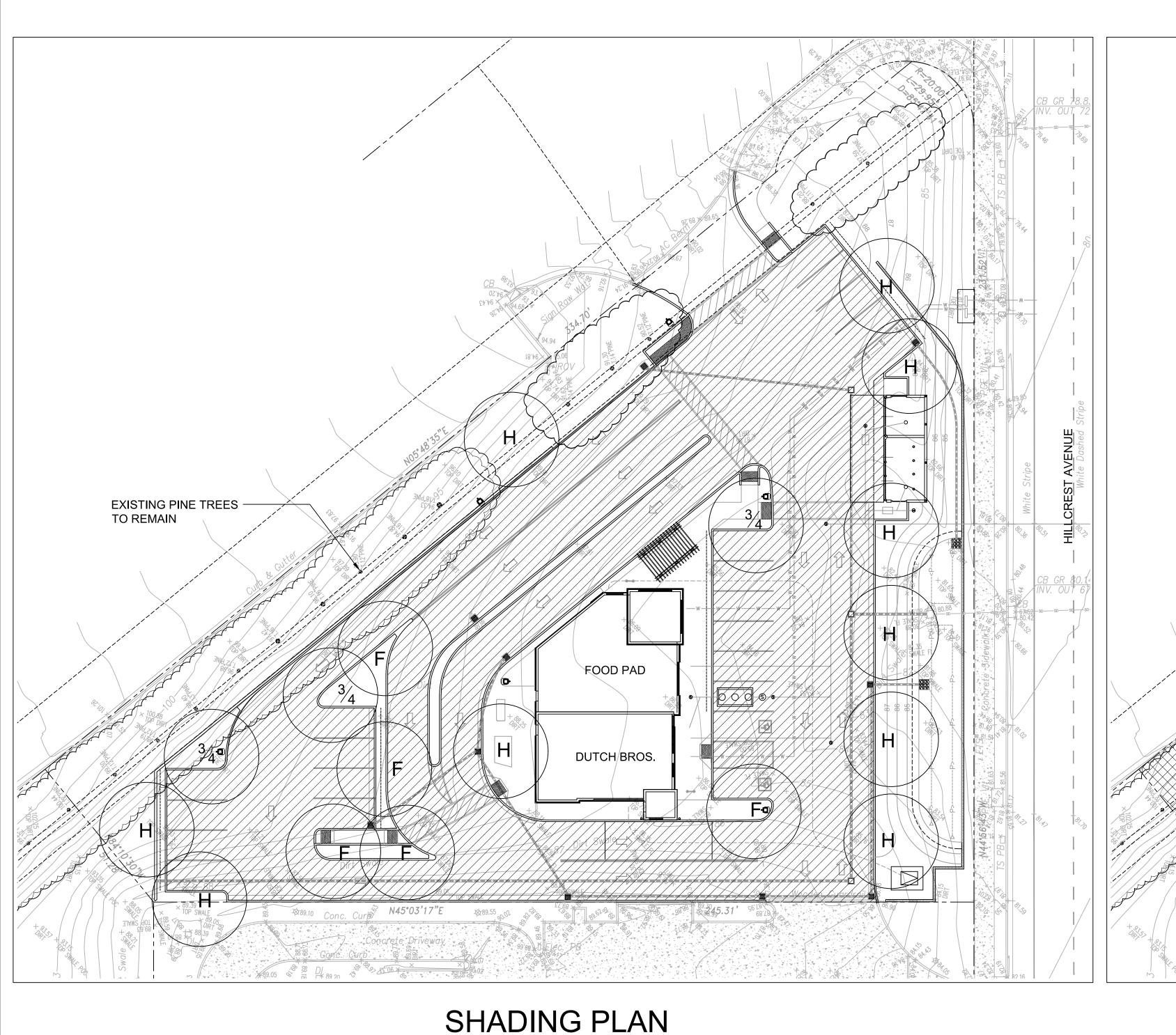
DESIGNED: DRAWN:
RS KD
CHECKED: JOB NO:

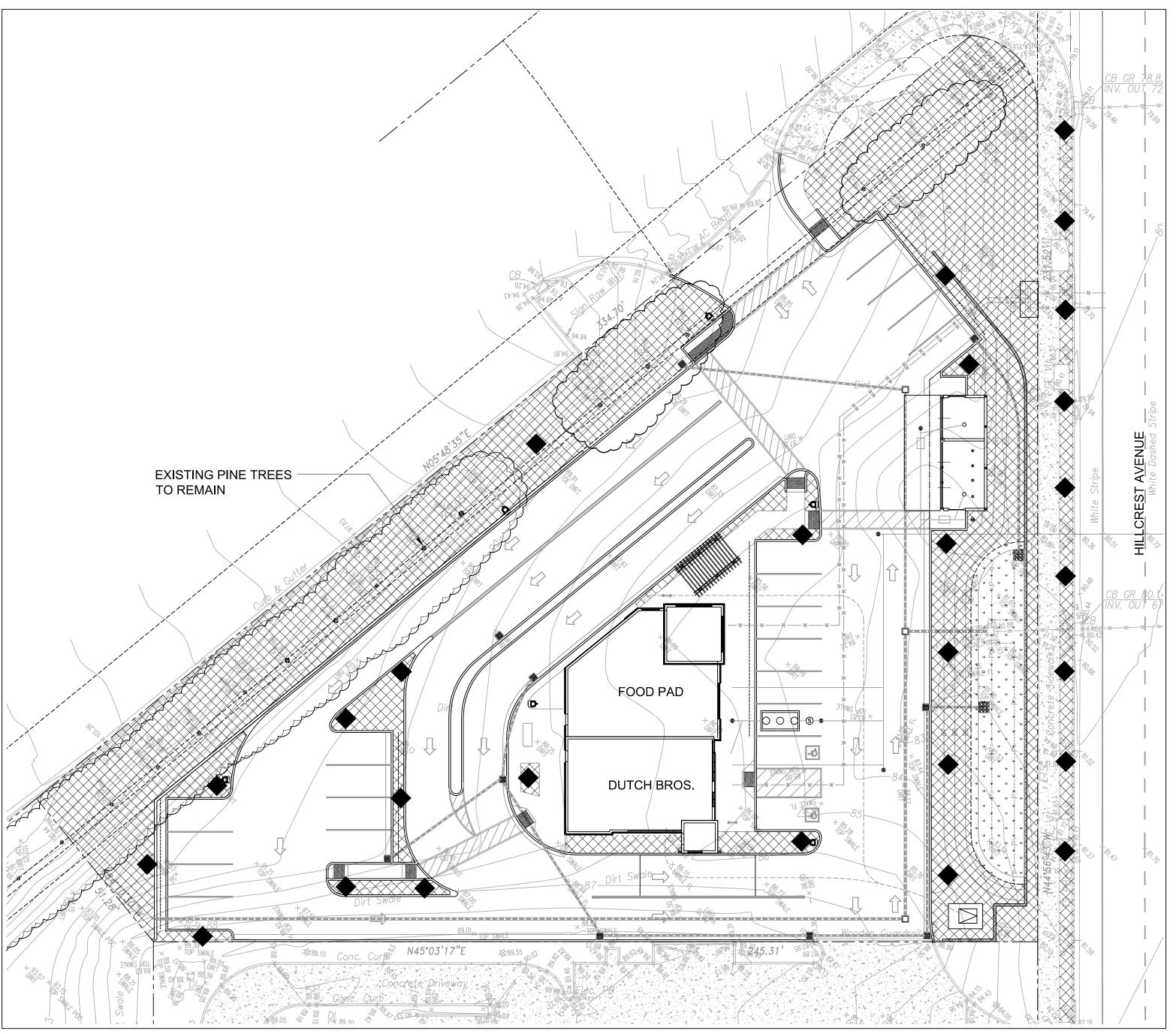
DATE
8-23-21

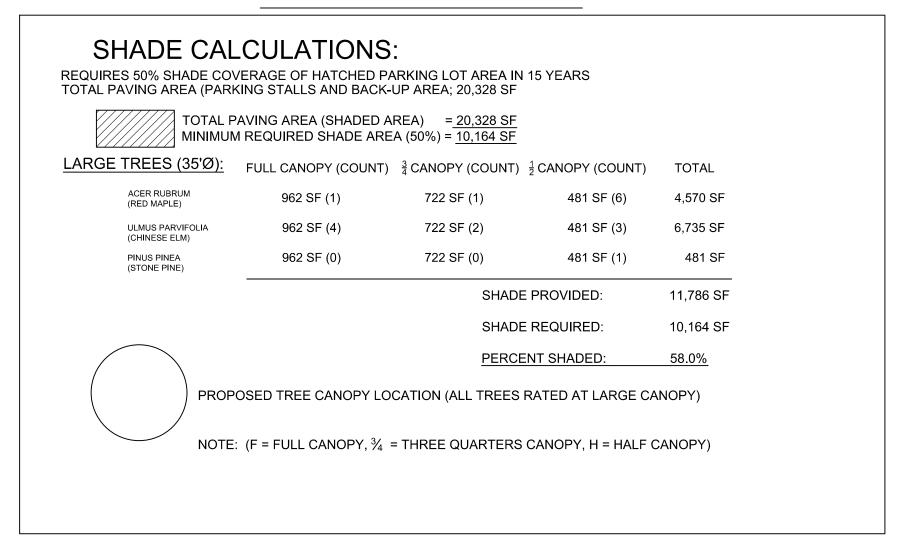
SCALE
NOTED

SHEET

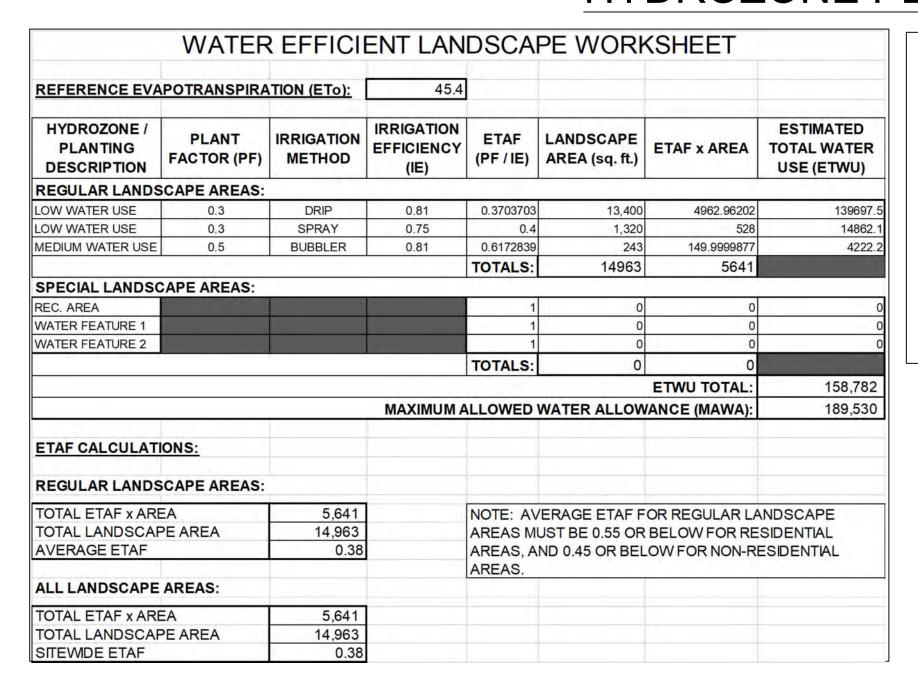
L1

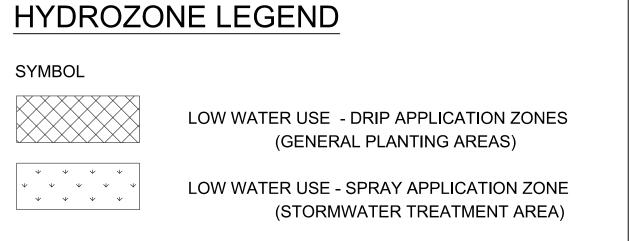






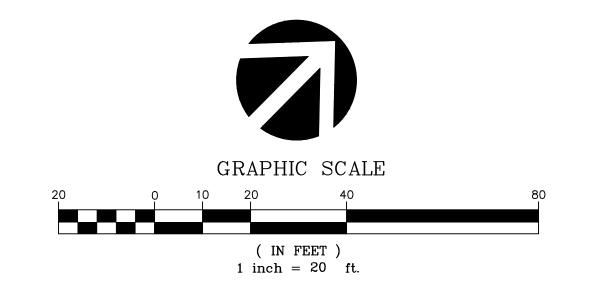
HYDROZONE PLAN





MEDIUM WATER USE - BUBBLER APPLICATION ZONE

(TREE BUBBLER AREAS)







SHADING PLA AND HYDROZONE I

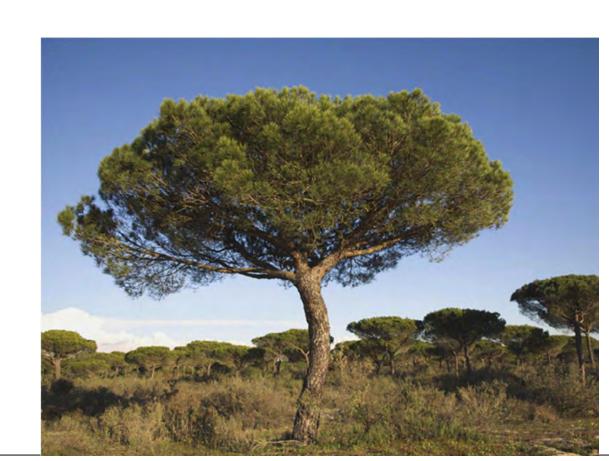
CHECKED: JOB NO: 8-23-21 SCALE NOTED

SHEET

L3

TREES:







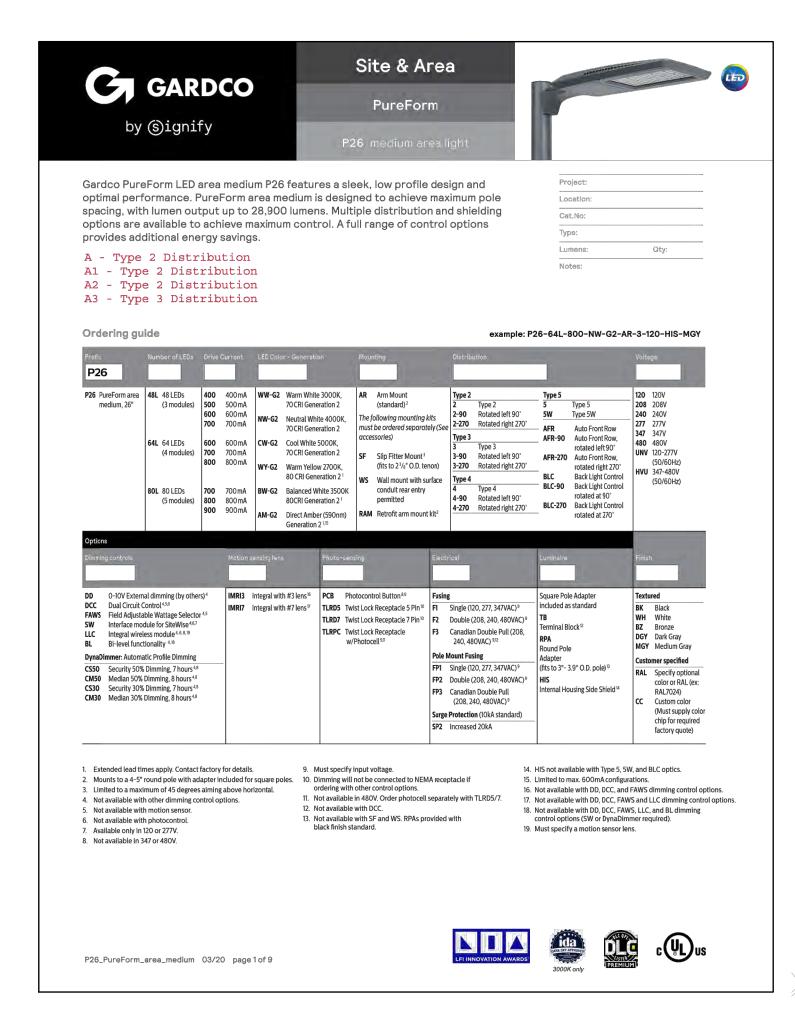


ACER RUBRUM PINUS PINEA

PLATANUS ACERIFOLIA 'COLUMBIA'

ULMUS PARVIFOLIA

Calculation Summary								
Project: HILLCREST AVE - DUTCH BROS - SITE								
Label	СаІсТуре	Units	Avg	Max	Min	Avg/Min	Max/Min	# Pts
DRIVEWAY & MAIN PARKING LOT	Illuminance	Fc	3.95	9.03	0.73	5.41	12.37	102
SW PARKING LOT	Illuminance	Fc	4.17	7.53	2.09	2.00	3.60	44



SITE PLAN - PHOTOMETRIC 1/16" = 1'-0"







0.01 SIDHU

APN 052-460-034

2020-26860 HILLCREST AVENUE

PARCEL 3 (214 PMo26) 0.02

APN 052-460-018

LOT 5 (TRACT 7893)

3353 DEER VALLEY ROAD

0.13 0.63 2.13 2.44

0.11 0.21 0.56 3.26 3.42 44

0.04 0.10 0.18 0.34 0.65

0.05 0.17 0.25 0.47 0.87

0.03

0.53 0.31 0.14 0.06 0.05 0.06 0.11 0.33 0.64

0.48 · · · 0.38 · · · 0.25 · · 0.12 · · · 0.06pap004 · · · (20.05 pm 20.0 · · · 0.26 · · · 0.48 · ·

0.01 0.01 0.01 0.01

0.01 0.01 0.02 0.02 0.03 0.05 0.08 0.14 0.25 0.42 0.62 0.84 1.12 1.49

0.76 0.61 0.36 0.16 0.07 0.05 0.43

FOOD PAD

DUTCH BROS

1.22 0.00 0.00 0.00 0.00

 0.01
 0.02
 0.04
 0.06
 0.06
 0.07
 0.08
 0.08
 0.08
 0.08
 0.08
 0.08
 0.07
 0.07
 0.08
 0.09
 0.10
 0.12
 0.20
 0.33
 0.52

\$\frac{1}{2}\text{30}\text{19-1}\frac{1}{2}\text{30}\text{208} \text{5.04} \text{5.07} \text{5.12} \text{5.17} \text{5.12} \text{5.21} \text{5.20} \text{5.17} \text{5.14} \text{5.10} \text{5.10} \text{5.99} \text{5.10} \text{5.16} \text{5.42} \text{5.21} \text{5.21} \text{5.29} \text{5.29}

0.01 0.02 0.04 0.10 0.18 0.26 0.32 0.35 0.35 0.36 0.35 0.35 0.35 0.34 0.31 0.31 0.31 0.29 0.25 0.18 0.12 0.08 0.08 0.08 0.13 0.48 0.49 0.71 0.52

0.01 0.02 0.04 0.13 0.26 0.39 0.49 0.55 0.54 0.53 / 0.52 0.51 0.49 0.46 0.47 0.44 0.35 / 0.24 0.12 0.07 / 0.07 0.13 0.46 / 1.70 3.07 3.85

6.44 4.61 3.10 2.05 1.2

3.05 **2.**75 **3.**15 **3.**49 **2.**74 **2.**32 **1.**97 **1.**59 **1.**16 **0.**58 **0.**16 **0.**07 **0.**00 **0.**02 **0.**30 **1**04

0.05 0.17 0.29 0.32 0.32 0.32 0.32 0.28 0.24 0.19 0.14 0.11 0.09 0.08 0.08 0.07 0.07 0.07 0.07 0.06 0.06 0.05 0.04 0.05 0.06 0.08 0.08 0.08 0.08 0.08 0.08 0.08

8.59 6.62 4.69 3.13 2.04

5.39 4.05 3.24 / 2.47 1.84

7.40 5.52 4.14 2.90

FIRST STERT TRIBLE NEWS, LL6.05 6.08 6.10 6.12 6.12 6.12 6.14 6.14 6.14 6.13 6.13 6.11 6.11 6.11 6.10 6.10 6.10

5.01 5.02 5.02 5.05 5.17 5.37 5.59 5.71 5.76 5.74 5.72 5.74 5.73 5.67 5.62 5.61 5.59 5.50 5.30 5.14 5.06 5.06 5.08

0.01 0.02 0.02 0.04 0.08 0.34 0.69 1.13 1.34 1.43 1.38 1.34 1.41 1.42 1.24 1.11 1.08 0.98 5.79 0.47 0.17 3.06

1.37 1.96 2.56 /3.01 3.40 3.67 4.38 4.89 3.72 3.01 2.36 /1.7

8.45

0.03 0.05 0.14 0.51 0.88 3.36 1.74 1.90 1.90 1.90 2.01 2.10 1.77 1.55 1.42 1.24 0.96 0.56

0.03 0.06 0.27 0.71 1.09 1.65 2.14 2.46 2.53 2.55 2.91 3/15 2.53 2.15 1.85 1.53

3.34 **3**.89 **4**.73 **5**.96

3.66 DH 4.06 4.83 6.05

0.01 0.02 0.03 0.07 0.26 0.51 0.79 1.01 1.01 0.98 1.01 1.01 0.91 0.83 0.80

0.01 0.02 0.03 0.05 0.09 0.52 1.41 1.78 2.31 2.98 3.54 4.21 4.95 6.12 7.00 5.20 3.96 2.81 7.98 1.2

4.42 4.36 3.97 3.90 - 26.802 4.42 5.14 6.4

4.95 4.89 4.26 3.84 7 3.73 3.74 3.88 4.78

0.01 0.02 0.04 0.06 0.10 0.59 1.90 0.18 0.11 0.11 0.11 0.11 0.11 0.11 0.11 0.11 0.11 0.11 0.11 0.11 0.11 0.11 0.11 0.11 0.11 0.11 0.11

0.05 0.35 0.88 /1.12 1.29

0.04 0.08 0.16 0.30 0.70 4.19 4.14 3.77 3.38 3.00 2.49 2.00 2.16 2.16 1.66 1.51 1.32 0.99

0.01 0.01 0.02 0.02 0.03 0.04 0.03 0.01 0.01 0.01 0.01 0.01 0.01

0.01 0.02 0.02 0.03 0.04 0.07 0.09 0.12 0.10 0.04 0.03 0.02 0.02 0.02 0.01 0.01

0.01 0.02 0.03 0.05 0.08 0.14 0.22 0.32 0.34// 0.24 0.24 0.03 0.03 0.03 0.03 0.02 0.01

0.01 0.02 0.03 0.05 0.07 0.13 0.24 0.38 0.54 0.69 0.69 0.65 0.53 0.14 0.06 0.06 0.05 0.03 0.02 0.01

0.01 0.02 0.02 0.04 0.06 0.10 0.18 0.33 0.48 0.69 0.92 0.92 0.92 0.29 0.35 0.92 0.77 0.28 0.29 0.29 0.14 0.07 0.03 0.02

0.01 0.01 0.02 0.02 0.04 0.07 0.12 0.22 0.39 0.58 10.80 1.06 1.38 182 2.42 3.23 3.92 0.62 0.43 0.24 0.11 0.05 0.02

0.22 0.41

SITE PLAN

0.640 0.30 0.13 0.06 0.03

1.07 0.36 0.07

0.48 0.16

0.40 0.16

0.29 0.12

0.22 0.24 0.09

2.92 0.77 0.16 0.09 0.05 0.03 0.02 0.01

0.05 0.03

0.15 0.04

0.84 0.13 0.08 0.05 0.03

0.72 0.22 0.12 0.06 0.03

0.73 0.35 0.18 0.10 0.04

0.74 0.40 0.21 0.12 0.04

0.47 0.08 0.05 0.03 0.02

ENU

REST

2.13 2.98 4.02 4.90 5.38 3.42 0.29 0.12 0.06 0.03

5.24 0.75 0.41

5.22 0.80 0.42

3.04 × 0.78 0.15 0.09

0.86 0.45 0.24

0.58 0.26 0.13

4.87 6.32 5.74 4.59 3.91 4.04 3.75 0.67 0.19 5.10 0.07 0.07 0.04 0.02 0.01 ■

4.80

4.73 | 0.66 | / 0.31 | 0.15 | 0.11 | 0.05

2.11 2.80 3.61 4.26 4.41

1.13 1.74 2.18 2.47 2.65 2.86 2.77 1.81

1.94 2.41 2.65 2.69 2.75

2.15 **2**.74 **2**.96 **3**.01 **3**.08

3.77 4.39 4.49 4.68 5.43

3.27 4.92 5.10 4.65 4.44 4.88

7.27 8.04 6.20 4.41 3.43 3.33

DRIVEWAY & MAIN PARKING LOT

8.67 6.36 4.40 3.43

5.57 5.27 4.55 4.21

7.14 5.92 4.51 3.86 4.13

4.15 4.49 4.28 4.34 5.13 A

3.78 3.94 4.12 4.79

3.45 3.50

1.62 1.65 1.45 1.32

0.09 0.12 0.14 0.14 0.14 0.13 0.07 0.02 0.01

A2 9.03 6.48 4.34 3.24

0.38 1.37 2.55

\$\bar{0.53} \bar{0.19} \bar{0.07} \bar{0.05} \bar{0.07} \bar{0.19} \bar{0.78} \bar{1.70} \bar{2.17} \bar{2.21} \bar{2.01} \bar{1.91}

3.16 3.52 3.64 3.87

3.93 4.25 4.81

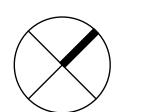
4.28 / 4.60 / 5.41

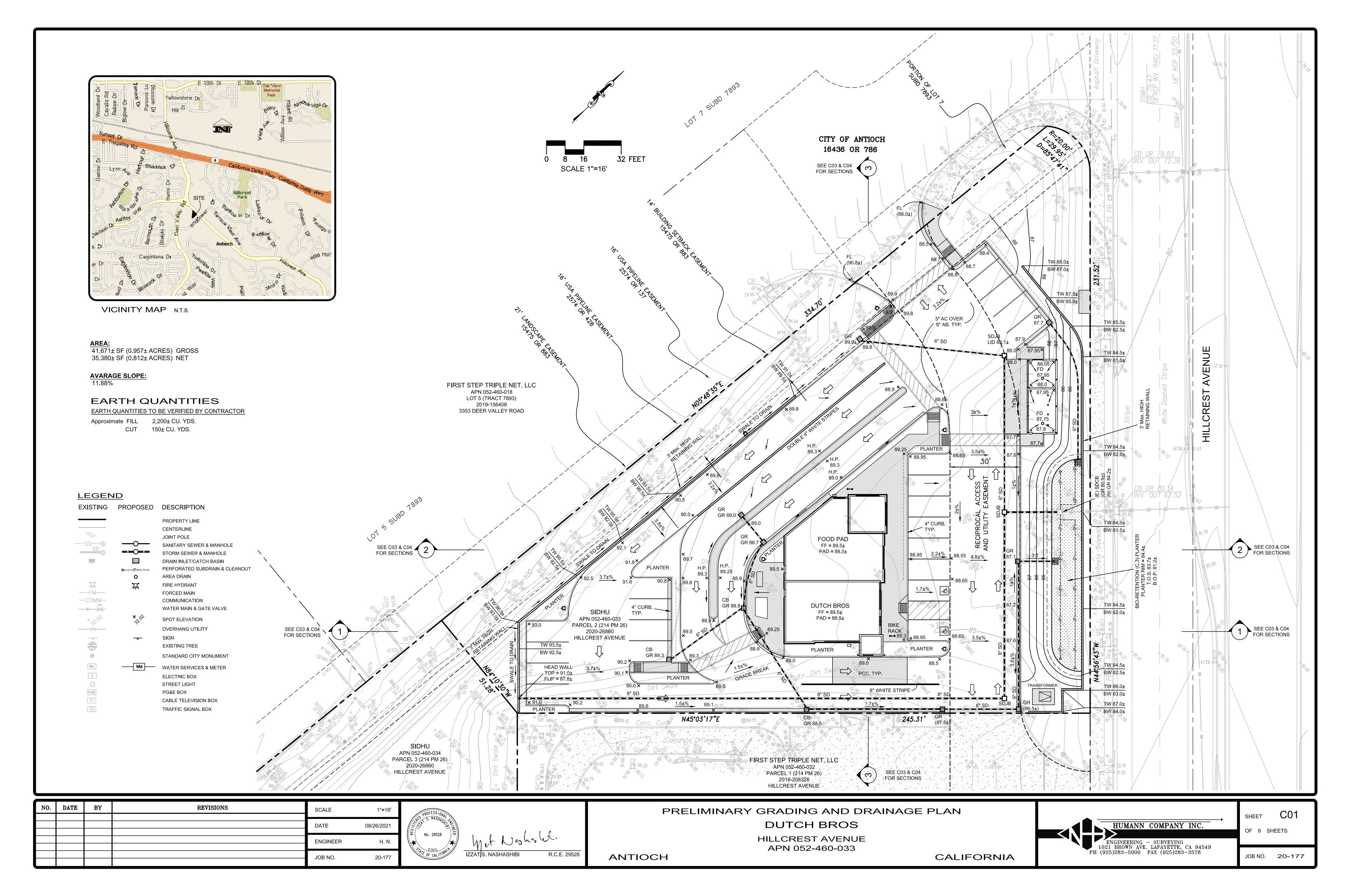
Antioch, CA

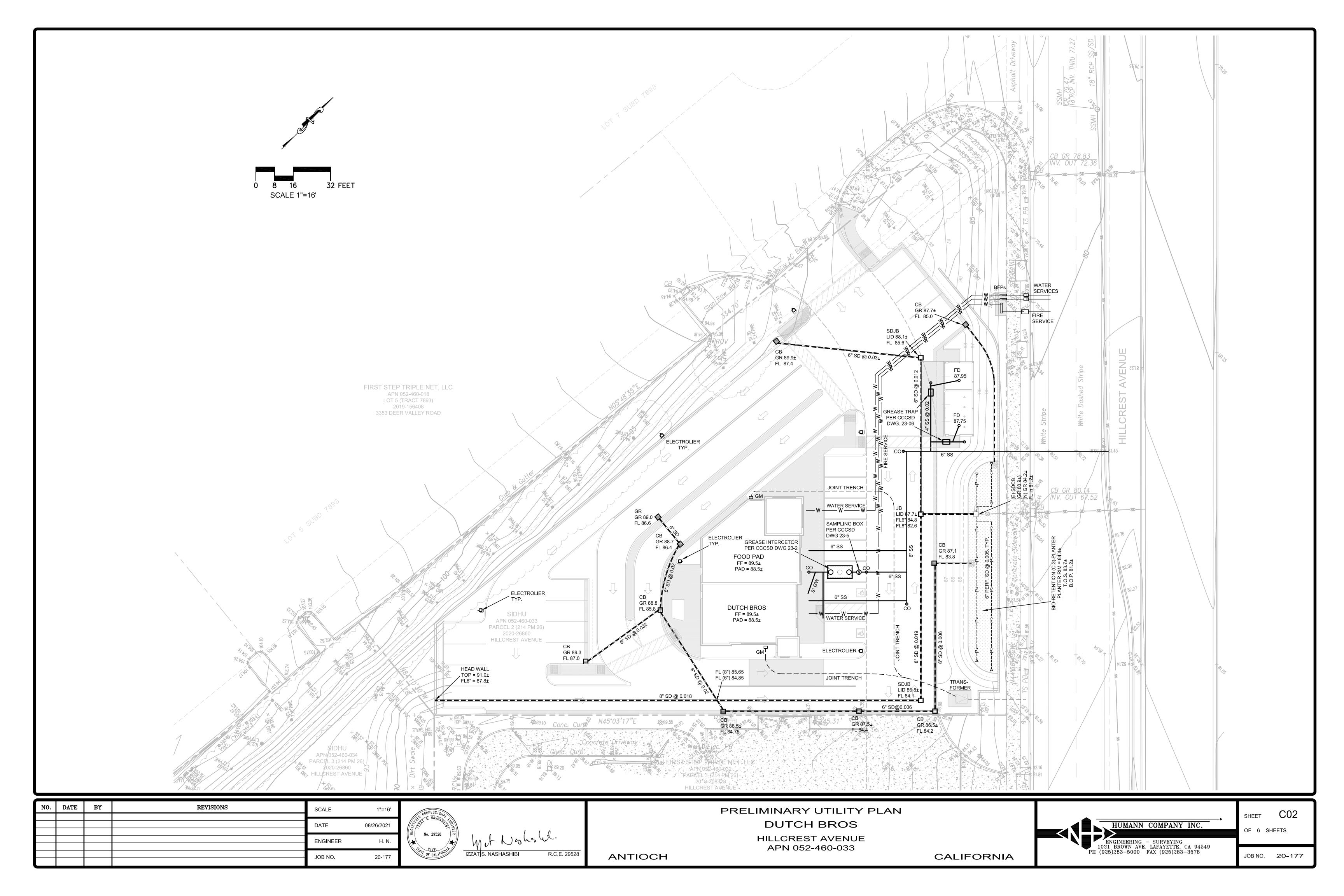


4457 Willow Road, Suite 100 Pleasanton, California 94588 phone: (925) 621-5300 fax: (925) 474-2159 belden@beldeninc.com 21061/NL

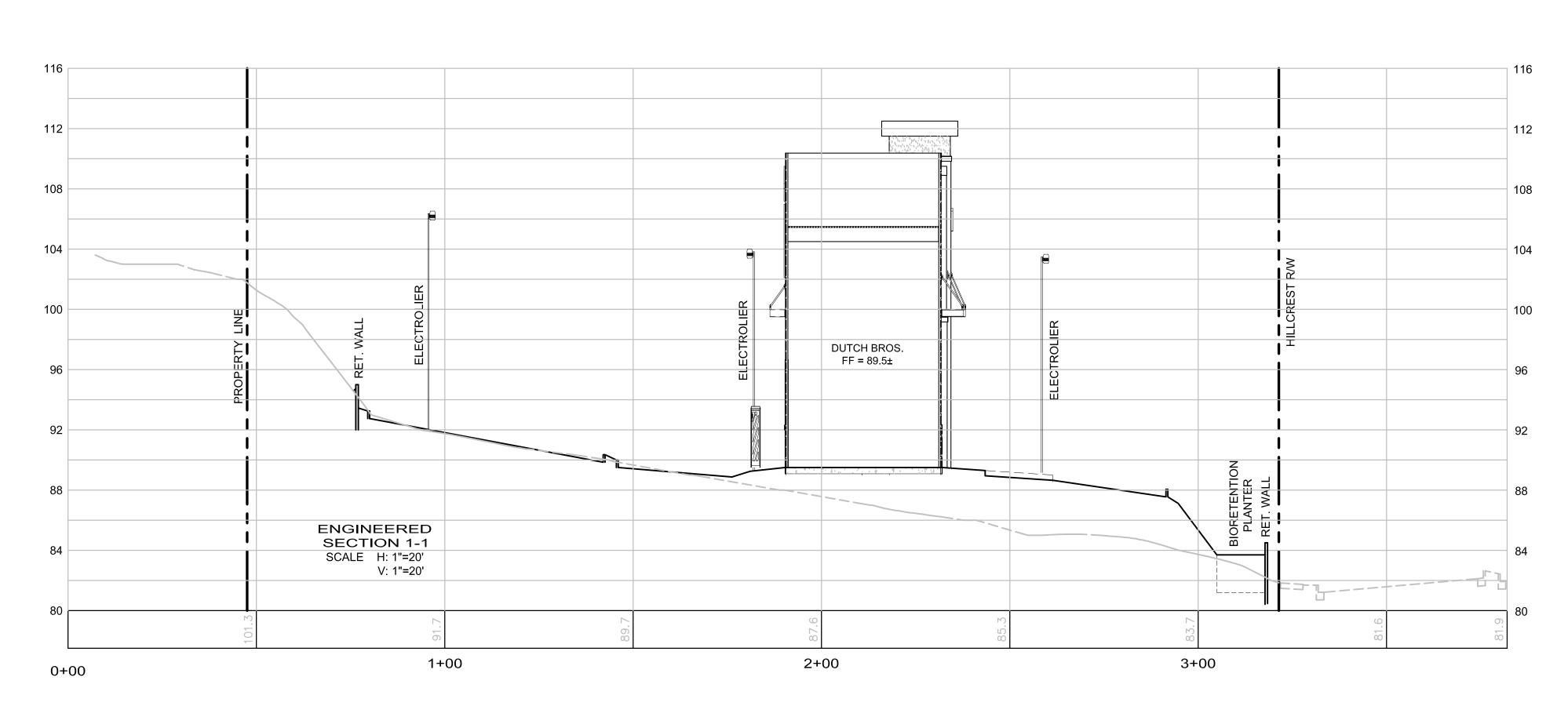












ANTIOCH

NO.	DATE	BY	REVISIONS	SCALE	1"=16'
				DATE	08/26/2021
				ENGINEER	H. N.
				JOB NO.	20-177



29528

ZOULL CALIFORNIA

IZZAT S. NASHASHIBI

R.C.E. 295

ENGINEERED CROSS-SECTIONS DUTCH BROS HILLCREST AVENUE APN 052-460-033

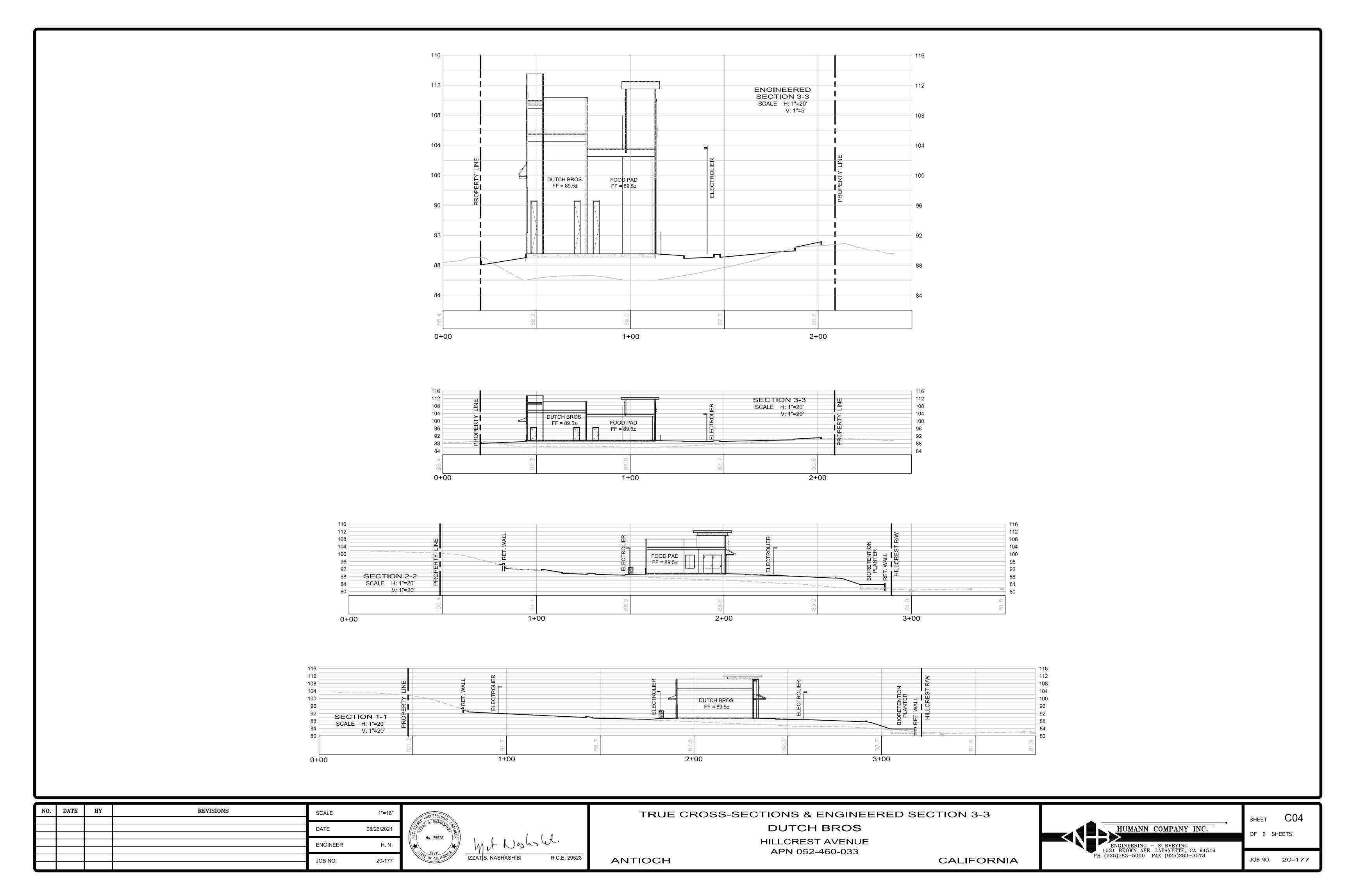
HUMANN COMPANY INC.

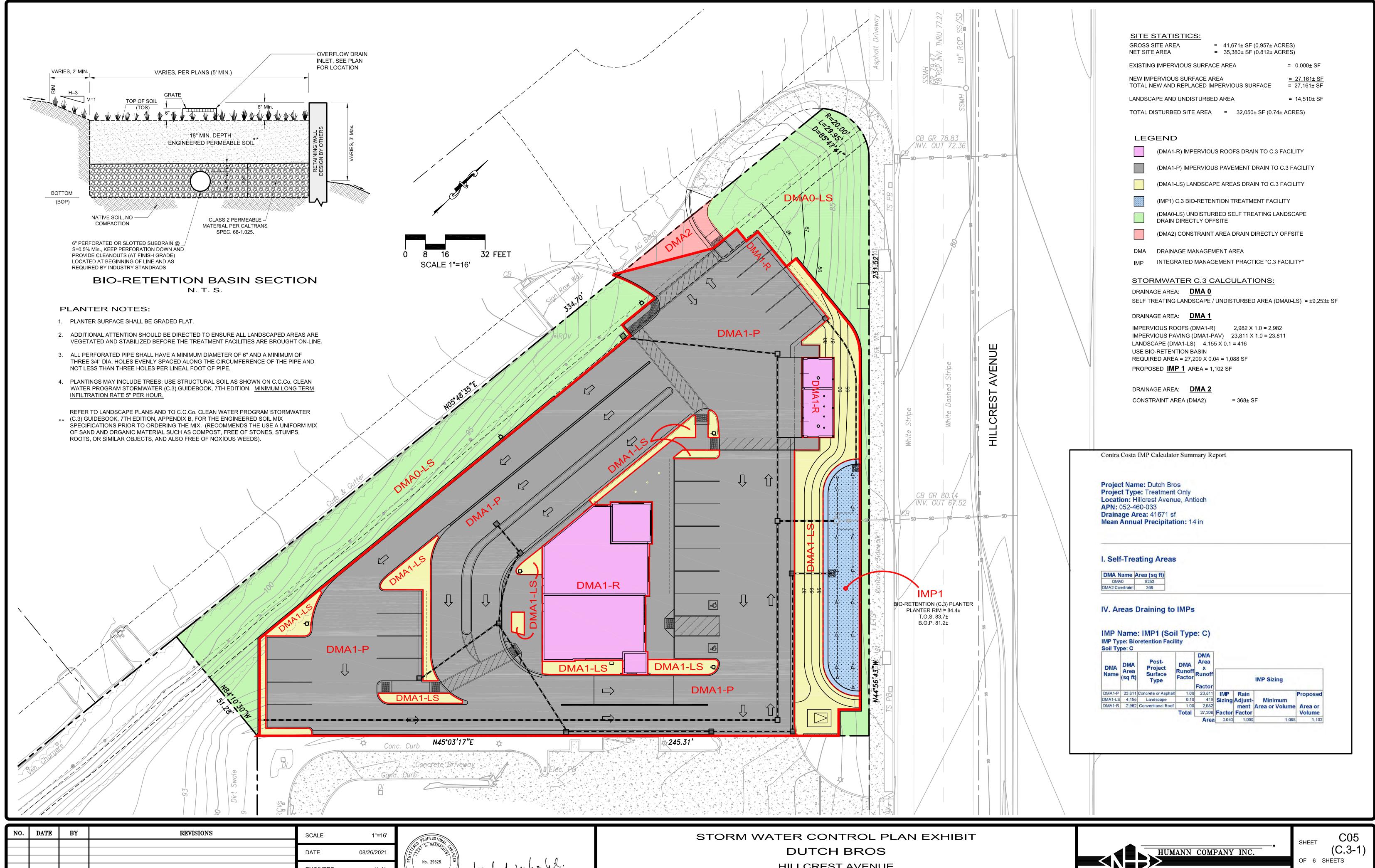
ENGINEERING - SURVEYING
1021 BROWN AVE. LAFAYETTE, CA 94549
PH (925)283-5000 FAX (925)283-3578

CALIFORNIA

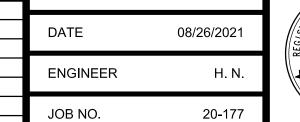
SHE	ΕT	C03
OF	6	SHEETS

JOB NO. 20-177





ANTIOCH





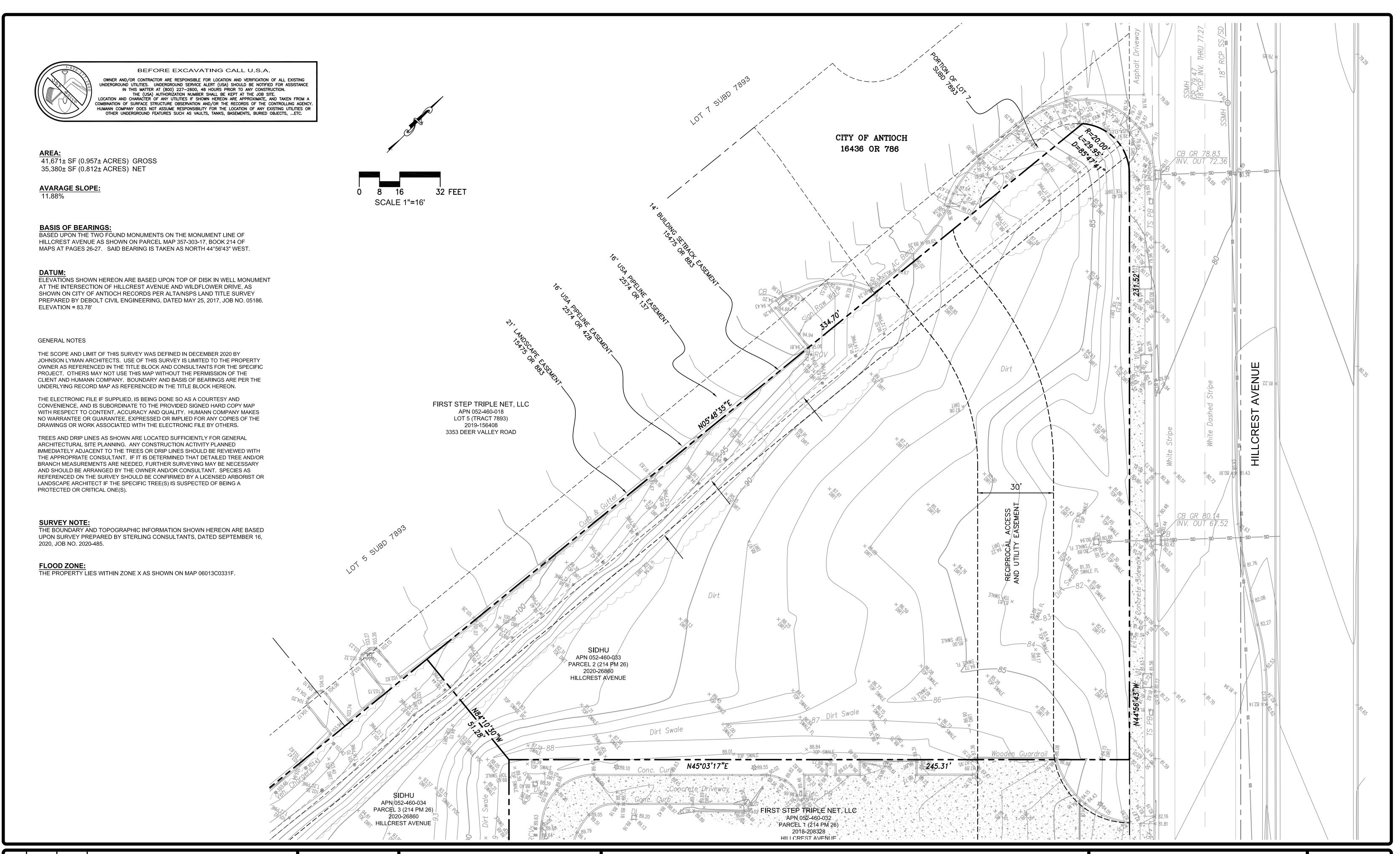
HILLCREST AVENUE

APN 052-460-033



CALIFORNIA

JOB NO. 20-177



NO.	DATE	BY	REVISIONS	SCALE	1"=16'
				DATE	09/16/2020
				ENGINEER	H. N.
				JOB NO.	20-177



DUTCH BROS
HILLCREST AVENUE
APN 052-460-033
ANTIOCH

EXISTING CONDITIONS



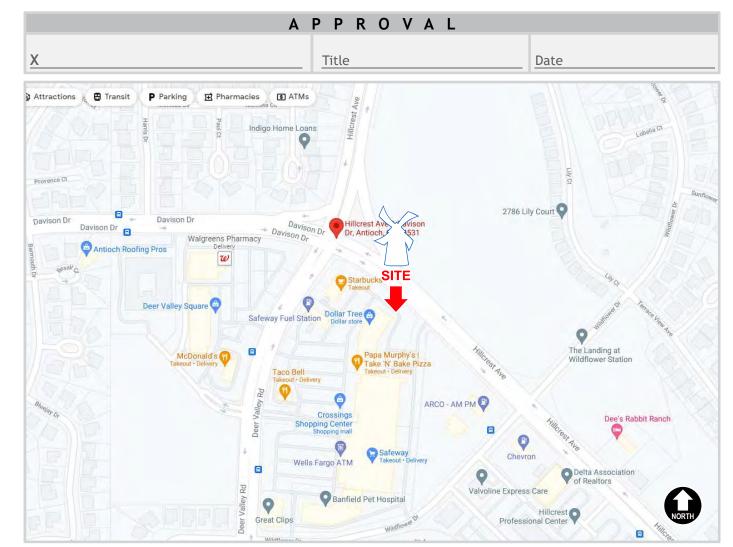
SHEET C06
OF 6 SHEETS

CALIFORNIA

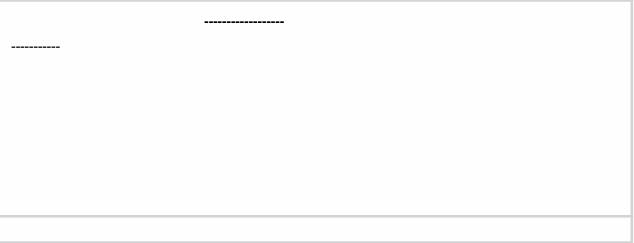
JOB NO. 20-177

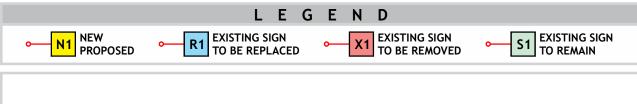
SCHEDULE

- N1 (1) SIGN TYPE DBCL10-REMOTE RW: CHANNEL LETTERS WITH REMOTE RACEWAY
- N2 (1) SIGN TYPE DBCL10-REMOTE RW: CHANNEL LETTERS WITH REMOTE RACEWAY
- N3 (1) SIGN TYPE:DBW13: SELF CONTAINED CHANNEL LOGO
- N4 (1) SIGN TYPE:DBW13: SELF CONTAINED CHANNEL LOGO
- N5 N/A
- N6 (4) SIGN TYPE: S/F FREE STANDING MENU BOARD
- N7 (1) SIGN TYPE: SIGN TYPE CLB: S/F POST MOUNTED DOUBLE ARM CLRNC BAR
- N8 (1) SIGN TYPE: NON-ILLUMINATED D/F DIRECTIONAL (DRIVE THRU/DRIVE THRU)
- N9 (1) SIGN TYPE: NON-ILLUMINATED D/F DIRECTIONAL (EXIT ONLY/ THANK YOU)
- N10 (4) SIGN TYPE: S/F WALL MOUNTED MENU BOARD











AERIAL PHOTO / SITE PLAN NOT TO SCALE



12226 Coast Drive Whittier, CA 90601

Tel: (562) 946-7545 Fax: (562) 949-5707 St. Lic.: 455415

Los Angeles, CA



DRAWING/REVISION NO.:

08-21-0001R3

of 15

CLIENT:

DUTCH BROS

Hillcrest Ave Antioch, Ca.

Approval Signature

DATE:

08/04/2021

PROJECT MANAGER

Carla T.

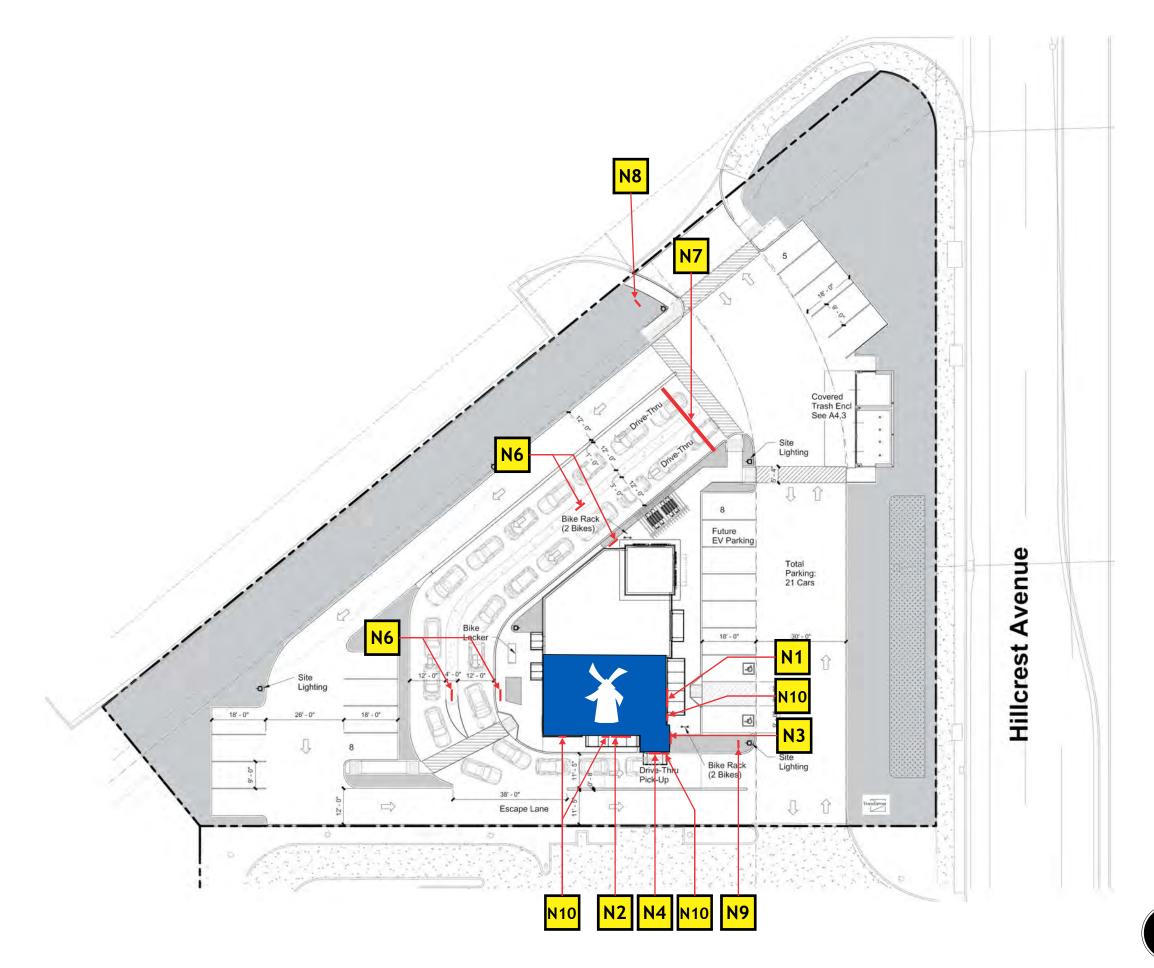
DESIGNER:

Jose Soria

REVISION DATE: 08/27/2021

REVISION BY:

Adrian C.





12226 Coast Drive Whittier, CA 90601

Tel: (562) 946-7545 Fax: (562) 949-5707 St. Lic.: 455415

Los Angeles, CA



DRAWING/REVISION NO.:

08-21-0001R3

PAGE NO.:

2 of 15

CLIENT:
DUTCH BROS

ADDRESS

Hillcrest Ave Antioch, Ca.

Approval Signature

DATE:

08/04/2021

PROJECT MANAGER

Carla T.

DESIGNER:

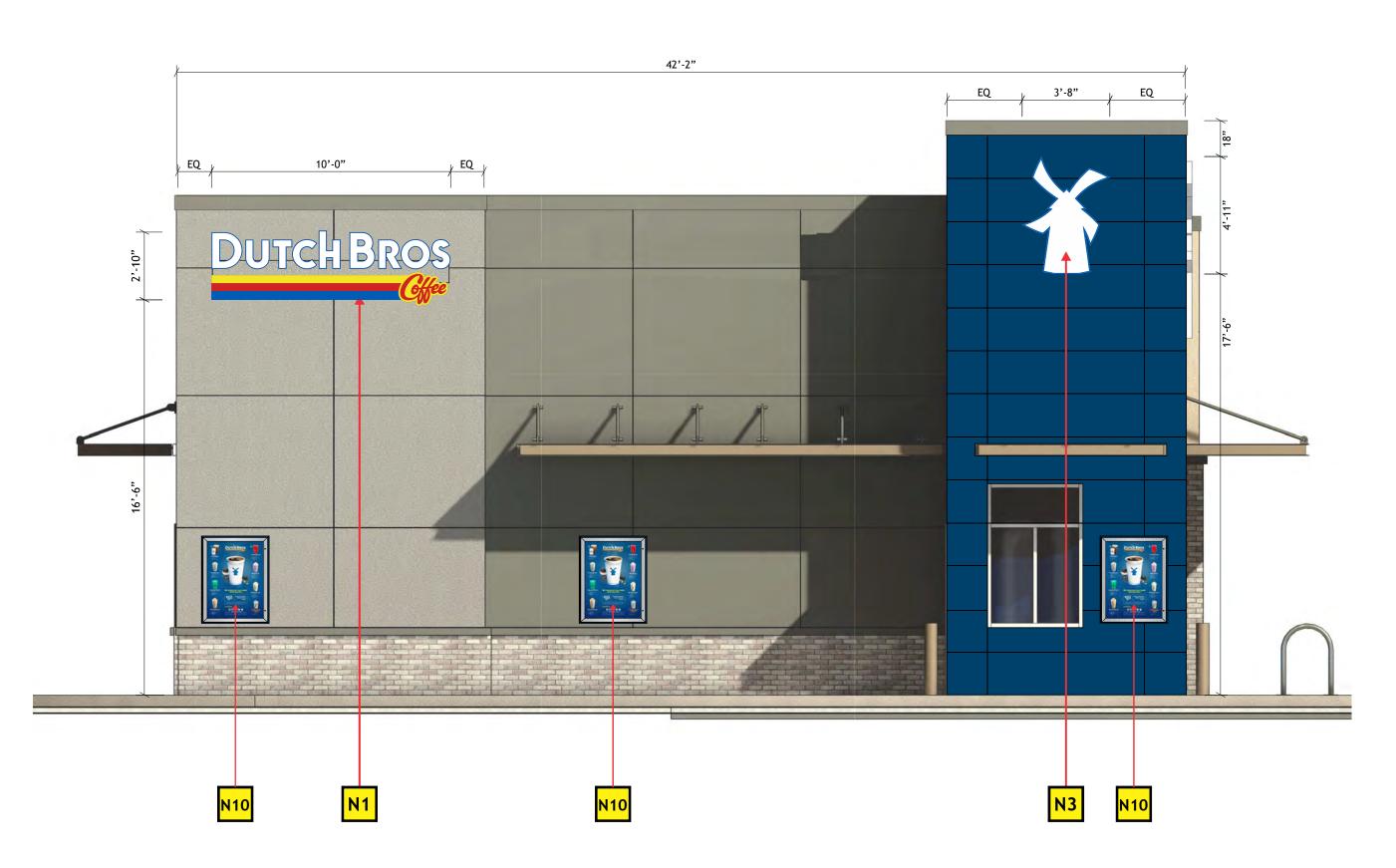
Jose Soria

REVISION DATE:

08/27/2021

REVISION BY:

Adrian C.



LOREN LOREN INDUSTRIES

12226 Coast Drive Whittier, CA 90601

Tel: (562) 946-7545 Fax: (562) 949-5707 St. Lic.: 455415

Los Angeles, CA



DRAWING/REVISION NO.:

08-21-0001R3

PAGE NO.:

3 of 15

CLIENT:

DUTCH BROS

ADDRESS

Hillcrest Ave Antioch, Ca.

Approval Signature

DATE:

08/04/2021

PROJECT MANAGER

Carla T.

DESIGNER:

Jose Soria

REVISION DATE: 08/27/2021

REVISION BY:

Adrian C.



LOREN LOREN INDUSTRIES

12226 Coast Drive Whittier, CA 90601

Tel: (562) 946-7545 Fax: (562) 949-5707 St. Lic.: 455415

Los Angeles, CA



DRAWING/REVISION NO.:

08-21-0001R3

PAGE NO.:

4

of **15**

CLIENT:

DUTCH BROS

ADDRESS

Hillcrest Ave Antioch, Ca.

Approval Signature

DATE:

08/04/2021

PROJECT MANAGER

Carla T.

DESIGNER:

Jose Soria

REVISION DATE:

08/27/2021

REVISION BY:

Adrian C.

62'-8"



LOREN LOREN INDUSTRIES

12226 Coast Drive Whittier, CA 90601

Tel: (562) 946-7545 Fax: (562) 949-5707 St. Lic.: 455415

Los Angeles, CA



DRAWING/REVISION NO.:

08-21-0001R3

PAGE NO.:

5

of **15**

CLIENT:
DUTCH BROS

ADDRESS

Hillcrest Ave Antioch, Ca.

Approval Signature

DATE:

08/04/2021

PROJECT MANAGER

Carla T.

DESIGNER:

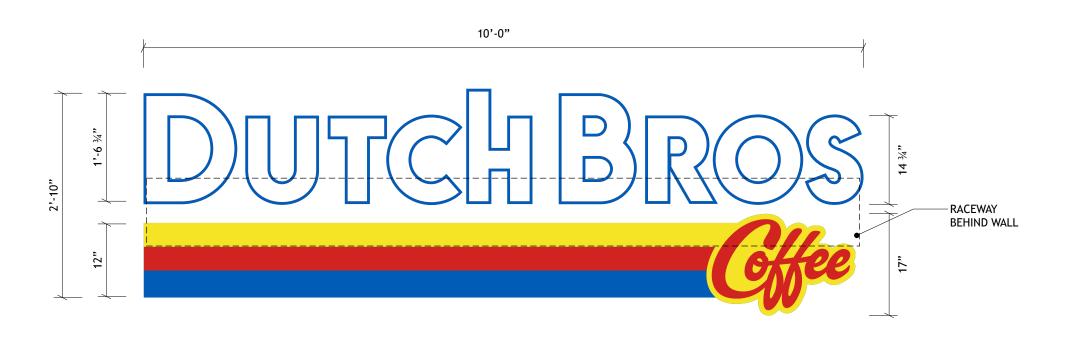
Jose Soria

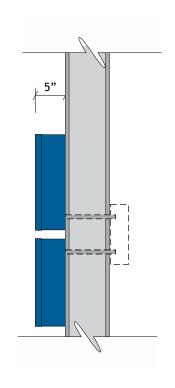
REVISION DATE:

08/27/2021

REVISION BY:

Adrian C.





N1 N2

SIGN TYPE DBCL10-REMOTE RW: CHANNEL LETTERS WITH REMOTE RACEWAY

TOTAL SQ. FT.: 28.33 Scale: 3/4" = 1'-0" SIDE VIEW

SPECIFICATIONS:

230-015 YELLOW PSV

PMS 116C

230-33 RED PSV PMS 1797C

> 230-127 INTENSE BLUE PSV PMS 300C

PMS 7691C

WHITE

GENERAL NOTES:

- 1.) INSTALLATION OF THIS SIGN SHALL CONFORM TO THE REQUIREMENTS OF ARTICLE 600 OF NEC, UL48 AND/OR OTHER APPLICABLE LOCAL CODES.
- 2.) BRANCH CIRCUIT:
- A.) ALL BRANCH CIRCUITS FOR SIGNS MUST BE TOTALLY DEDICATED TO SIGNS (INCLUDING DEDICATED GROUND AND DEDICATED NEUTRAL PER CIRCUIT).
- B.) SIGN CIRCUITS MUST NOT BE SHARED WITH OTHER LOADS SUCH AS LIGHTING, AIR CONDITIONING AND OTHER EQUIPMENT.
- C.) PROPERTY SIZED GROUND WIRE THAT CAN BE TRACKED TO THE BREAKER PANEL MUST BE PROVIDED.
- 3.) U.L. AND DATA LABELS REQUIRED
- 4.) SIGN SATISFIES ALL REQUIREMENTS OF TITLE 24.
- 5.) OUTDOOR SIGNAGE TO EMPLOY EITHER PHOTOCELL OR OUTDOOR ASTRONOMICAL TIMER.



12226 Coast Drive Whittier, CA 90601

Tel: (562) 946-7545 Fax: (562) 949-5707 St. Lic.: 455415

Los Angeles, CA



DRAWING/REVISION NO .:

08-21-0001R3

PAGE NO.:

6

of **15**

CLIENT:

DUTCH BROS

ADDRESS

Hillcrest Ave Antioch, Ca.

Approval Signature

DATE:

08/04/2021

PROJECT MANAGER

Carla T.

DESIGNER:

Jose Soria

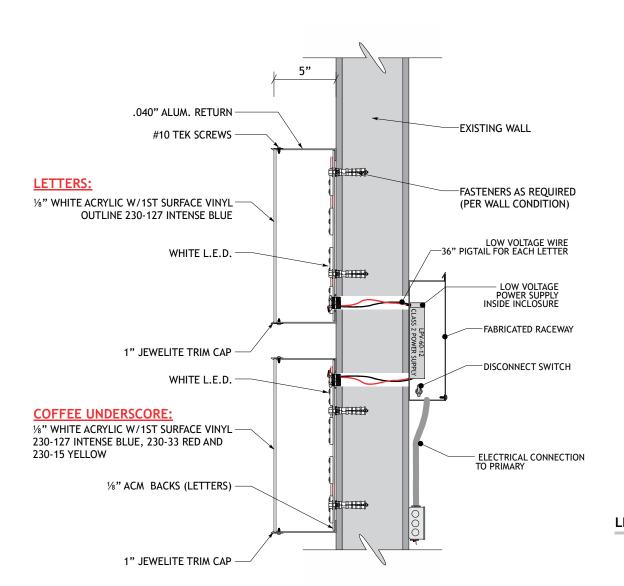
REVISION DATE:

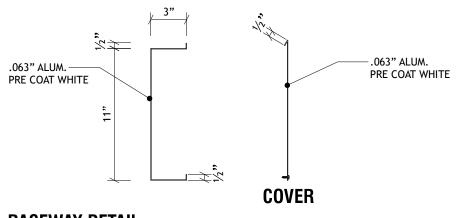
08/27/2021

00/2//202

REVISION BY:

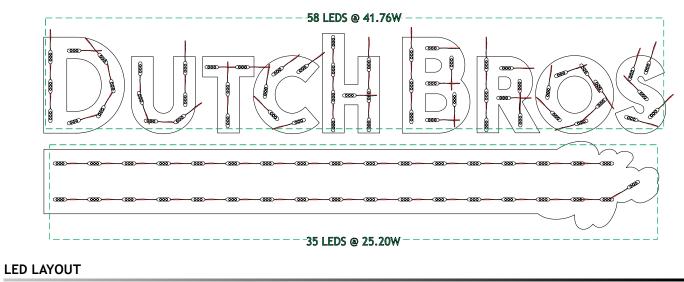
Adrian C.





RACEWAY DETAIL

Scale: 1" = 1'-0"



NTS



ELECTRIC SIGN SECTION

THIS SIGN IS INTENDED TO BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF ARTICLE 600 OF THE NATIONAL ELECTRICAL CODE AND/OR OTHER APPLICABLE LOCAL CODES.

THIS INCLUDES PROPER GROUNDING AND BONDING OF THE SIGN.

NOTES:

ELECTRICAL COMPONENTS TO BE UL LISTED AND INSTALLED IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE (NEC)

ALL WIRING SHALL BE 12 GA

(1) 20 AMP-120V CIRCUIT TO BE BROUGHT TO JOB SITE BY LICENCED ELECTRICIAN.

ALL SIGNAGE WILL BE UL2161 COMPLIANT AND CARRY UL LABELS.

ELECTRICAL SPECIFICATIONS-LETTERS & COFFEE UNDERSCORE:

(93) WHITE LED MODULES @ 0.72W EA= 66.96W TOTAL (1) 12V 100W POWER SUPPLIES @ 2.2 AMPS EA.

(1) CUSTOMER PROVIDED 120V/20A/60HZ DEDICATED CIRCUIT REQUIRED

TOTAL CIRCUIT LOAD: 2.2 AMPS @ 120 VAC

GENERAL NOTES:

- 1.) INSTALLATION OF THIS SIGN SHALL CONFORM TO THE REQUIREMENTS OF ARTICLE 600 OF NEC, UL48 AND/OR OTHER APPLICABLE LOCAL CODES.
- 2.) BRANCH CIRCUIT:
- A.) ALL BRANCH CIRCUITS FOR SIGNS MUST BE TOTALLY DEDICATED TO SIGNS (INCLUDING DEDICATED GROUND AND DEDICATED NEUTRAL PER CIRCUIT).
- B.) SIGN CIRCUITS MUST NOT BE SHARED WITH OTHER LOADS SUCH AS LIGHTING, AIR CONDITIONING AND OTHER EQUIPMENT.
- C.) PROPERTY SIZED GROUND WIRE THAT CAN BE TRACKED TO THE BREAKER PANEL MUST BE PROVIDED.
- 3.) U.L. AND DATA LABELS REQUIRED
- 4.) SIGN SATISFIES ALL REQUIREMENTS OF TITLE 24.
 5.) OUTDOOR SIGNAGE TO EMPLOY EITHER PHOTOCELL OR OUTDOOR ASTRONOMICAL TIMER



12226 Coast Drive Whittier, CA 90601

Tel: (562) 946-7545 Fax: (562) 949-5707 St. Lic.: 455415

Los Angeles, CA



DRAWING/REVISION NO.:

08-21-0001R3

PAGE NO.:

of 15

CLIENT:

DUTCH BROS

ADDRESS

Hillcrest Ave Antioch, Ca.

Approval Signature

DATE:

08/04/2021

PROJECT MANAGER

Carla T.

DESIGNER:

Jose Soria

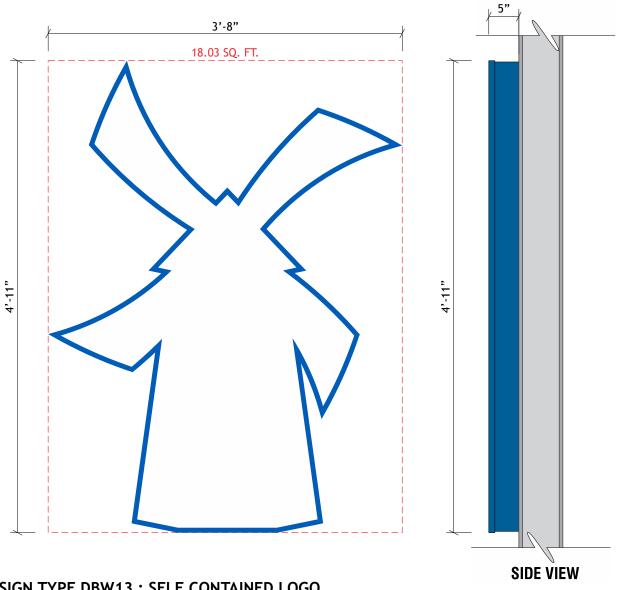
REVISION DATE:

08/27/2021

00/2//20/

REVISION BY:

Adrian C.



COLOR SPECIFICATIONS: 230-015 YELLOW PSV PMS 116C 230-33 RED PSV PMS 1797C 230-127 INTENSE BLUE PSV PMS 300C PMS 7691C WHITE

SPECIFICATIONS:

SELF CONTAINED LOGO:

FACES:..... 3/16" WHITE ACRYLIC W/1ST SURFACE VINYL

OUTLINE 230-127 INTENSE BLUE

TRIMCAP:..... 1" PAINTED TO MATCH PMS 7691C

ILLUMINATION:.... WHITE LED W/SELF CONTAINED POWER SUPPLY

SIGN TYPE DBW13: SELF CONTAINED LOGO

TOTAL SQ. FT.: 18.03

Scale: 1" = 1'-0"

GENERAL NOTES:

- 1.) INSTALLATION OF THIS SIGN SHALL CONFORM TO THE REQUIREMENTS OF ARTICLE 600 OF NEC, UL48 AND/OR OTHER APPLICABLE LOCAL CODES.
- 2.) BRANCH CIRCUIT:
- A.) ALL BRANCH CIRCUITS FOR SIGNS MUST BE TOTALLY DEDICATED TO SIGNS (INCLUDING DEDICATED GROUND AND DEDICATED NEUTRAL PER CIRCUIT).
- B.) SIGN CIRCUITS MUST NOT BE SHARED WITH OTHER LOADS SUCH AS LIGHTING, AIR CONDITIONING AND OTHER EQUIPMENT.
- C.) PROPERTY SIZED GROUND WIRE THAT CAN BE TRACKED TO THE BREAKER PANEL MUST BE PROVIDED.
- 3.) U.L. AND DATA LABELS REQUIRED
- 4.) SIGN SATISFIES ALL REQUIREMENTS OF TITLE 24.
- 5.) OUTDOOR SIGNAGE TO EMPLOY EITHER PHOTOCELL OR OUTDOOR ASTRONOMICAL TIMER.



12226 Coast Drive Whittier, CA 90601

Tel: (562) 946-7545 Fax: (562) 949-5707 St. Lic.: 455415

Los Angeles, CA



DRAWING/REVISION NO.:

08-21-0001R3

PAGE NO.:

OF

15

CLIENT:

DUTCH BROS

ADDRESS

Hillcrest Ave Antioch, Ca.

Approval Signature

DATE:

08/04/2021

PROJECT MANAGER

Carla T.

DESIGNER:

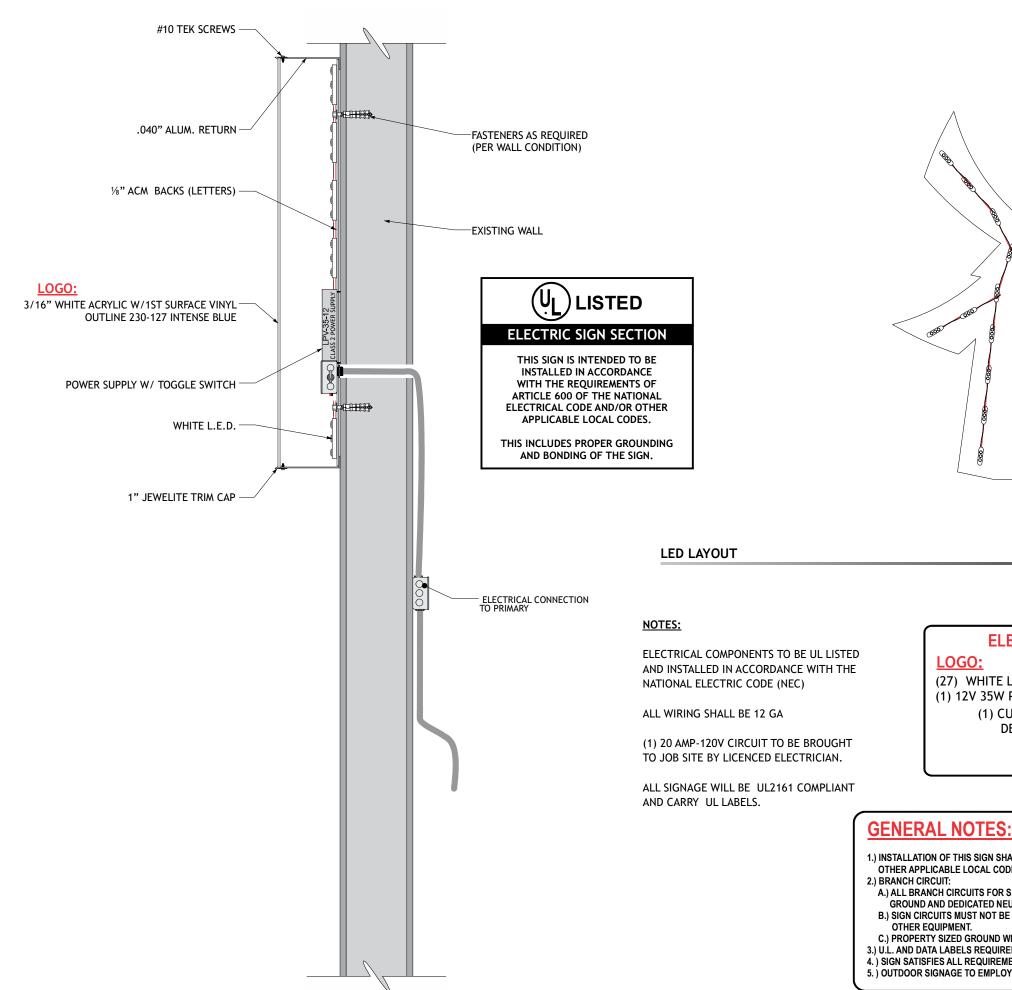
Jose Soria

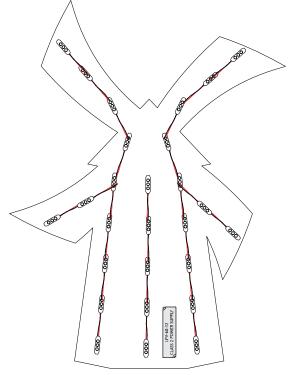
REVISION DATE:

08/27/2021

REVISION BY:

Adrian C.





NTS

ELECTRICAL SPECIFICATIONS

(27) WHITE LED MODULES @ 0.72W EA= 19.44W TOTAL (1) 12V 35W POWER SUPPLIES @ 1.1 AMPS EA.

> (1) CUSTOMER PROVIDED 120V/20A/60HZ DEDICATED CIRCUIT REQUIRED

> > **TOTAL CIRCUIT LOAD:** 1.1 AMPS @ 120 VAC

- 1.) INSTALLATION OF THIS SIGN SHALL CONFORM TO THE REQUIREMENTS OF ARTICLE 600 OF NEC, UL48 AND/OR OTHER APPLICABLE LOCAL CODES.
- A.) ALL BRANCH CIRCUITS FOR SIGNS MUST BE TOTALLY DEDICATED TO SIGNS (INCLUDING DEDICATED GROUND AND DEDICATED NEUTRAL PER CIRCUIT).
- B.) SIGN CIRCUITS MUST NOT BE SHARED WITH OTHER LOADS SUCH AS LIGHTING, AIR CONDITIONING AND
- C.) PROPERTY SIZED GROUND WIRE THAT CAN BE TRACKED TO THE BREAKER PANEL MUST BE PROVIDED.
- 3.) U.L. AND DATA LABELS REQUIRED
- 4.) SIGN SATISFIES ALL REQUIREMENTS OF TITLE 24.
- 5.) OUTDOOR SIGNAGE TO EMPLOY EITHER PHOTOCELL OR OUTDOOR ASTRONOMICAL TIMER



12226 Coast Drive Whittier, CA 90601

Tel: (562) 946-7545 Fax: (562) 949-5707 St. Lic.: 455415

Los Angeles, CA



DRAWING/REVISION NO.:

08-21-0001R3

PAGE NO .:

15 OF

CLIENT: **DUTCH BROS**

ADDRESS

Hillcrest Ave Antioch, Ca.

Approval Signature

DATE:

08/04/2021

PROJECT MANAGER

Carla T.

DESIGNER:

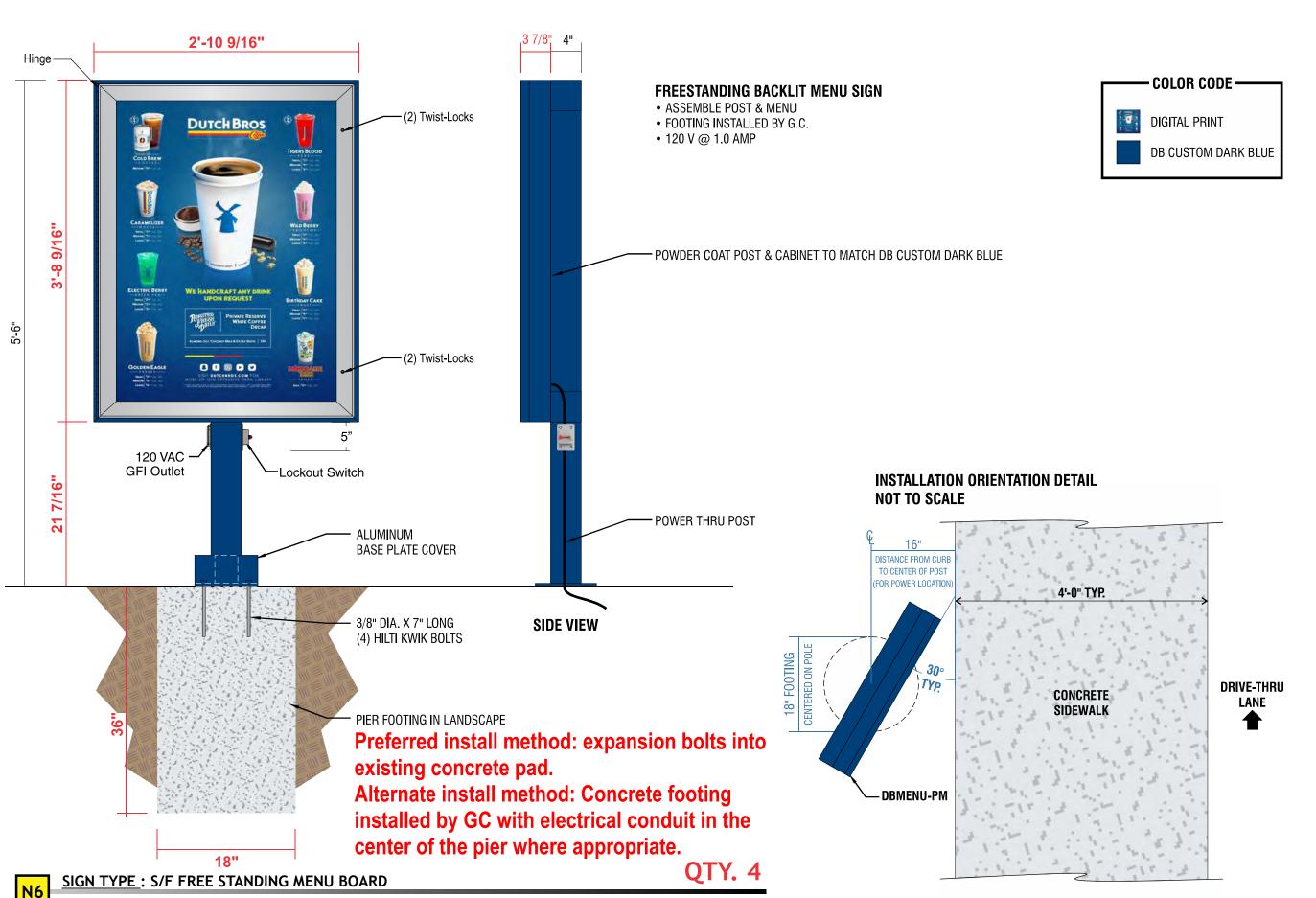
Jose Soria

REVISION DATE:

08/27/2021

REVISION BY: Adrian C.

SCOPE OF WORK: PROVIDE (1) S/F ILLUMINATED MENU SIGN - PLATE-MOUNTED



LOREN LOREN INDUSTRIES

12226 Coast Drive Whittier, CA 90601

Tel: (562) 946-7545 Fax: (562) 949-5707

St. Lic.: 455415

Los Angeles, CA



DRAWING/REVISION NO.:

08-21-0001R3

PAGE NO.:

10 of 15

CLIENT:
DUTCH BROS

ADDDECC

Hillcrest Ave Antioch, Ca.

Approval Signature

DATE:

08/04/2021

PROJECT MANAGER

Carla T.

DESIGNER:

Jose Soria

REVISION DATE: 08/27/2021

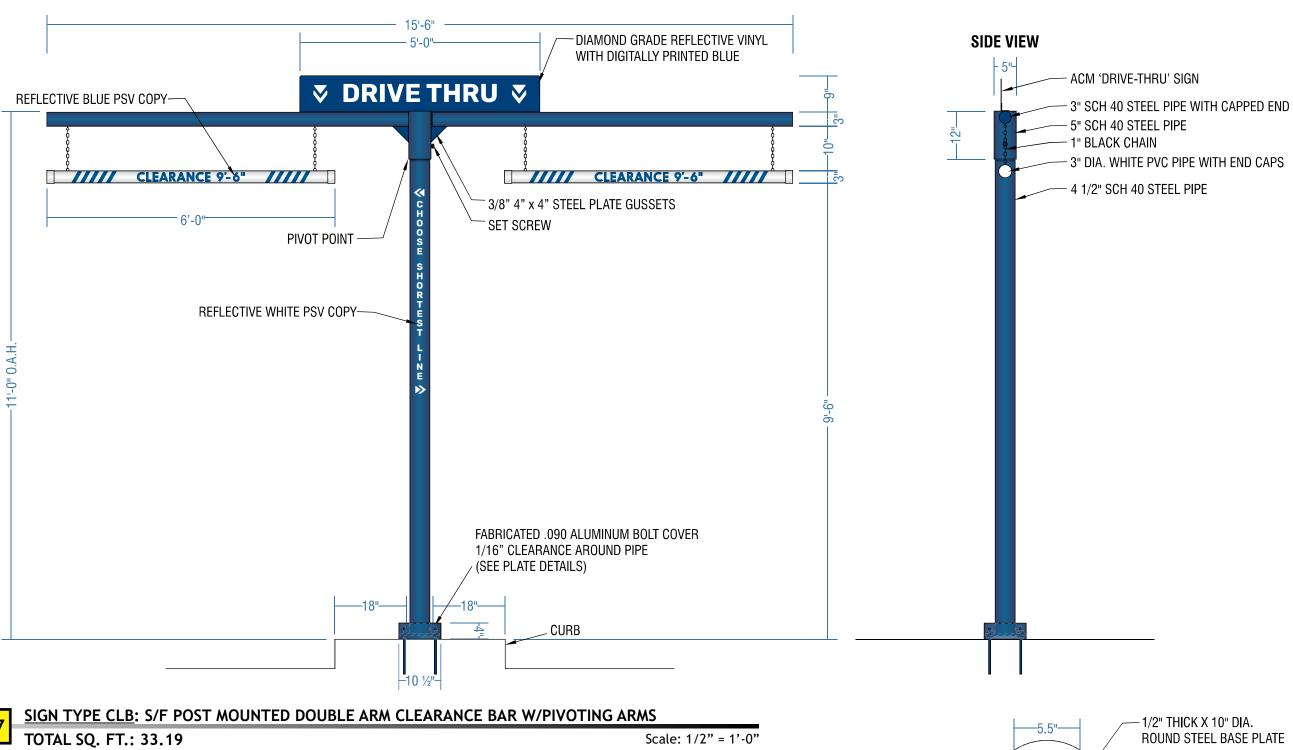
REVISION BY:

Adrian C.

ALL IDEAS, PLANS, AND ELECTRONIC ART INDICATED ON THIS DRAWING ARE COPYRIGHTED AND OWNED BY LOREN ELECTRIC SIGN CORPORATION AND SHALL NOT BE REPRODUCED, USED BY OR DISCLOSED TO ANY PERSONS, FIRM OR CORPORATION FOR ANY PURPOSE WHATSOEVER WITHOUT PERMISSION OF LOREN ELECTRIC SIGN CORPORATION.

TOTAL SQ. FT.: 10.70

Scale: 1" = 1'-0"



N7

STEEL POLE SUPPORT STRUCTURE WITH FABRICATED .090 ALUMINUM BOLT COVER. PAINT DB CUSTOM DARK BLUE. REFLECTIVE WHITE PSV COPY APPLIED TO VERTICAL POLE.

3" DIA. WHITE PVC CLEARANCE BAR WITH END CAPS AND 280-75 REFLECTIVE BLUE PSV TEXT & STRIPES.

HANG WITH BLACK CHAIN SECURED TO BOTTOM OF POLE STRUCTURE.

INCLUDE ONE SHEET REFLECTIVE VINYL NUMBERS MASKED FOR FIELD INSTALLATION.

CLEARANCE NUMBERS TO BE FIELD MEASURED AND APPLIED. MEASURE FROM ASPHALT TO BOTTOM OF OVERHANG MINUS 6".

ACM 'DRIVE-THRU' SIGN WITH DIAMOND GRADE REFLECTIVE VINYL WITH DIGITALLY PRINTED BLUE.

DIAMOND GRADE REFLECTIVE WHITE VINYL WITH DIGITALLY PRINTED PMS 541 C BLUE BACKGROUND.

INSTALL STEEL POLE PLATE-MOUNTED WITH LEVELING NUTS ONTO G.C. PROVIDED FOOTING.

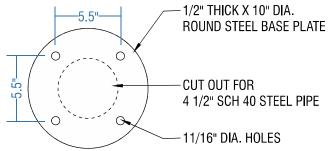


PLATE DETAIL SCALE: 1 1/2"=1'-0"



12226 Coast Drive Whittier, CA 90601

Tel: (562) 946-7545 Fax: (562) 949-5707 St. Lic.: 455415

Los Angeles, CA



DRAWING/REVISION NO .:

08-21-0001R3

PAGE NO.:

11 of 15

CLIENT:
DUTCH BROS

ADDRESS

Hillcrest Ave Antioch, Ca.

Approval Signature

DATE:

08/04/2021

PROJECT MANAGER

Carla T.

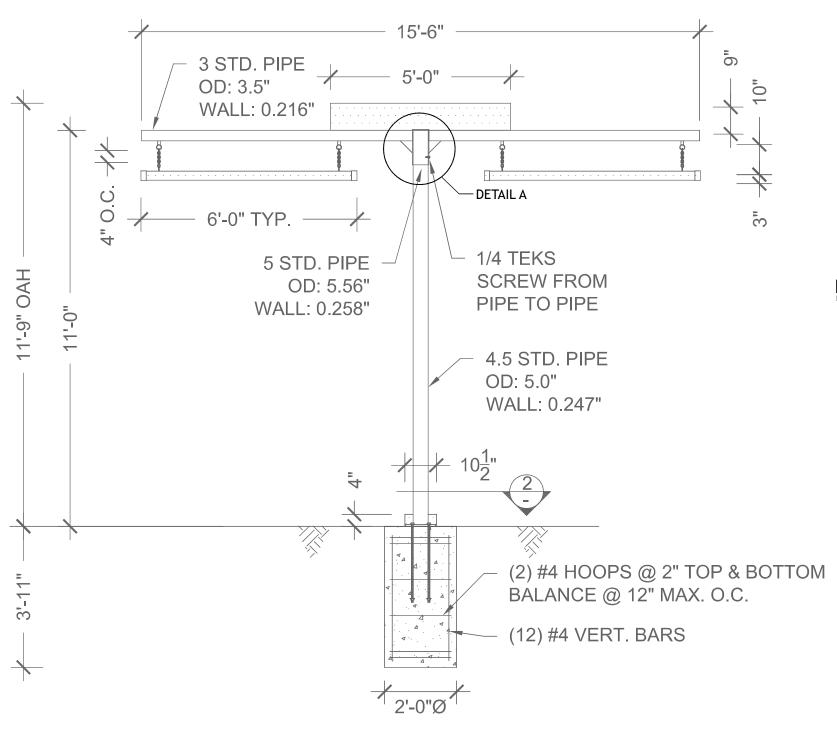
Jose Soria

REVISION DATE:

08/27/2021

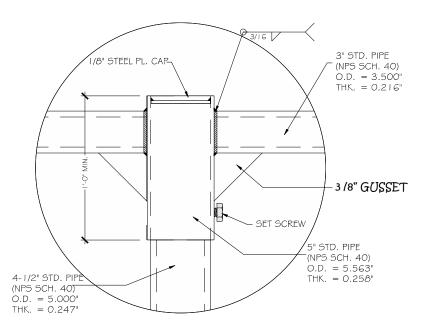
REVISION BY:

Adrian C.



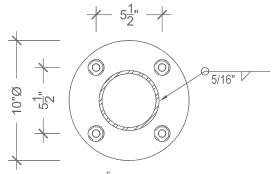
ELEVATION

SCALE: 3/8"=1'-0"



DETAIL A

Scale: 1" = 1'-0"



 $10"Øx_8^{5"}$ STEEL PLATE W/ (4) $\frac{5}{8}$ " Ø THREADED ANCHOR RODS MIN EMBED. = 24" INTO CONCRETE W/NUT/WASHER/NUT @ EMBED. END

BASE PLATE SCALE: 1 1/2"=1'-0"



12226 Coast Drive Whittier, CA 90601

Tel: (562) 946-7545 Fax: (562) 949-5707 St. Lic.: 455415

Los Angeles, CA



DRAWING/REVISION NO.:

08-21-0001R3

PAGE NO.:

12 of 15

CLIENT:

DUTCH BROS

ADDRE

Hillcrest Ave Antioch, Ca.

Approval Signature

DATE:

08/04/2021

PROJECT MANAGER

Carla T.

DESIGNER:

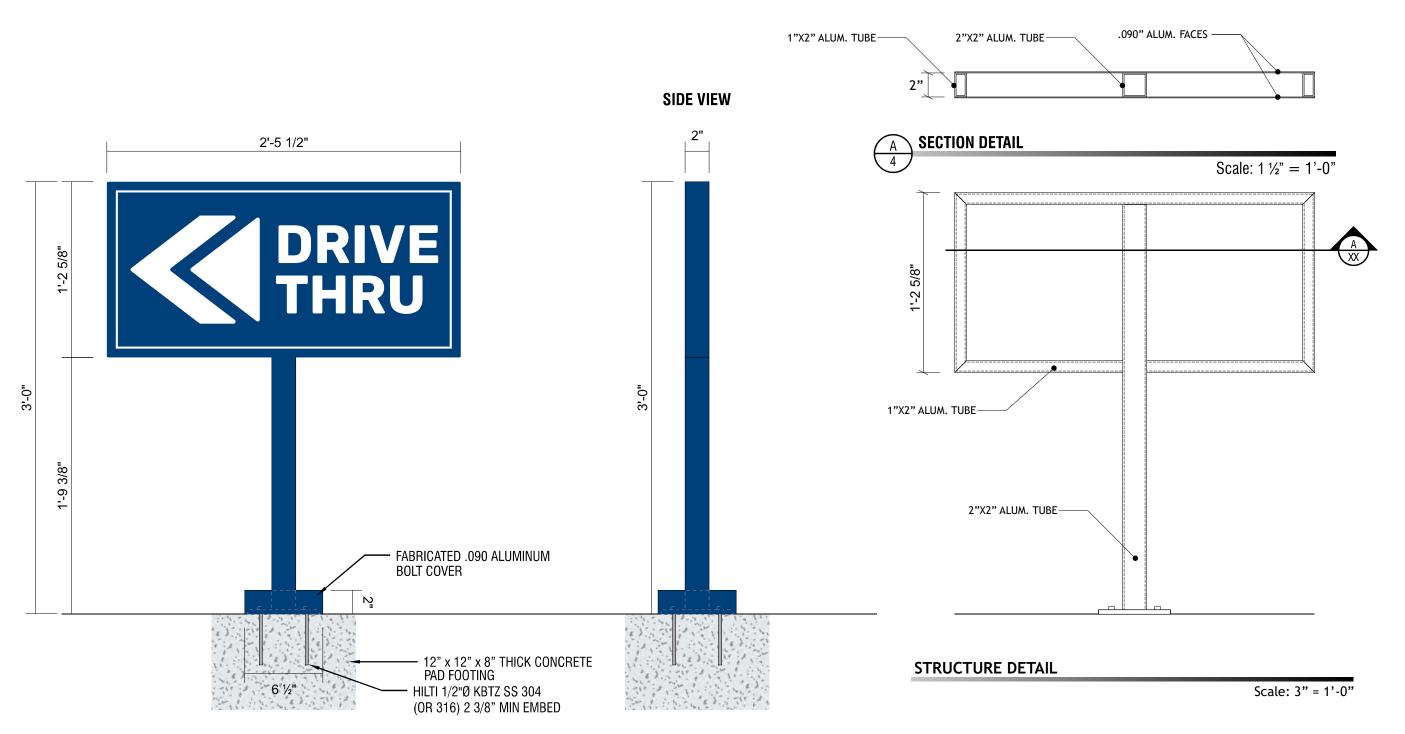
Jose Soria

REVISION DATE:

08/27/2021

REVISION BY:

Adrian C.



SIGN TYPE DB/DIR: NON-ILLUMINATED D/F DIRECTIONAL (QTY. 2)

TOTAL SQ. FT.: 3.13

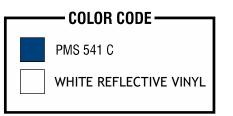
Scale: 3" = 1'-0"

DIAMOND GRADE REFLECTIVE WHITE VINYL WITH DIGITALLY PRINTED PMS 541 C BLUE BACKGROUND 2" X 2" SQUARE TUBE ALUMINUM FRAME & POST WITH ALUMINUM FACES & 3/8" X 6" X 6" PLATE FABRICATED .090 ALUMINUM BOLT COVER PAINT PMS 541 C

INSTALL PLATE-MOUNT SIGN WITH HILTI KWIK BOLTS

PAD FOOTING INSTALLED BY GC

Footing and concrete provided and installed by sign installer.





12226 Coast Drive Whittier, CA 90601

Tel: (562) 946-7545 Fax: (562) 949-5707

St. Lic.: 455415

Los Angeles, CA



DRAWING/REVISION NO.:

08-21-0001R3

PAGE NO.:

13 of 15

CLIENT:
DUTCH BROS

Hillcrest Ave Antioch, Ca.

Approval Signature

DATE:

08/04/2021

PROJECT MANAGER

Carla T.

DESIGNER:

Jose Soria

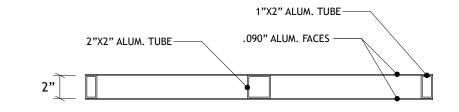
REVISION DATE:

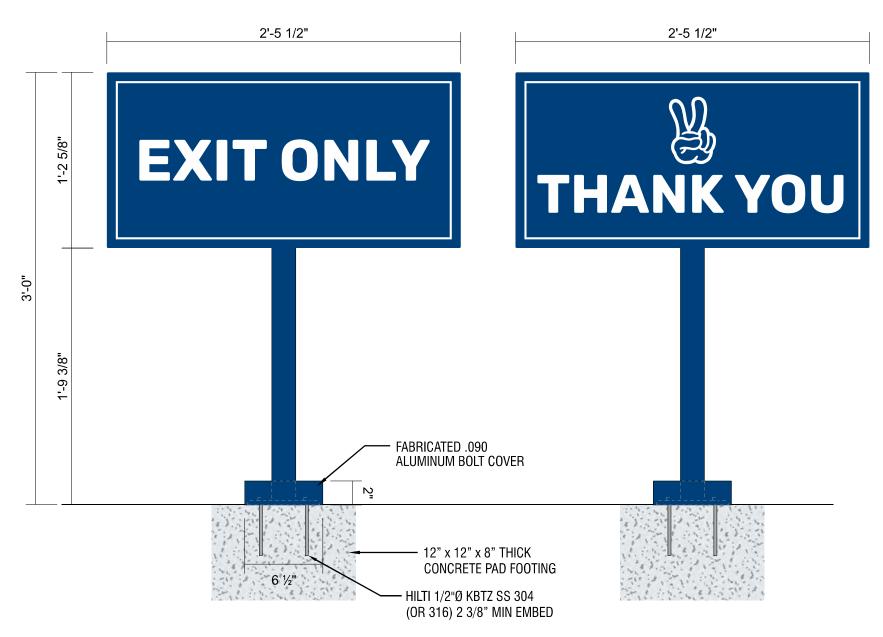
00 (07 (00)

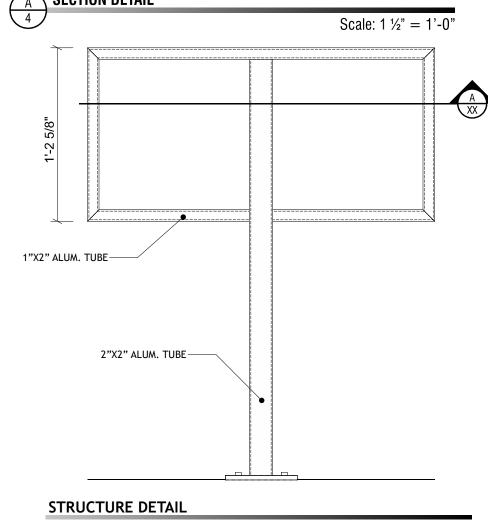
08/27/2021

REVISION BY:

Adrian C.







Scale: 3" = 1'-0"

N 9

SIGN TYPE DB/DIR: NON-ILLUMINATED D/F DIRECTIONAL (QTY. 1)

TOTAL SQ. FT.: 1.82

Scale: 3" = 1'-0"

DIAMOND GRADE REFLECTIVE WHITE VINYL WITH DIGITALLY PRINTED PMS 541 C BLUE BACKGROUND 2" X 2" SQUARE TUBE ALUMINUM FRAME & POST WITH ALUMINUM FACES & 3/8" X 6" X 6" PLATE FABRICATED .090 ALUMINUM BOLT COVER PAINT PMS 541 C INSTALL PLATE-MOUNT SIGN WITH HILTI KWIK BOLTS PAD FOOTING INSTALLED BY GC

PMS 541 C

WHITE REFLECTIVE VINYL

SECTION DETAIL

Fax: (562) 949-5707 St. Lic.: 455415

LOREN INDUSTRIES

12226 Coast Drive

Whittier, CA 90601

Tel: (562) 946-7545

Los Angeles, CA

Los Angeles, C



DRAWING/REVISION NO .:

08-21-0001R3

PAGE NO.:

14 of 15

CLIENT:
DUTCH BROS

Hillcrest Ave Antioch, Ca.

Approval Signature

DATE:

08/04/2021

PROJECT MANAGER

Carla T.

DESIGNER:

Jose Soria

REVISION DATE:

00 (07 (00)

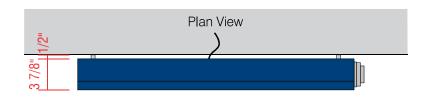
08/27/2021

REVISION BY:

Adrian C.

ALL IDEAS, PLANS, AND ELECTRONIC ART INDICATED ON THIS DRAWING ARE COPYRIGHTED AND OWNED BY LOREN ELECTRIC SIGN CORPORATION AND SHALL NOT BE REPRODUCED, USED BY OR DISCLOSED TO ANY PERSONS, FIRM OR CORPORATION FOR ANY PURPOSE WHATSOEVER WITHOUT PERMISSION OF LOREN ELECTRIC SIGN CORPORATION.

Footing and concrete provided and installed by sign installer.



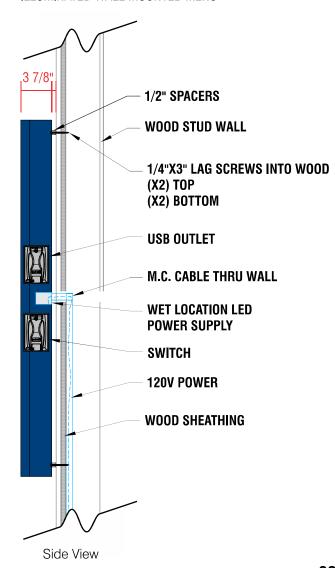


- A WALL-MOUNTED, BACKLIT MENU SIGN
 - PRINTED MENU PANEL NOT INCLUDED
 - LED OUTDOOR LIGHT BOX
 - LOCKABLE HINGED DOOR
 - ALUMINUM CONSTRUCTION
- **B** PRINTED LIGHT GUIDE PANEL

• AS SEPARATE ORDER

ATTACHMENT DETAIL

ILLUMINATED WALL MOUNTED MENU







DIGITAL PRINT







- COLOR CODE -



POWDER COATED DB CUSTOM DARK BLUE



POWDER COATED SILVER

SIGN TYPE: V5 S/F WALL MOUNTED MENU BOARD

TOTAL SQ. FT.: 10.70

Scale: 1" = 1'-0"

LOREN INDUSTRIES 12226 Coast Drive Whittier, CA 90601 Tel: (562) 946-7545 Fax: (562) 949-5707

St. Lic.: 455415



DRAWING/REVISION NO.:

08-21-0001R3

PAGE NO.:

of 15 15

CLIENT:

DUTCH BROS ADDRESS

> Hillcrest Ave Antioch, Ca.

Approval Signature

DATE:

08/04/2021

PROJECT MANAGER

Carla T.

DESIGNER:

Jose Soria

REVISION DATE:

08/27/2021

REVISION BY:

Adrian C.

ATTACHMENT C PROJECT DESCRIPTION (SEPARATE PAGE)



Project Description

TO Jose Cortez DATE 06-30-21

Associate Planner City of Antioch P.O. Box 5007

Antioch, CA 94531-5007

Project Description:

We are proposing a new 2-tenant building containing a 1133 sf Dutch Bros drive thru and a 1400 sf tenant on Hillcrest Avenue. The current site is an un-developed piece of land (approx. .95 acres) adjacent to an Arco/AM-PM gas station and along the backside of The Crossings Shopping Center (pictures included below).

The building consists of horizontal composite siding at the Dutch Bros tower, stucco, brick base and steel awnings. The 1400 sf tenant space will also have a stucco finish and the same brick finish at the entry tower and wall base.

<u>1133 sf Dutch Bros</u> (info from nearest 2 locations in Oakley and Brentwood)

Business Type: Drive-thru retail coffee business.

Activities: Customers order in either lane and pick up at drive-thru window. There maybe be some walk-up

customer orders but most are drive-thru

Number of Employees: (3) shifts with 5 employees each

Parking: 21 total stalls, shared with pad building

Customers: Mostly drive thru, very little walk-up, no interior seating

Days/Hours of Operation: 24 hours/day, 7 days/week

Outdoor Activities: 2 drive-thru lanes to order coffee and 2 tables for outdoor seating

Hours of Traffic: Weekday peak hours 3pm-4pm (approx. 60 cars/hr)

Weekend peak hours: 11am-12pm

Deliveries: Early morning deliveries via small delivery trucks.

1400 sf Pad Bldg

Business Type: Small food use (sandwich shop, ice cream, etc)

Number of Employees: 2-3 employees

Parking: 21 total stalls, shared with pad building Customers: All walk-in, no drive-thru proposed

Days/Hours of Operation: TBD

Outdoor Activities: 2 tables for outdoor seating

Deliveries: Early morning deliveries via small delivery trucks.





Thank you, Gerry Nicol Johnson Lyman Architects 510.334.6728 gerry@johnsonlyman.com

ATTACHMENT D TRAFFIC ANALYSIS (SEPARATE PAGE)



DUTCH BROS COFFEE SHOP TRANSPORTATION ANALYSIS Antioch, CA

May 20, 2022

Prepared for: City of Antioch

Prepared by: Stantec Consulting Services Inc.

Project Number: 2042631300

This document entitled DUTCH BROS COFFEE SHOP TRANSPORTATION ANALYSIS was prepared by Stantec Consulting Services Inc. ("Stantec") for the account of City of Antioch (the "Client"). Any reliance on this document by any third party is strictly prohibited. The material in it reflects Stantec's professional judgment in light of the scope, schedule and other limitations stated in the document and in the contract between Stantec and the Client. The opinions in the document are based on conditions and information existing at the time the document was published and do not take into account any subsequent changes. In preparing the document, Stantec did not verify information supplied to it by others. Any use which a third party makes of this document is the responsibility of such third party. Such third party agrees that Stantec shall not be responsible for costs or damages of any kind, if any, suffered by it or any other third party as a result of decisions made or actions taken based on this document.

Prepared by:

Signature

Sandhya Perumalla, ENV SP Senior Transportation Planner

Reviewed by:

Daryl Zerfass, PE, PTP

Principal, Transportation Planning and Traffic

Engineering

Table of Contents

1	INTRODUCTION	
1.1	Project Description	1
1.2	Approach	1
2	PROJECT TRIP GENERATION	4
2.1	Trip Generation Case Study	4
2.1.1	Reduction for Pass-by/Diverted Trips	5
2.2	Study Area	
2.3	Project Trip Distribution	
2.4 2.5	Opening Day Conditions With-ProjectQueue Analysis	
	·	
3	CONCLUSION	15
LIST OF	TABLES	
Table 1 T	Trip Generation Summary based on ITE Trip Rates	4
Table 2 T	Trip Generation Summary based on Case Studies of Local Dutch Bros	5
Table 3 T	Trip Generation Summary - With Pass-by Trips	6
	ntersection LOS Summary – Existing Conditions	
	ntersection LOS Summary – Existing with Project Conditions	
	Outch Bros Coffee Shop Drive-Through - Maximum Queue Summary	
i abie 7 C	Queue Lengths Summary	15
	FIGURES	_
	Project Location Map	
	Project Site Plan	3
rigure 3	Existing, Net New Project-Only, and Opening Day with Project AM Peak Hour Intersection	7
	Existing, Net New Project-Only, and Opening Day with Project PM Peak Hour Intersection	/
	Existing, Not New 110,000 Only, and Opening Buy with 110,000 1 Wir Cult Hill Good on	8
	Project-Only Trips	
Figure 6	Project Access Driveway Volumes	11
Figure 7	Weekday AM Queue Data at the Dutch Bros Coffee Case Study Locations	13
	Weekday PM Queue Data at the Dutch Bros Coffee Case Study Locations	
-igure 9	Saturday Midday Queue Data at the Dutch Bros Coffee Case Study Locations	14
LIST OF	FAPPENDICES	
APPEN	DIX A DRIVEWAY ENTER AND EXIT TRAFFIC VOLUMES DATA SHEETS	. A.1
APPEN	DIX B TRAFFIC COUNT DATA SHEETS	B.1
APPEN	DIX C LOS WORKSHEETS	. C.1
APPEN	DIX D QUEUING SURVEY DATA SHEETS	D.1
APPEN	DIX F INTERSECTION QUEUING DATA SHEETS	F 1

Project Number: 2042631300 i

1 Introduction

Stantec Consulting Services Inc. (Stantec) has prepared a traffic analysis for a proposed two-tenant building containing a Dutch Bros Coffee shop and a small food use (collectively referred to herein as Project) in the City of Antioch, California. The Project includes the development of an approximately 1,133 square feet (SF) Dutch Bros coffee shop with drive through as well as a 1,400 SF food use. The purpose of this report is to document the data and findings of the traffic analysis.

1.1 Project Description

The proposed Project is located on Hillcrest Avenue just north of Wildflower Drive, immediately adjacent to an existing Arco AM/PM gas station and along the backside of The Crossing Shopping Center. The Project site is currently an undeveloped vacant parcel. See Figure 1 for the Project Location Map. Based on the information provided by the Project applicant, the 1,400 SF retail use would be a small food use such as a sandwich shop, ice cream parlor, etc. The Project site would share access with the Arco AM/PM gas station and with The Crossing Shopping Center. The proposed site plan shows the proposed drive-through as having a double queuing lane with storage that can accommodate approximately 24 vehicles from the drive through entrance to the pickup window. See Figure 2 for the Project Site Plan.

1.2 Approach

Based on an initial scoping discussion with the City, the traffic analysis includes a trip generation analysis for the Project and a queuing analysis for the Dutch Bros drive-through window. The trip generation and queuing analysis utilizes data obtained from four case studies of similar Dutch Bros sites in the Northern California area, including two case studies conducted specifically for this study and two recent case studies provided by the City that were a part of another Dutch Bros traffic study prepared by Kittleson & Associates in 2021¹. The case study trip rates have been compared to trip rates from standardized Institute of transportation Engineers (ITE) trip generation estimates for a similar use. The most conservative of the trip generation estimates, which are from the case studies, have been used as the basis of the traffic study.

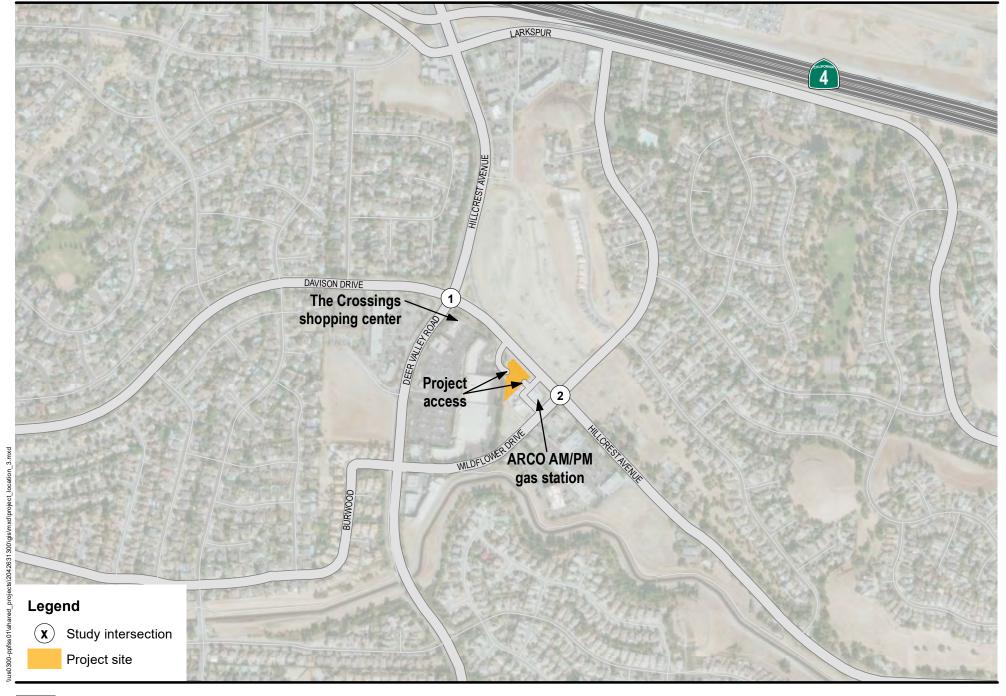
The existing Dutch Bros coffee shop sites in Northern California that were used as case study locations are located in the Cities of Vacaville, Stockton, Brentwood and Fairfield. A professional traffic data collection firm was utilized to obtain vehicle trips and drive through queue lengths at the locations in Vacaville and Stockton specifically for use in this study. The number of vehicles entering and exiting each site during the typical weekday morning (7 - 9 AM) and evening (4 - 6 PM) peak periods and during a Saturday midday (11 AM - 1 PM) peak period were collected. Drive through queue lengths were recorded during weekday morning (7 - 10 AM) and evening (3 - 6 PM) peak periods and during a Saturday midday (11 AM - 2 PM).

¹ Kittleson & Associates Dutch Bros Coffee & Day Care Technical Memorandum, March 2021



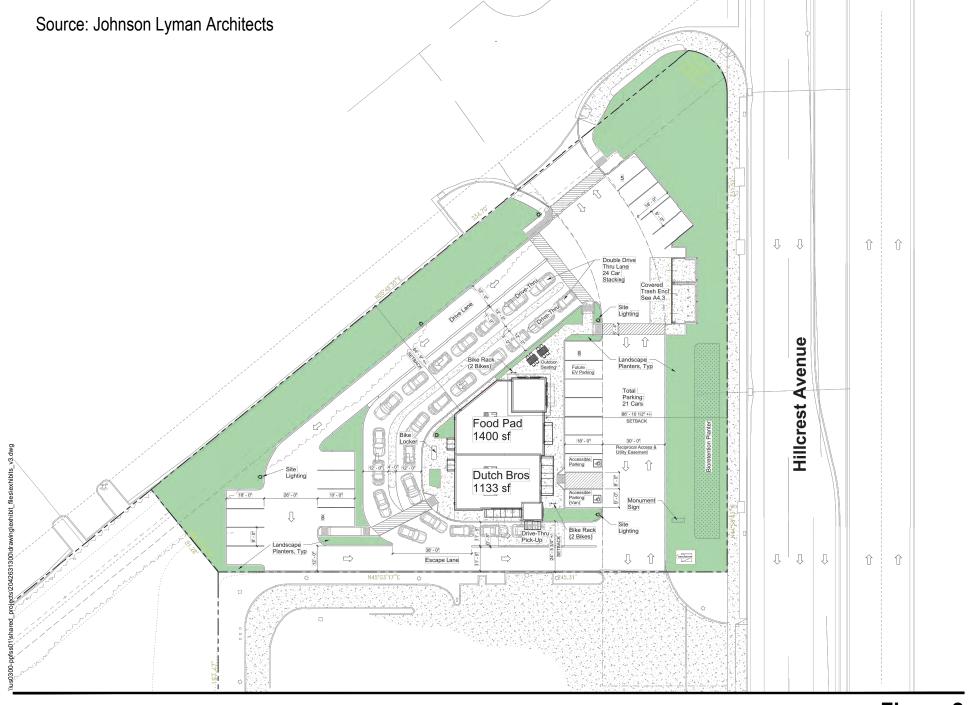
F

Project Number: 2042631300













2 Project Trip Generation

For comparison purposes, the proposed Project's anticipated trip generation estimates were prepared using standardized Institute of Transportation Engineers (ITE) 11th Edition trip generation rates for the Coffee/Donut Shop with Drive-Through Window (937) category and Fast-Food Restaurant without Drive-through Window (933) category.

As shown in Table 1 based on standardized ITE rates, the proposed Project is expected to generate a total of approximately 1,236 average daily trips (ADT) for a typical weekday, with 158 trips occurring during the AM peak hour and 90 trips occurring during the PM peak hour. It generates approximately 1,074 daily trips for a typical Saturday. The proposed coffee shop is expected to generate a total of approximately 605 ADT, with 98 trips occurring during the AM peak hour and 44 trips occurring during the PM peak hour. It generates approximately 100 daily trips during Saturday.

Table 1 Trip Generation Summary based on ITE Trip Rates

			AM Peak Hour		PN	l Peak H	our			
Trip Rates	Amount	Units	In	Out	Total	In	Out	Total	ADT	Saturday
Coffee/Donut Shop with										_
Drive-Through Window (937)		TSF	43.80	42.08	85.88	19.50	19.50	38.99	533.57	87.91
Fast-Food Restaurant without										
Drive-Through Window (933)		TSF	25.04	18.14	43.18	16.61	16.61	33.21	450.49	696.00
Trip Generation										
Dutch Bros Coffee Shop	1.133	TSF	50	48	98	22	22	44	605	100
Food Use	1.400	TSF	35	25	60	23	23	46	631	974
Total			85	73	158	45	45	90	1,236	1,074

Trip Rate Source: Institute of Transportation Engineers (ITE), Trip Generation Manual 11th Edition, 2021, with ITE code in parentheses

TSF- Thousand Square Feet

ADT - Average Daily Trips

DU - Dwelling Unit

2.1 Trip Generation Case Study

The number of vehicles entering and exiting the two case study sites during the typical weekday morning and evening peak periods and during a Saturday midday peak period were collected during the following time periods. See Appendix A for the Driveway enter and exit traffic volumes data sheets.

At 101 Elmira Rd, Vacaville, location:

- Tuesday, February 1, 2022, from 7:00 AM 10:00 AM
- Tuesday, February 1, 2022, from 3:00 PM 6:00 PM
- Saturday, January 29, 2022, from 11:00 AM 2:00 PM



DUTCH BROS COFFEE SHOP TRANSPORTATION ANALYSIS May 2022

At 1665 Pacific Avenue, Stockton, location:

- Thursday, February 10, 2022, from 7:00 AM 10:00 AM
- Thursday, February 10, 2022, from 3:00 PM 6:00 PM
- Saturday, January 29, 2022, from 11:00 AM 2:00 PM

The case study trips collected at the four locations mentioned above are summarized in Table 2. As shown, during the weekday AM and PM peak period and the weekend mid-day peak hour, the Vacaville case study location generates a greater number of trips compared to the trips generated by the other three case study locations. Also, comparing the case study locations to the ITE trip generation estimates for the Coffee shop use, shows that the case study locations generate a greater number of trips. Therefore, the most conservative trip generation estimates of the Vacaville case study are used in this analysis as a worst-case scenario.

Table 2 Trip Generation Summary based on Case Studies of Local Dutch Bros

		AM Peak H	our		PM Peak Ho	our	Saturday Mid-day Peak Hour		
Case Study Locations	In	Out	Total	In	Out	Total	In	Out	Total
101 Elmira Rd, Vacaville	84	90	174	63	67	130	87	98	185
1665 Pacific Avenue, Stockton		54	107	49	51	100	53	52	105
8870 Brentwood Boulevard, Brentwood*	55	55	110	60	60	120	84	84	168
1420 W. Texas Street, Fairfield*	72	72	144	61	61	122	74	74	148
ITE Trip Generation for Coffee/Donut Shop with Drive-Through Window (for									
comparison)	50	48	98	22	22	44	n/a	n/a	100

Table 3 in the following section shows the total Project trip generation estimates based on the trips generated by the Vacaville case study location for the Dutch Bros use and ITE rates for the separate food use. As shown, the proposed Project would generate a grand total of 234 trips during the AM peak hour and 176 trips during the PM peak hour.

2.1.1 REDUCTION FOR PASS-BY/DIVERTED TRIPS

Not all the trips generated by the proposed Project are primary trips and coffee shops and food uses include pass-by trips. A primary trip is a trip made from origin to a final destination (e.g., home to work). A pass-by trip is a stop made on the way between origin and destination without a significant route diversion to a primary trip destination (e.g., trip made to a coffee shop on the way to work from home).

Therefore, a pass-by trip reduction is applied based on data provided in the ITE Trip Generation Handbook, Third Edition. Data was available for the following uses with similar characteristics to the proposed uses:

 For a Coffee/Donut shop with drive-through window and no-indoor seating (Land Use code 938), the available data shows that the average pass-by trip percentage is 89 percent.



n/a - not available

DUTCH BROS COFFEE SHOP TRANSPORTATION ANALYSIS May 2022

 For the Fast-food restaurant with drive-through window (Land Use code 934), the available data shows that the average pass-by trip percentage is approximately 50 percent.

Since the traffic count data was collected during COVID-19 pandemic conditions, it is assumed that a greater proportion of the trips to the Dutch Bros coffee shop could be primary trips as people are either working from home or not travelling to work as often as they did before the pandemic. Therefore, a reduced assumption of 75 percent is applied as pass by trips instead of the typical 89 percent. As shown in Table 3, applying the conservative pass-by reduction of 75 percent to the Dutch Bros trips and 50 percent to the food use trips, the total net new trips generated by the proposed Project is approximately 74 during the AM peak hour and approximately 55 during the PM peak hour.

Table 3 Trip Generation Summary - With Pass-by Trips

				AM Peak Ho	ur	F	M Peak Ho	ur
	Amount	Units	In	Out	Total	In	Out	Total
Trip Generation								
Dutch Bros Coffee Shop	1.133	TSF	84	90	174	63	67	130
Food Use	1.400	TSF	35	25	60	23	23	46
Total Driveway Trips	-		119	115	234	86	90	176
Pass-by Trips Reductions ¹								
Dutch Bros Coffee Shop	75%	-	-63	-67	-130	-47	-50	-97
Food Use	50%	-	-18	-12	-30	-12	-12	-24
Net New trips								
Dutch Bros Coffee Shop	-	-	21	23	44	16	17	33
Food Use	-	-	17	13	30	11	11	22
Total Net New trips	-	-	38	36	74	27	28	55

¹Pass-by trip rate source: Institute of Transportation Engineers (ITE), Trip Generation Handbook, 3rd Edition, 2017., with adjustments for COVID conditions for the Coffee Shop.

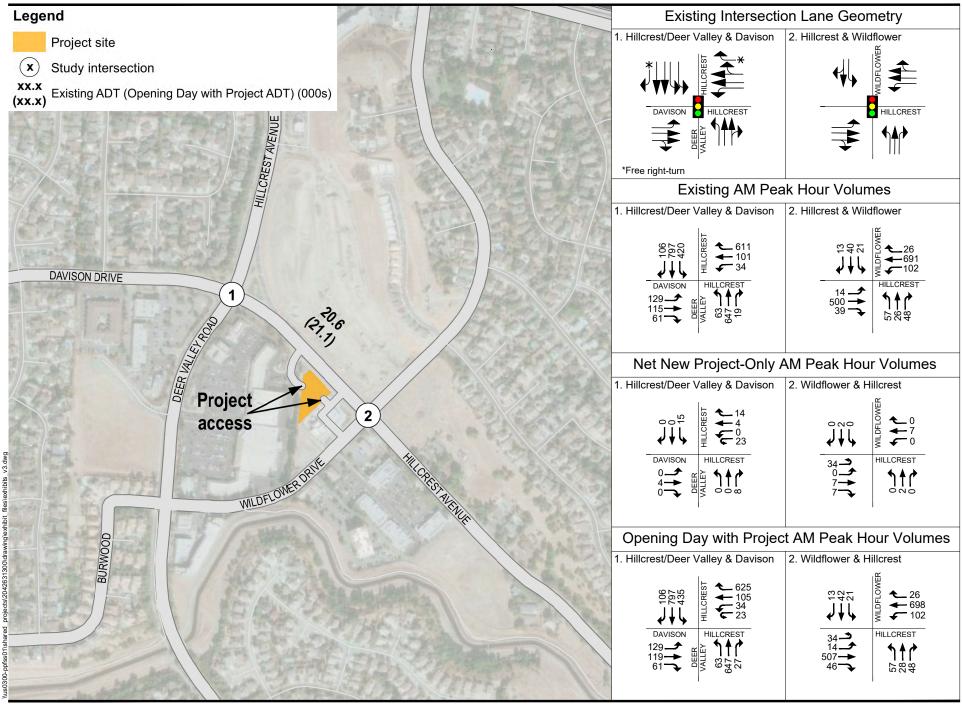
2.2 Study Area

Based on the trip generation estimates for the proposed Project discussed above, the following two signalized study intersections in the immediate vicinity of the Project site were selected for analysis (see previously referenced Figure 1 for locations). It includes intersections where the proposed Project would generally add 50 or more trips during either the AM or PM peak hour.

- Hillcrest Avenue/Deer Valley Road & Davison Drive
- 2. Hillcrest Avenue & Wildflower Drive

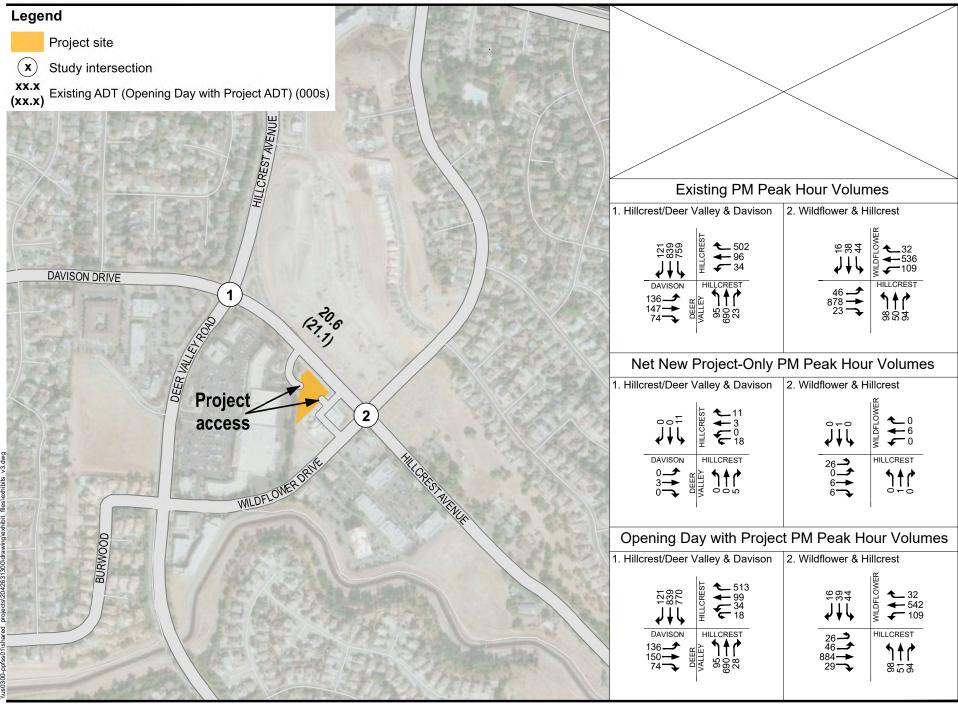
Existing traffic count data was collected in February 2022 for the two study area intersections during the typical weekday AM and PM peak periods, and a 24-hour mid-block Average Daily Traffic (ADT) count was collected on Hillcrest Avenue adjacent to the Project site to represent existing traffic conditions. Traffic counts data sheets are provided in Appendix B. See Figure 3 for the existing intersection lane geometry, existing ADT, the corresponding AM peak hour volumes, and Figure 4 for the existing PM peak hour volumes.















The results of the existing conditions intersection LOS analysis are shown in Table 4. The study area intersection was analyzed using the HCM delay methodology for signalized intersections. Detailed LOS calculation worksheets are provided in Appendix C. The table shows that the study intersections currently operate at LOS D or better during the AM and the PM peak hour conditions based on the average vehicle delay.

Table 4 Intersection LOS Summary - Existing Conditions

Int		Control	AM Pea	ık Hour	PM Peak Hour	
#	Intersection Name	Туре	Delay	LOS	Delay	LOS
1	Hillcrest Avenue/Deer Valley Road & Davison Drive	Signal	36.7	D	43.3	D
2	Hillcrest Avenue & Wildflower Drive	Signal	9.9	Α	12.9	В
Note					•	
Note	Hillcrest Avenue & Wildflower Drive			A		

2.3 Project Trip Distribution

The Project's anticipated trip distribution percentages were derived based on the Project site's location in relation to the surrounding uses while taking into account the proposed driveway locations and lane geometry, existing traffic flow patterns and engineering judgement. Overall, approximately 30 percent of the Project trips are expected to be oriented towards the east on Hillcrest Avenue and 70 percent of the project trips oriented towards the west on Hillcrest Avenue.

See Figure 5 for the Project trip distribution, AM and PM peak hour Pass-by Project trips, New Project trips, and Net Project trips for the two study area locations. See Figure 6 for the Project Access Driveway Volumes.

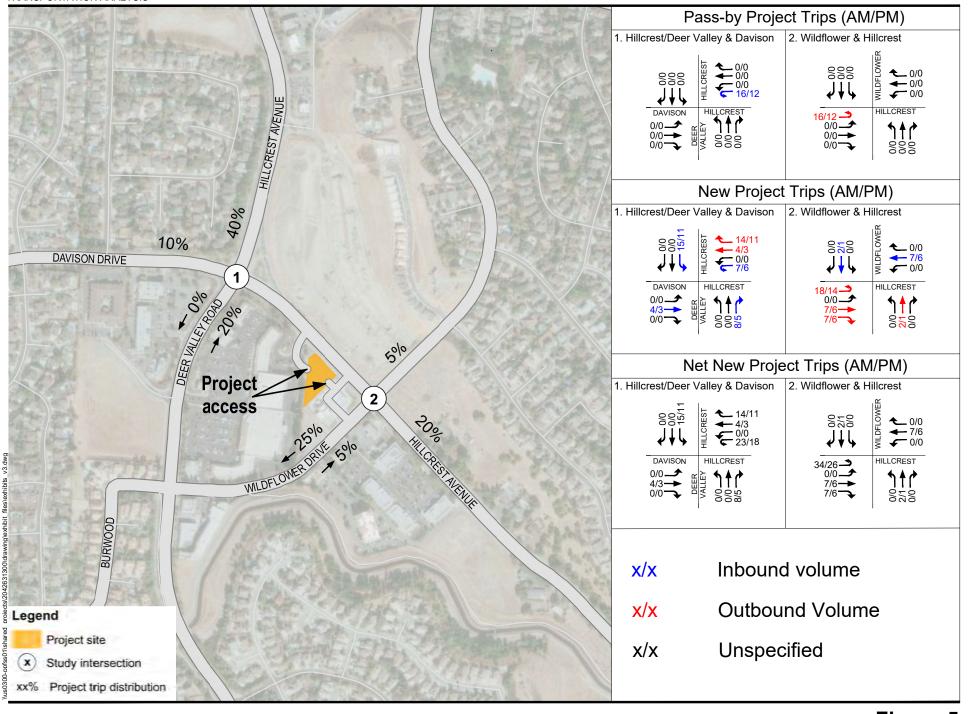
2.4 Opening Day Conditions With-Project

The Project is expected to be built out within a year. Therefore, for opening day conditions with the Project analysis, the total volume of trips generated by the proposed Project are added to the existing traffic counts to derive opening day with-Project volumes. Since the Project would be constructed within a year, the existing condition traffic counts are considered appropriate for background conditions. A cumulative analysis is not provided since the City noted that there are no significant cumulative projects in the vicinity of the Project site that would be expected to change the findings of this analysis. Opening day conditions with-Project ADT volumes and the corresponding with-Project AM peak hour turning movement volumes at the two study intersections are shown in previously referenced Figure 3. Previously referenced Figure 4 shows the Opening day conditions with-Project PM peak hour turning movement volumes.

Peak hour delay values and LOS that correspond with the existing traffic volumes and the opening day traffic volumes can be found in Table 5, which provides a comparison between the two scenarios. The signalized study intersections were analyzed using the HCM delay methodology using Synchro software. Detailed LOS calculation worksheets are provided in Appendix C.

The table shows that the study intersections would continue to operate at LOS D or better during the AM and the PM peak hour conditions based on the average vehicle delay.









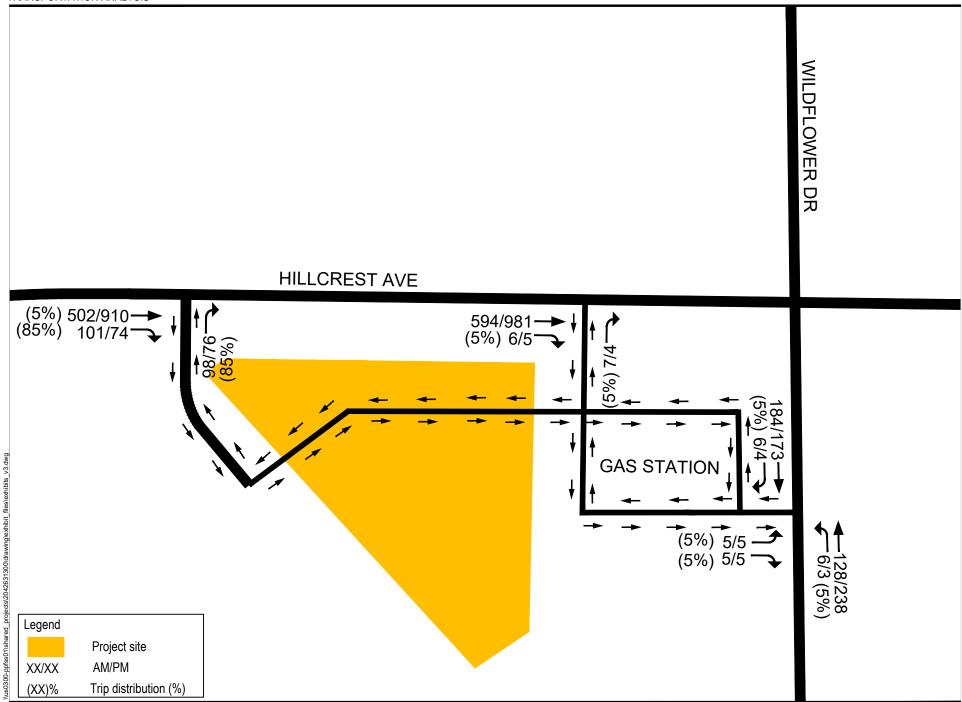






Table 5 Intersection LOS Summary – Existing with Project Conditions

			Exis	ting		Openi	ng Day	With-Pro	ject	Incre	ase
Int		AM Peal	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		
#	Intersection Name	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	AM	PM
	Hillcrest Avenue/Deer Valley							_			
1	Road & Davison Drive	36.7	D	43.3	D	37.7	D	43.5	D	1.0	0.2
	Hillcrest Avenue & Wildflower										
2	Drive	9.9	Α	12.9	В	10.9	В	13.4	В	1.0	0.5

Note:

LOS - Level of Service

Traffic counts adjusted to reflect typical non-COVID conditions

2.5 Queue Analysis

Based on an initial scoping discussion with the City, a queuing analysis for the proposed drive-through restaurant is required to establish the typical maximum queue length based on the proposed use. The queuing analysis utilizes data obtained from four case studies of similar Dutch Bros sites in the Northern California area, including two case studies conducted specifically for this study and two recent case studies provided by the City that were a part of another Dutch Bros traffic study prepared by Kittleson & Associates in 2021².

As mentioned, drive through queue lengths during the typical weekday morning and evening peak periods and during a Saturday midday peak period were collected during the same time periods as the entering and exiting vehicle counts. See Appendix D for the queueing survey data sheets. Table 6 shows a maximum queue summary observed at the four Dutch Bros coffee shop case study locations. See Figure 7, Figure 8, and Figure 9 for a graphical representation of the queues observed at the four case study locations.

Table 6 Dutch Bros Coffee Shop Drive-Through - Maximum Queue Summary

Wee	kday	Saturday	Maximum (Vehicles)					
AM (Vehicles)	PM (Vehicles)	Mid-Day (Vehicles)						
22	14	22	22					
12	11	13	13					
14	17	26	26					
21	18	25	25					
22	18	26	26					
Average Maximum								
	AM (Vehicles) 22 12 14 21	(Vehicles) (Vehicles) 22 14 12 11 14 17 21 18	AM (Vehicles) PM (Vehicles) Mid-Day (Vehicles) 22 14 22 12 11 13 14 17 26 21 18 25					

As shown in Table 6, the Brentwood location experienced the longest queue lengths with a maximum of 26 vehicles, which occurred on a Saturday. The Vacaville, Stockton and Fairfield locations had maximum queue lengths of 22, 13, and 25 vehicles, respectively. The overall average maximum queue over all time periods is 22 vehicles.

² Ibid.

0

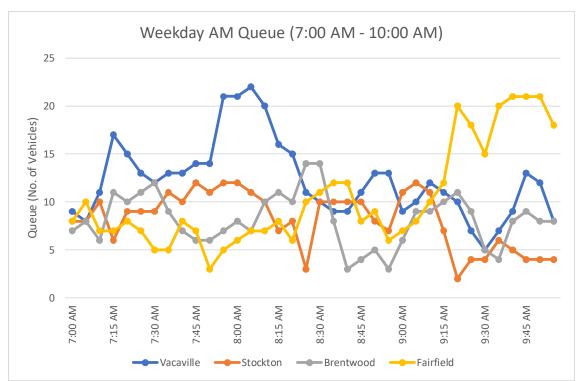
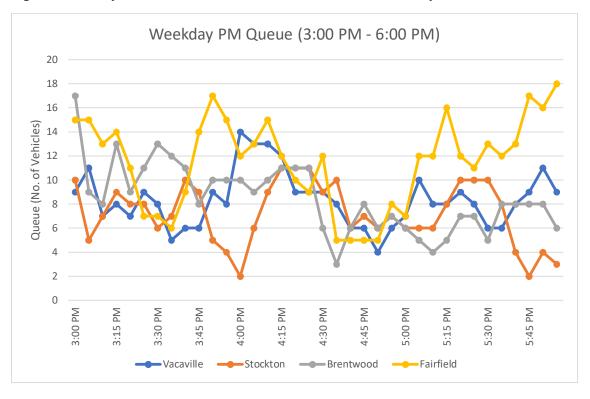


Figure 7 Weekday AM Queue Data at the Dutch Bros Coffee Case Study Locations





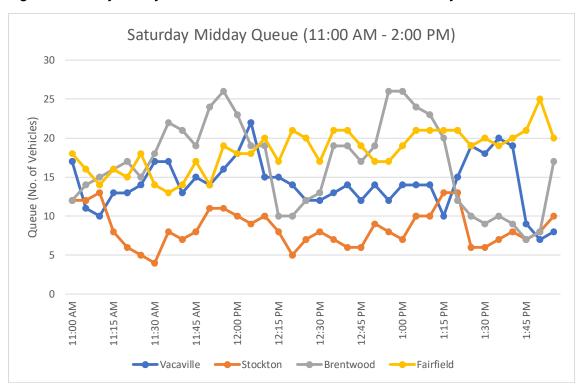


Figure 9 Saturday Midday Queue Data at the Dutch Bros Coffee Case Study Locations

Access to the Project site would be via two shared access driveways—one with the Arco AM/PM gas station, and the other with The Crossing Shopping Center. The driveway closest to the Coffee shop drive-through, which could potentially be affected by a drive-through queue exceeding the available storage, is the one shared with The Crossing Shopping Center.

The proposed Project site plan shows a queuing storage capacity of up to 24 vehicles within the drive-through lanes and could accommodate two more cars (for a total of 26 vehicles) on-site before affecting the adjacent driveway. Additionally, a potential overflow of the queue could be accommodated on the driveway without affecting Hillcrest Avenue. Based on the case study queuing survey data, which indicates worst-case queues in the range of 22 to 26 vehicles, the proposed Project's vehicle queueing could be accommodated within the drive-through lane with a worst-case scenario of the queue exceeding the drive-through lane by a few vehicles while remaining on-site. The Project's queue would not affect the traffic on the adjacent shared driveway or City roadways.

Intersection Queue Analysis

The traffic analysis shows that the Project would increase the number of vehicles making U-turns at the adjacent intersections and Table 7 summarizes the results of the U-turn queuing analysis for conditions with the proposed Project. The queue lengths were determined using SimTraffic, a micro simulation software. Appendix E shows the queueing reports from the simulation output.

DUTCH BROS COFFEE SHOP TRANSPORTATION ANALYSIS May 2022

Table 7 Queue Lengths Summary

Int #	Intersection Name	U-turn Movement	Turn Pocket Length	AM Peak Hour	PM Peak Hour
1	Hillcrest Avenue/Deer Valley Road & Davison Drive	WBU/L	200 feet	98 feet	86 feet
2	Hillcrest Avenue & Wildflower Drive	EBU/L	210 feet	65 feet	91 feet
Note	· -				
WBU	/L- Westbound U-turn/Left-turn				

As shown in the table above, the estimated westbound U-turn/left turn queue length of 98 feet and 86 feet during the AM and PM peak hour, respectively, at the intersection of the Hillcrest Avenue/Deer Valley Road and Davison Drive does not exceed the 200-foot turn pocket length. Similarly, the estimated eastbound U-turn/left turn queue length of 65 feet and 91 feet during the AM and PM peak hour, respectively at the intersection of the Hillcrest Avenue and Wildflower Drive does not exceed the 210-foot turn pocket length. Therefore, the estimated queue lengths for conditions with the proposed Project do not exceed the existing turn lane pocket lengths.

3 Conclusion

EBU/L - Eastbound U-turn/Left-turn

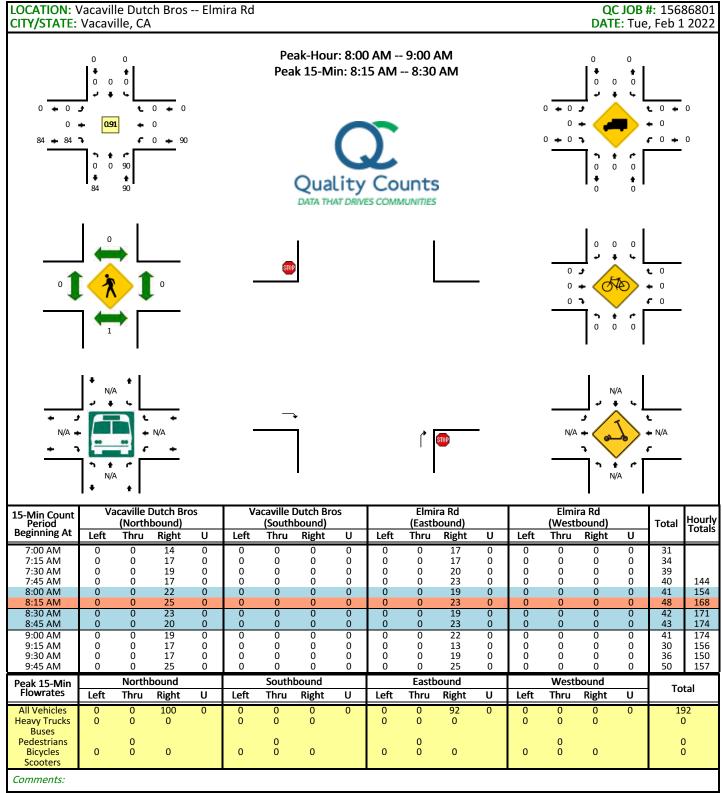
This traffic analysis was prepared to evaluate the proposed Project's effect on traffic conditions in accordance with the City's traffic analysis procedures. The Project was evaluated under opening day conditions with the proposed Project. Based on the results of the LOS analyses and the criteria set forth by the City, the study intersections would operate at an acceptable LOS D or better during the AM and the PM peak hour and turn pocket queue lengths are acceptable.

A queuing analysis for the proposed drive-through restaurant was also conducted to establish the typical maximum queue length based on the proposed use. The study determined that the proposed Project's drive-through vehicle queueing could be accommodated within the drive-through lane with a worst-case scenario of the queue exceeding the drive-through lane by a few vehicles while remaining on-site. The Project's queue would not affect the traffic on the adjacent shared driveway or City roadways.

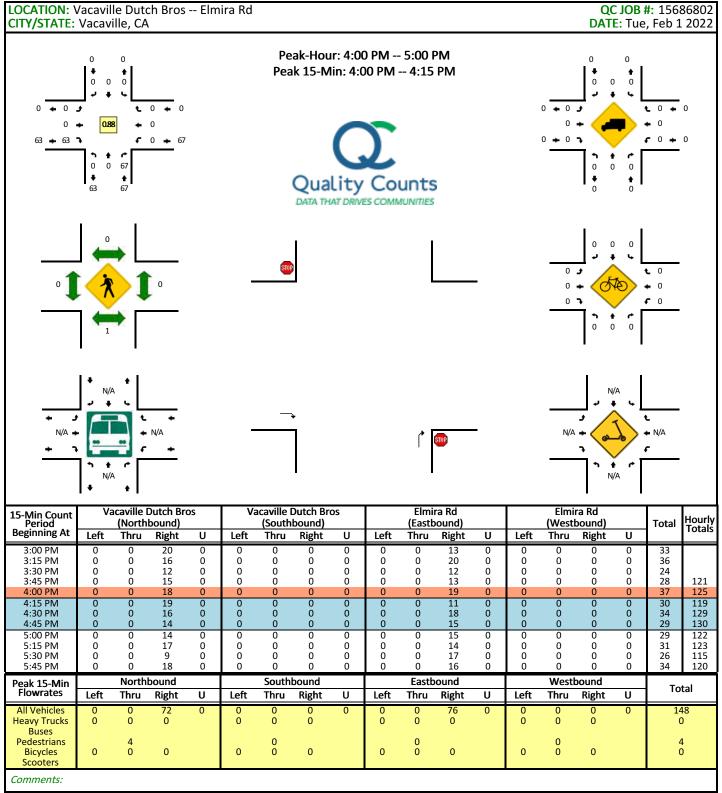
0

Appendix A Driveway Enter and Exit Traffic Volumes Data Sheets

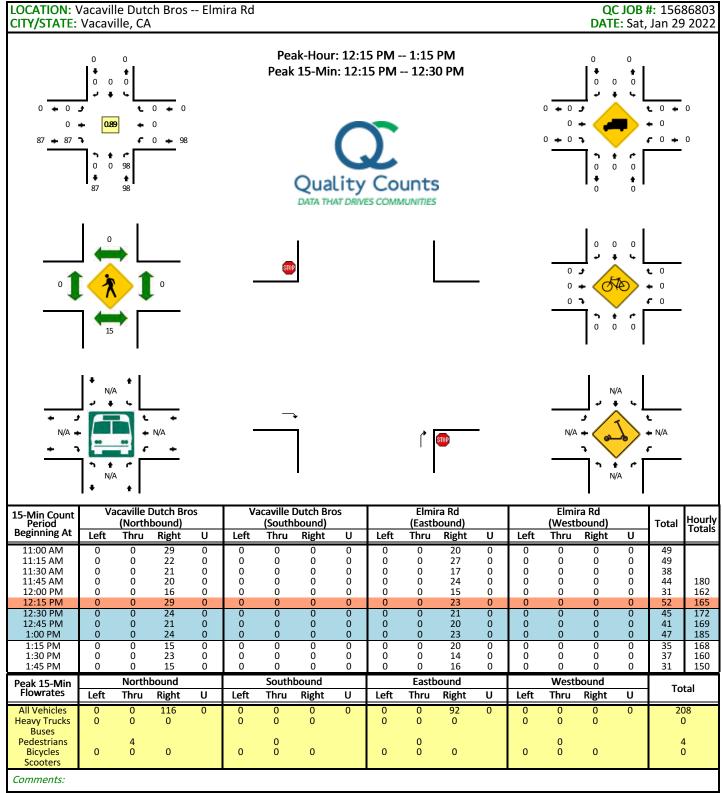




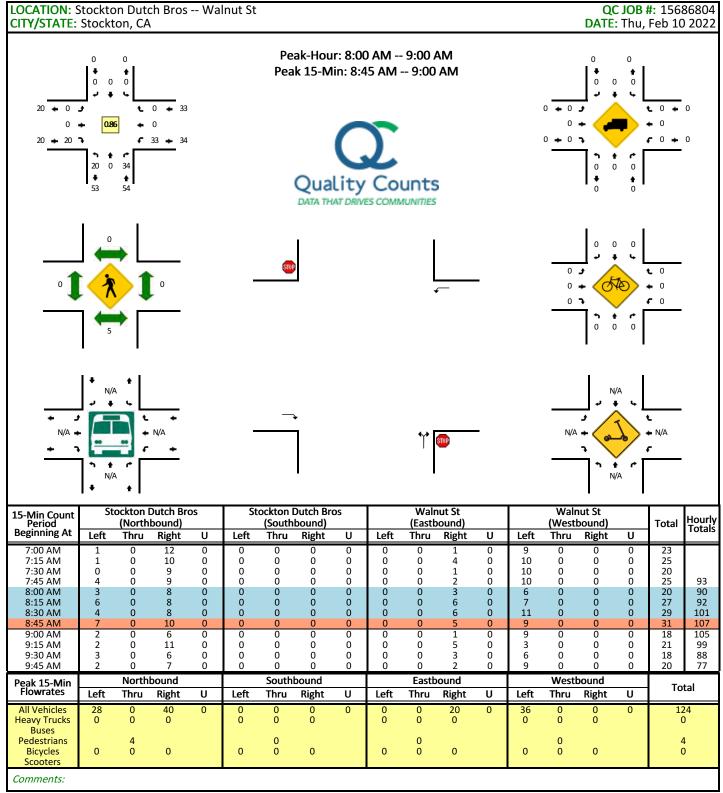
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212



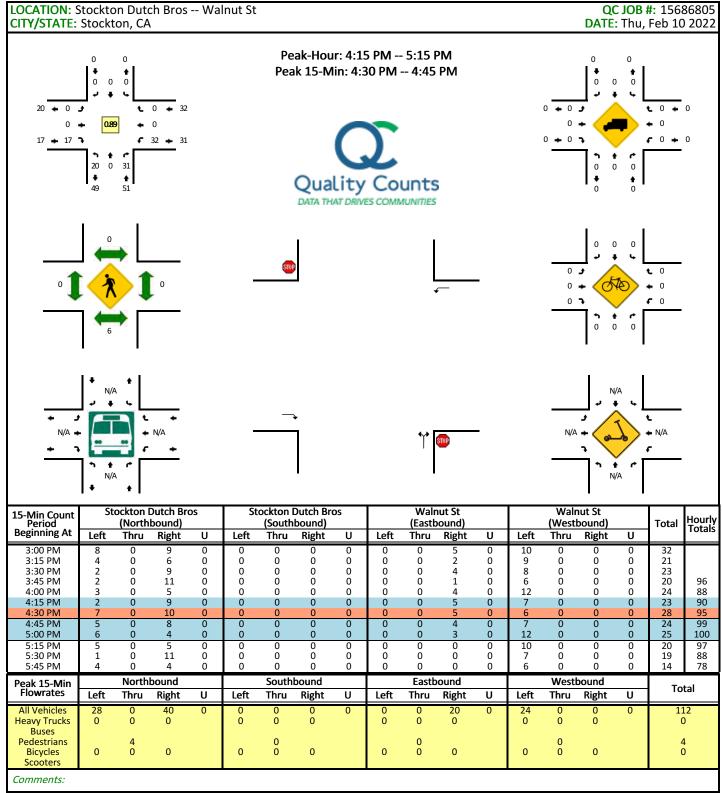
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212



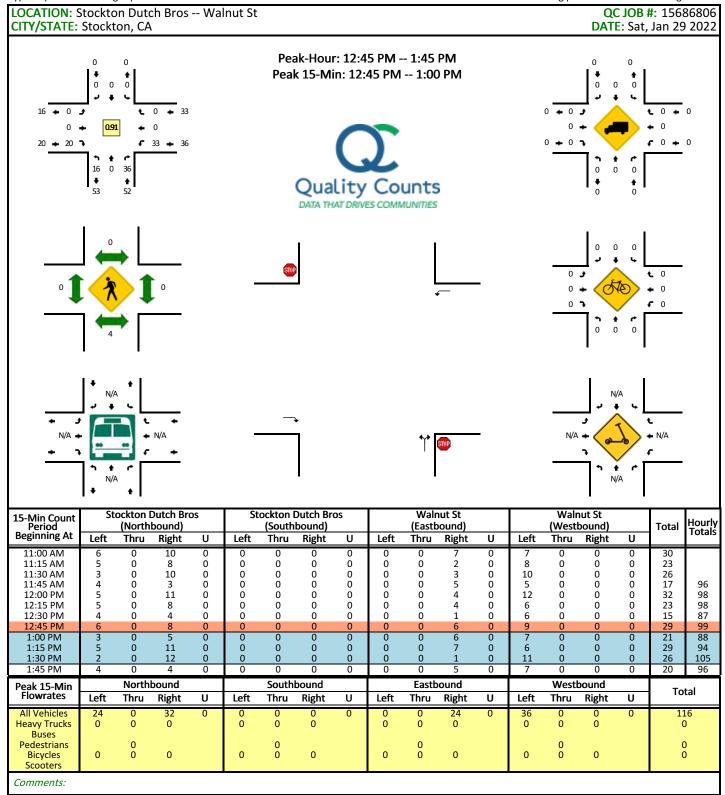
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212



SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212



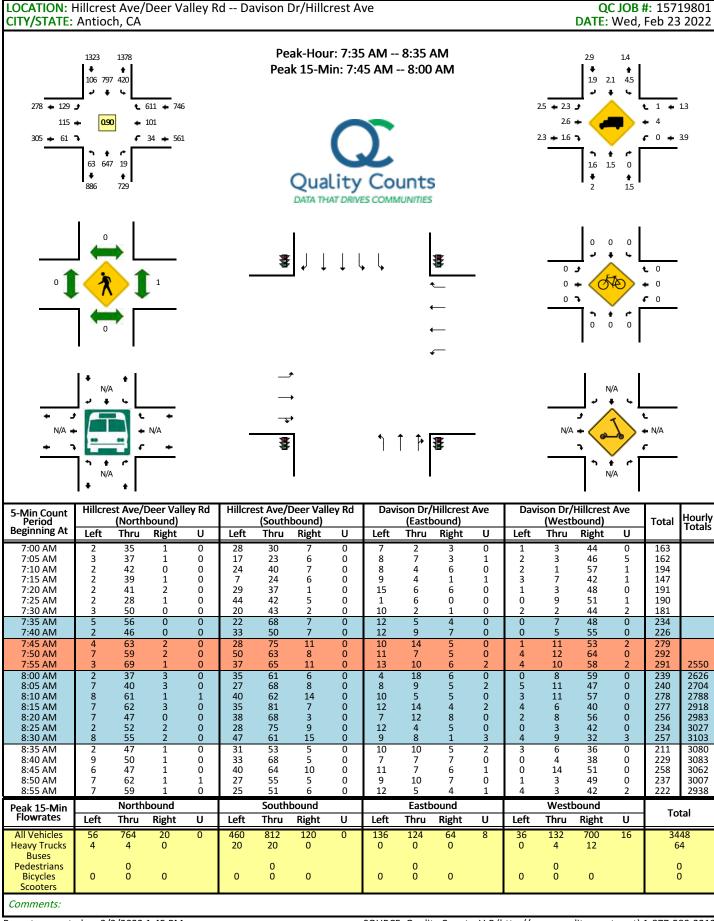
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212



SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

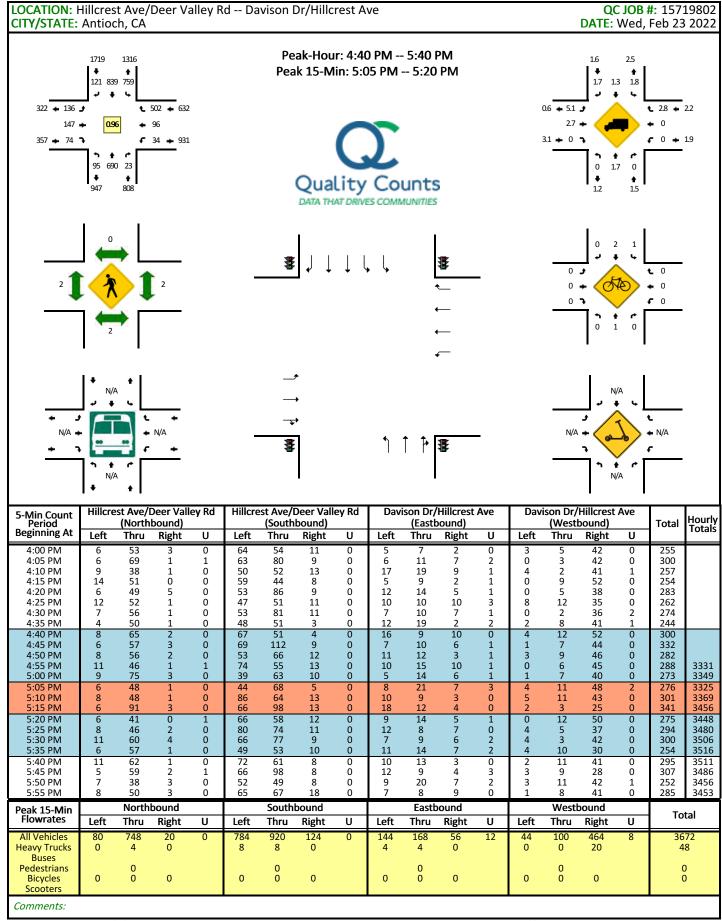
Appendix B Traffic Count Data Sheets





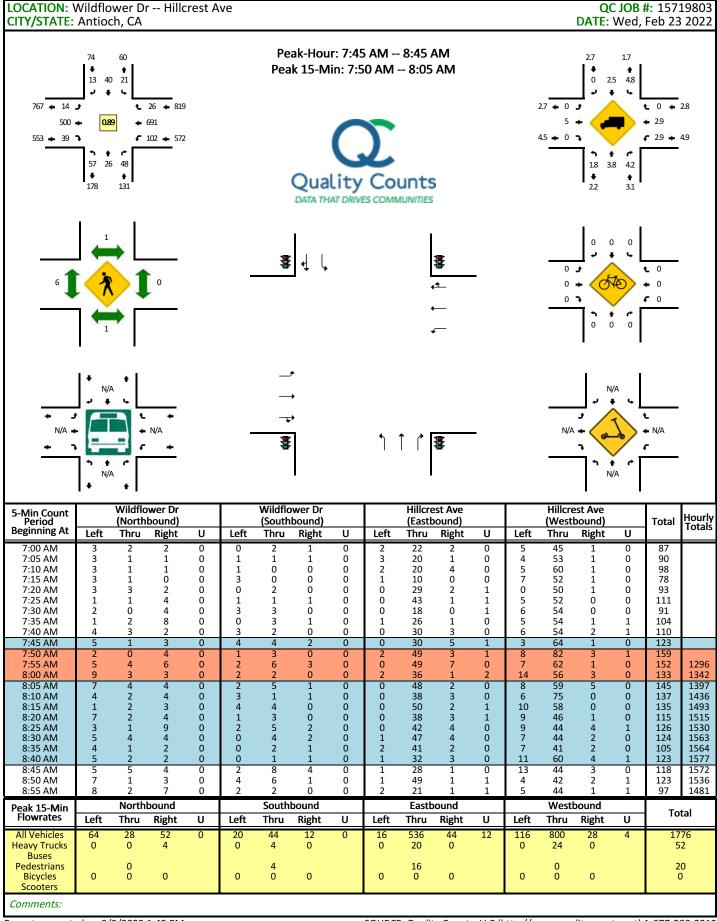
Report generated on 3/3/2022 1:45 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212



Report generated on 3/3/2022 1:45 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212



Report generated on 3/3/2022 1:45 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Report generated on 3/3/2022 1:45 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

LOCATION: Hillcrest Ave btwn Deer Valley Rd and Wildflower Dr

SPECIFIC LOCATION: CITY/STATE: Antioch, CA QC JOB #: 15719805 DIRECTION: EB, WB DATE: Feb 23 2022 - Feb 23 2022

Start Time	Mon Tue Wed Thu Fri 23 Feb 22	Average Weekday Hourly Traffic	Sat Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM	158	158		158	
01:00 AM	116	116		116	
02:00 AM	85	85		85	
03:00 AM	186	186		186	
04:00 AM	369	369		369	
05:00 AM	634	634		634	
06:00 AM	817	817		817	
07:00 AM	1165	1165		1165	
08:00 AM	1214	1214		1214	
09:00 AM	963	963		963	
10:00 AM	995	995		995	
11:00 AM	1040	1040		1040	
12:00 PM	1170	1170		1170	
01:00 PM	1277	1277		1277	
02:00 PM	1362	1362		1362	
03:00 PM	1421	1421		1421	
04:00 PM	1482	1482		1482	
05:00 PM	1513	1513		1513	
06:00 PM	1490	1490		1490	
07:00 PM	1047	1047		1047	
08:00 PM	764	764		764	
09:00 PM	633	633	C 4 4 4 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	633	
10:00 PM	381	381	OMMUNII	381	
11:00 PM	275	275		275	
Day Total	20557	20557		20557	
% Weekday Average	100%				
% Week Average	100%	100%			
AM Peak	8:00 AM	8:00 AM		8:00 AM	
Volume	1214	1214		1214	
PM Peak	5:00 PM	5:00 PM		5:00 PM	
Volume	1513	1513		1513	
Comments:					

Report generated on 3/3/2022 3:36 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

LOCATION: Hillcrest Ave btwn Deer Valley Rd and Wildflower Dr

SPECIFIC LOCATION: CITY/STATE: Antioch, CA QC JOB #: 15719805 DIRECTION: EB

DATE: Feb 23 2022 - Feb 23 2022

Start Time	Mon Tue Wed Thu 23 Feb 22	Fri Average Weekday Hourly Traffic	Sat Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM	107	107		107	
01:00 AM	79	79		79	
02:00 AM	33	33		33	
03:00 AM	43	43		43	
04:00 AM	54	54		54	
05:00 AM	100	100		100	
06:00 AM	191	191		191	
07:00 AM	449	449		449	
08:00 AM	531	531		531	
09:00 AM	430	430		430	
10:00 AM	429	429		429	
11:00 AM	477	477		477	
12:00 PM	575	575		575	
01:00 PM	620	620		620	
02:00 PM	732	732		732	
03:00 PM	772	772		772	
04:00 PM	850	850		850	
05:00 PM	897	897		897	
06:00 PM	845	845		845	
07:00 PM	662	662	-Vull	662	
08:00 PM	462	462		462	
09:00 PM	388	388	COLANAL IN CO.	388	
10:00 PM	235	235	-DIMINIUNI I	235	
11:00 PM	192	192		192	
Day Total	10153	10153		10153	
% Weekday Average	100%				
% Week Average	100%	100%			
AM Peak	8:00 AM	8:00 AM		8:00 AM	
Volume	531	531		531	
PM Peak	5:00 PM	5:00 PM		5:00 PM	
Volume	897	897		897	

Report generated on 3/3/2022 3:36 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

LOCATION: Hillcrest Ave btwn Deer Valley Rd and Wildflower Dr

SPECIFIC LOCATION:

QC JOB #: 15719805 DIRECTION: WB

DATE: Feb 23 2022 - Feb 23 2022

CITY/STATE: An	Mon Tue Wed Thu Fri	Average Weekday	Sat Sun	Average Week	E: Feb 23 2022 - Feb 23 2023 I
Start Time	23 Feb 22	Hourly Traffic	Jac Juli	Hourly Traffic	Average Week Profile
12:00 AM	51	51		<i>.</i> 51	
01:00 AM	37	37		37	
02:00 AM	52	52		52	
03:00 AM	143	143		143	
04:00 AM	315	315		315	
05:00 AM	534	534		534	
06:00 AM	626	626		626	
07:00 AM	716	716		716	
08:00 AM	683	683		683	
09:00 AM	533	533		533	
10:00 AM	566	566		566	
11:00 AM	563	563		563	
12:00 PM	595	595		595	
01:00 PM	657	657		657	
02:00 PM	630	630		630	
03:00 PM	649	649		649	
04:00 PM	632	632		632	
05:00 PM	616	616		616	
06:00 PM	645	645	OIID.	645	
07:00 PM	385	385		385	
08:00 PM	302	302		302	
09:00 PM	245	245		245	
10:00 PM	146	146	DIMIMUNIT	146	
11:00 PM	83	83		83	
Day Total	10404	10404		10404	
% Weekday Average	100%				
% Week Average	100%	100%			
AM Peak	7:00 AM	7:00 AM		7:00 AM	
Volume	716	716		716	
PM Peak Volume	1:00 PM 657	1:00 PM 657		1:00 PM 657	

Report generated on 3/3/2022 3:36 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

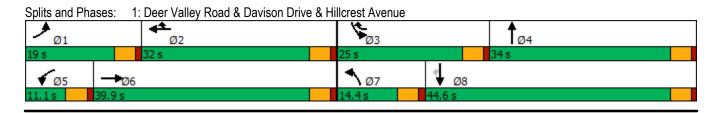
Appendix C LOS Worksheets



	۶	→	•	•	←	4	1	†	~	/	 	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	7	∱ β		7	∱ Љ	7	7	∱ ∱		ሻሻ	^	7
Traffic Volume (vph)	129	115	61	34	101	611	63	647	19	420	797	106
Future Volume (vph)	129	115	61	34	101	611	63	647	19	420	797	106
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	190		0	200		0	230		0	300		0
Storage Lanes	1		0	2		1	1		0	2		1
Taper Length (ft)	25			75			25			75		
Satd. Flow (prot)	1770	3355	0	1770	3007	1441	1770	3525	0	3433	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3355	0	1770	3007	1441	1770	3525	0	3433	3539	1583
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)		68						3				149
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		707			794			575			888	
Travel Time (s)		10.7			12.0			13.1			20.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)						50%						
Lane Group Flow (vph)	143	196	0	38	452	339	70	740	0	467	886	118
Turn Type	Prot	NA		Prot	NA	pt+ov	Prot	NA		Prot	NA	Perm
Protected Phases	1	6		5	2	23	7	4		3	8	
Permitted Phases												8
Total Split (s)	19.0	39.9		11.1	32.0		14.4	34.0		25.0	44.6	44.6
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	4.5
Act Effct Green (s)	12.4	38.5		6.4	27.8	50.6	8.6	26.4		18.2	38.5	38.5
Actuated g/C Ratio	0.12	0.37		0.06	0.27	0.49	0.08	0.26		0.18	0.37	0.37
v/c Ratio	0.67	0.15		0.35	0.56	0.48	0.48	0.82		0.77	0.67	0.17
Control Delay	60.9	16.5		58.3	37.0	21.3	58.3	44.6		50.5	30.9	2.6
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	60.9	16.5		58.3	37.0	21.3	58.3	44.6		50.5	30.9	2.6
LOS	Е	В		Е	D	С	Е	D		D	С	Α
Approach Delay		35.2			31.5			45.8			34.9	
Approach LOS		D			С			D			С	
Intersection Summary												
Area Type:	Other											
Cycle Length: 110												
Actuated Cycle Length: 10												
Control Type: Actuated-Un	coordinated											
Maximum v/c Ratio: 0.82												
Intersection Cianal Dalay	26.7			ما	toroootio	1 OC. D						

Intersection Signal Delay: 36.7 Intersection Capacity Utilization 62.1% Intersection LOS: D ICU Level of Service B

Analysis Period (min) 15



	۶	→	•	•	←	4	1	†	~	/	Ţ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	*	∱ ∱		7	ħβ		7	†	7	7	1}	
Traffic Volume (vph)	14	500	39	102	691	26	57	26	48	21	40	13
Future Volume (vph)	14	500	39	102	691	26	57	26	48	21	40	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	210		0	150		0	50		100	80		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	75			75			25			40		
Satd. Flow (prot)	1770	3500	0	1770	3522	0	1770	1863	1583	1770	1792	0
Flt Permitted	0.950			0.950			0.718			0.738		
Satd. Flow (perm)	1770	3500	0	1770	3522	0	1337	1863	1583	1375	1792	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12			6				101		15	
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		226			450			224			597	
Travel Time (s)		3.4			6.8			5.1			13.6	
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
Shared Lane Traffic (%)												
Lane Group Flow (vph)	16	606	0	115	805	0	64	29	54	24	60	0
Turn Type	Prot	NA		Prot	NA		Perm	NA	Perm	Perm	NA	
Protected Phases	1	6		5	2			4			8	
Permitted Phases							4		4	8		
Total Split (s)	9.5	22.5		11.0	24.0		31.5	31.5	31.5	31.5	31.5	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	
Act Effct Green (s)	5.0	22.9		6.4	29.7		7.6	7.6	7.6	7.6	7.6	
Actuated g/C Ratio	0.11	0.51		0.14	0.66		0.17	0.17	0.17	0.17	0.17	
v/c Ratio	0.08	0.34		0.45	0.34		0.28	0.09	0.15	0.10	0.19	
Control Delay	20.2	10.2		25.0	6.2		19.9	16.5	2.7	16.9	14.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	20.2	10.2		25.0	6.2		19.9	16.5	2.7	16.9	14.5	
LOS	С	В		С	Α		В	В	Α	В	В	
Approach Delay		10.4			8.6			12.9			15.2	
Approach LOS		В			А			В			В	
Intersection Summary												

Area Type: Other

Cycle Length: 65

Actuated Cycle Length: 44.7

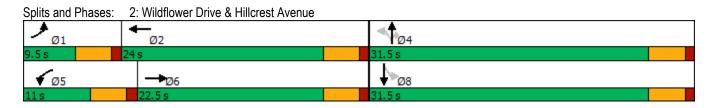
Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.45

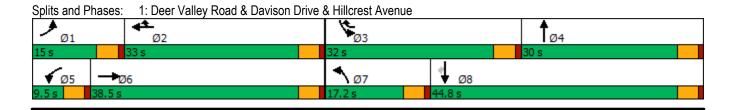
Intersection Signal Delay: 9.9
Intersection Capacity Utilization 45.2%

Intersection LOS: A ICU Level of Service A

Analysis Period (min) 15



	۶	→	•	•	←	4	1	†	~	-	Ţ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ሻ	∱ β		ሻ	∱ ∱	7	ሻ	∱ ∱		ሻሻ	^	7
Traffic Volume (vph)	136	147	74	34	96	502	95	690	23	759	839	121
Future Volume (vph)	136	147	74	34	96	502	95	690	23	759	839	121
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	190		0	200		250	230		0	300		0
Storage Lanes	1		0	2		0	1		0	2		1
Taper Length (ft)	25			75			25			75		
Satd. Flow (prot)	1770	3362	0	1770	3021	1441	1770	3522	0	3433	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3362	0	1770	3021	1441	1770	3522	0	3433	3539	1583
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)		77						3				149
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		707			776			575			888	
Travel Time (s)		10.7			11.8			13.1			20.2	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Shared Lane Traffic (%)						50%						
Lane Group Flow (vph)	142	230	0	35	362	261	99	743	0	791	874	126
Turn Type	Prot	NA		Prot	NA	pt+ov	Prot	NA		Prot	NA	Perm
Protected Phases	1	6		5	2	23	7	4		3	8	
Permitted Phases												8
Total Split (s)	15.0	38.5		9.5	33.0		17.2	30.0		32.0	44.8	44.8
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	4.5
Act Effct Green (s)	10.4	37.8		5.0	28.5	60.1	10.7	25.1		27.1	41.5	41.5
Actuated g/C Ratio	0.10	0.35		0.05	0.26	0.55	0.10	0.23		0.25	0.38	0.38
v/c Ratio	0.85	0.19		0.43	0.46	0.33	0.58	0.92		0.93	0.65	0.18
Control Delay	87.6	18.0		67.9	36.3	15.0	60.3	58.1		58.3	30.9	3.1
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	87.6	18.0		67.9	36.3	15.0	60.3	58.1		58.3	30.9	3.1
LOS	F	В		Е	D	В	Е	Е		Е	С	Α
Approach Delay		44.6			29.5			58.3			41.1	
Approach LOS		D			С			Е			D	
Intersection Summary												
Area Type:	Other											
Cycle Length: 110												
Actuated Cycle Length: 10	9.1											
Control Type: Actuated-Ur	ncoordinated											
Maximum v/c Ratio: 0.93												
Intersection Signal Delay:	43.3			In	tersection	n LOS: D						
Intersection Capacity Utiliz				IC	U Level	of Service	e C					
Analysis Period (min) 15												



	۶	→	•	•	←	•	•	†	/	/	ţ	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	7	∱ ∱		Ť	∱ ∱		7	†	7	7	f)	
Traffic Volume (vph)	46	878	23	109	536	32	98	50	94	44	38	16
Future Volume (vph)	46	878	23	109	536	32	98	50	94	44	38	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	210		0	150		0	50		100	80		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	75			75			25			40		
Satd. Flow (prot)	1770	3525	0	1770	3511	0	1770	1863	1583	1770	1779	0
Flt Permitted	0.950			0.950			0.720			0.723		
Satd. Flow (perm)	1770	3525	0	1770	3511	0	1341	1863	1583	1347	1779	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			9				101		17	
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		243			450			212			597	
Travel Time (s)		3.7			6.8			4.8			13.6	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Shared Lane Traffic (%)												
Lane Group Flow (vph)	48	939	0	114	591	0	102	52	98	46	57	0
Turn Type	Prot	NA		Prot	NA		Perm	NA	Perm	Perm	NA	
Protected Phases	1	6		5	2			4			8	
Permitted Phases							4		4	8		
Total Split (s)	10.0	23.5		10.0	23.5		31.5	31.5	31.5	31.5	31.5	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	
Act Effct Green (s)	5.6	23.9		5.6	27.9		8.9	8.9	8.9	8.9	8.9	
Actuated g/C Ratio	0.12	0.52		0.12	0.61		0.19	0.19	0.19	0.19	0.19	
v/c Ratio	0.23	0.51		0.54	0.28		0.39	0.14	0.25	0.18	0.16	
Control Delay	23.0	12.3		33.0	8.2		21.1	16.3	6.0	17.1	12.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	23.0	12.3		33.0	8.2		21.1	16.3	6.0	17.1	12.9	
LOS	С	В		С	Α		С	В	Α	В	В	
Approach Delay		12.8			12.2			14.2			14.8	
Approach LOS		В			В			В			В	
Intersection Summary												

Area Type: Other

Cycle Length: 65

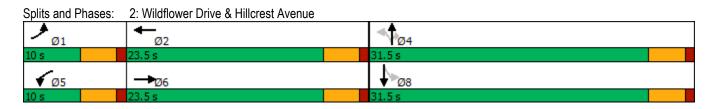
Actuated Cycle Length: 46.1

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.54

Intersection Signal Delay: 12.9 Intersection LOS: B Intersection Capacity Utilization 54.4% ICU Level of Service A

Analysis Period (min) 15



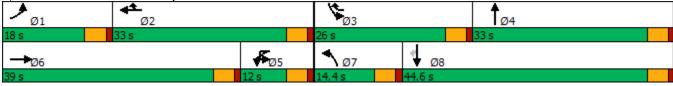
	۶	→	\rightarrow	F	•	←	•	4	†	/	\	↓
Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	ň	∱ }			Ä	↑ ↑	7	ř	∱ }		14.54	^
Traffic Volume (vph)	129	119	61	23	34	105	625	63	647	27	435	797
Future Volume (vph)	129	119	61	23	34	105	625	63	647	27	435	797
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	190		0		200		0	230		0	300	
Storage Lanes	1		0		2		1	1		0	2	
Taper Length (ft)	25				75			25			75	
Satd. Flow (prot)	1770	3359	0	0	1770	3010	1441	1770	3518	0	3433	3539
Flt Permitted	0.950				0.950			0.950			0.950	
Satd. Flow (perm)	1770	3359	0	0	1770	3010	1441	1770	3518	0	3433	3539
Right Turn on Red			Yes				No			Yes		
Satd. Flow (RTOR)		68							4			
Link Speed (mph)		45				45			30			30
Link Distance (ft)		707				506			575			888
Travel Time (s)		10.7				7.7			13.1			20.2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)							50%					
Lane Group Flow (vph)	143	200	0	0	64	464	347	70	749	0	483	886
Turn Type	Prot	NA		Prot	Prot	NA	pt+ov	Prot	NA		Prot	NA
Protected Phases	1	6		5	5	2	23	7	4		3	8
Permitted Phases												
Total Split (s)	18.0	39.0		12.0	12.0	33.0		14.4	33.0		26.0	44.6
Total Lost Time (s)	4.5	4.5			4.5	4.5		4.5	4.5		4.5	4.5
Act Effct Green (s)	12.1	36.4			7.1	29.0	52.6	8.6	26.3		19.1	39.2
Actuated g/C Ratio	0.12	0.35			0.07	0.28	0.50	0.08	0.25		0.18	0.37
v/c Ratio	0.70	0.17			0.53	0.56	0.48	0.48	0.84		0.77	0.67
Control Delay	64.6	17.8			65.9	36.6	20.5	58.9	47.3		50.4	31.2
Queue Delay	0.0	0.0			0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	64.6	17.8			65.9	36.6	20.5	58.9	47.3		50.4	31.2
LOS	Е	В			Е	D	С	Е	D		D	С
Approach Delay		37.3				32.4			48.3			35.1
Approach LOS		D				С			D			D
Intersection Summary												
Area Type:	Other											
Cycle Length: 110												
Actuated Cycle Length: 104												
Control Type: Actuated-Un	coordinated											
Maximum v/c Ratio: 0.84												
Internation Clausel Delays (7 7			1								



Intersection Signal Delay: 37.7

Analysis Period (min) 15

Intersection Capacity Utilization 62.9%



Intersection LOS: D

ICU Level of Service B



I O	ODD
Lane Group	SBR
Lare Configurations	7
Traffic Volume (vph)	106
Future Volume (vph)	106
Ideal Flow (vphpl)	1900
Storage Length (ft)	0
Storage Lanes	1
Taper Length (ft)	
Satd. Flow (prot)	1583
Flt Permitted	
Satd. Flow (perm)	1583
Right Turn on Red	Yes
Satd. Flow (RTOR)	149
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	0.90
Shared Lane Traffic (%)	
Lane Group Flow (vph)	118
Turn Type	Perm
Protected Phases	
Permitted Phases	8
Total Split (s)	44.6
Total Lost Time (s)	4.5
Act Effct Green (s)	39.2
Actuated g/C Ratio	0.37
v/c Ratio	0.17
Control Delay	2.6
Queue Delay	0.0
Total Delay	2.6
LOS	Α.
Approach Delay	7.
Approach LOS	
• •	
Intersection Summary	

Lane Group			۶	→	\rightarrow	•	←	•	•	†	/	>	ļ	
Traffic Volume (vph)	Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	
Traffic Volume (vph)	Lane Configurations		Ä	∱ }		7	∱ ∱		7	†	7	7	1	
Ideal Flow (vphpl) 1900 <td>Traffic Volume (vph)</td> <td>34</td> <td></td> <td></td> <td>46</td> <td>102</td> <td></td> <td>26</td> <td>57</td> <td>28</td> <td>48</td> <td>21</td> <td>42</td>	Traffic Volume (vph)	34			46	102		26	57	28	48	21	42	
Storage Length (ft) 210	Future Volume (vph)	34	14	507	46	102	698	26	57	28	48	21	42	
Storage Lanes	Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Taper Length (ft) 75 75 25 40 Satd. Flow (prot) 0 1770 3493 0 1770 3522 0 1770 1863 1583 1770 1796 Filt Permitted 0.950 0.950 0.717 0.737 Satd. Flow (perm) 0 1770 3493 0 1770 3522 0 1336 1863 1583 1779 1796 Right Turn on Red Yes Yes <td rowspan<="" td=""><td>Storage Length (ft)</td><td></td><td>210</td><td></td><td>0</td><td>150</td><td></td><td>0</td><td>50</td><td></td><td>100</td><td>80</td><td></td></td>	<td>Storage Length (ft)</td> <td></td> <td>210</td> <td></td> <td>0</td> <td>150</td> <td></td> <td>0</td> <td>50</td> <td></td> <td>100</td> <td>80</td> <td></td>	Storage Length (ft)		210		0	150		0	50		100	80	
Satd. Flow (prot) 0 1770 3493 0 1770 3522 0 1770 1863 1583 1770 1796 Flt Permitted 0.950 0.950 0.950 0.717 0.737 0.737 Satd. Flow (perm) 0 1770 3493 0 1770 3522 0 1336 1863 1583 1373 1796 Right Turn on Red Yes Yes <td>Storage Lanes</td> <td></td> <td>1</td> <td></td> <td>0</td> <td>1</td> <td></td> <td>0</td> <td>1</td> <td></td> <td>0</td> <td>1</td> <td></td>	Storage Lanes		1		0	1		0	1		0	1		
Fit Permitted 0.950 0.950 0.717 0.737 Satd. Flow (perm) 0 1770 3493 0 1770 3522 0 1336 1863 1583 1373 1796 Right Turn on Red Yes Yes Yes Yes Yes Satd. Flow (RTOR) 14 6 101 15 Link Speed (mph) 45 45 30 224 597 Link Distance (ft) 345 450 224 597 Travel Time (s) 5.2 6.8 5.1 13.6 Peak Hour Factor 0.89 </td <td>Taper Length (ft)</td> <td></td> <td>75</td> <td></td> <td></td> <td>75</td> <td></td> <td></td> <td>25</td> <td></td> <td></td> <td>40</td> <td></td>	Taper Length (ft)		75			75			25			40		
Satd. Flow (perm) 0 1770 3493 0 1770 3522 0 1336 1863 1583 1373 1796 Right Turn on Red Yes Yes Yes Yes Yes Yes Satd. Flow (RTOR) 14 6 101 15 Link Speed (mph) 45 45 30 30 Link Distance (ft) 345 450 224 597 Travel Time (s) 5.2 6.8 5.1 13.6 Peak Hour Factor 0.89	Satd. Flow (prot)	0	1770	3493	0	1770	3522	0	1770	1863	1583	1770	1796	
Right Turn on Red Yes Yes Yes Yes Satd. Flow (RTOR) 14 6 101 15 Link Speed (mph) 45 45 30 30 Link Distance (ft) 345 450 224 597 Travel Time (s) 5.2 6.8 5.1 13.6 Peak Hour Factor 0.89	Flt Permitted		0.950			0.950			0.717			0.737		
Satd. Flow (RTOR) 14 6 101 15 Link Speed (mph) 45 45 30 30 Link Distance (ft) 345 450 224 597 Travel Time (s) 5.2 6.8 5.1 13.6 Peak Hour Factor 0.89	Satd. Flow (perm)	0	1770	3493	0	1770	3522	0	1336	1863	1583	1373	1796	
Link Speed (mph) 45 45 30 30 Link Distance (ft) 345 450 224 597 Travel Time (s) 5.2 6.8 5.1 13.6 Peak Hour Factor 0.89	Right Turn on Red				Yes			Yes			Yes			
Link Distance (ft) 345 450 224 597 Travel Time (s) 5.2 6.8 5.1 13.6 Peak Hour Factor 0.89 <	Satd. Flow (RTOR)			14			6				101		15	
Travel Time (s) 5.2 6.8 5.1 13.6 Peak Hour Factor 0.89	Link Speed (mph)			45			45			30			30	
Peak Hour Factor 0.89	Link Distance (ft)			345			450			224			597	
Shared Lane Traffic (%) Lane Group Flow (vph) 0 54 622 0 115 813 0 64 31 54 24 62 Turn Type	Travel Time (s)			5.2			6.8			5.1			13.6	
Lane Group Flow (vph) 0 54 622 0 115 813 0 64 31 54 24 62 Turn Type Prot Prot NA Prot NA Perm NA Perm Perm NA Permitted Phases 1 1 6 5 2 4 8 Total Split (s) 9.6 9.6 22.5 11.0 23.9 31.5	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	
Turn Type Prot Prot NA Prot NA Perm NA Perm Perm NA Protected Phases 1 1 6 5 2 4 8 Permitted Phases 4 4 8 Total Split (s) 9.6 9.6 22.5 11.0 23.9 31.5 <td>Shared Lane Traffic (%)</td> <td></td>	Shared Lane Traffic (%)													
Protected Phases 1 1 6 5 2 4 8 Permitted Phases 4 4 8 Total Split (s) 9.6 9.6 22.5 11.0 23.9 31.5 4.5 4.5 4.5 4.5 4.5 4.5 4.5 4.5 4.5 4.5 4.5 4.5 4.5 4.5 4.5	Lane Group Flow (vph)	0	54	622	0	115	813	0	64	31	54	24	62	
Permitted Phases 4 4 8 Total Split (s) 9.6 9.6 22.5 11.0 23.9 31.5	Turn Type	Prot	Prot	NA		Prot	NA		Perm	NA	Perm	Perm	NA	
Total Split (s) 9.6 9.6 22.5 11.0 23.9 31.5	Protected Phases	1	1	6		5	2			4			8	
Total Lost Time (s) 4.5	Permitted Phases								4		4	8		
Act Effct Green (s) 5.1 22.9 6.4 27.8 7.6 7.0 7.1 7.17 0.17 0.17 0.17 0.17 0.17 0.17 0.17 0.17 0.17 0.17 0.17 0.17 0.17 0.17 0.10 0.20 0.0 0.0 0.15 0.10 0.2 0.10 0.10	Total Split (s)	9.6	9.6	22.5		11.0	23.9		31.5	31.5	31.5	31.5	31.5	
Actuated g/C Ratio 0.11 0.51 0.14 0.62 0.17 0.10 0.20 Control Delay 23.0 10.2 25.0 7.9 19.9 16.5 2.7 16.9 14.7 LOS C B C A B B A B B Approach Delay 11.2 10.0 13.0 15.3	Total Lost Time (s)		4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	
v/c Ratio 0.27 0.35 0.45 0.37 0.28 0.10 0.15 0.10 0.20 Control Delay 23.0 10.2 25.0 7.9 19.9 16.5 2.7 16.9 14.7 Queue Delay 0.0	Act Effct Green (s)		5.1	22.9		6.4	27.8		7.6	7.6	7.6	7.6	7.6	
Control Delay 23.0 10.2 25.0 7.9 19.9 16.5 2.7 16.9 14.7 Queue Delay 0.0 </td <td>Actuated g/C Ratio</td> <td></td> <td>0.11</td> <td>0.51</td> <td></td> <td>0.14</td> <td>0.62</td> <td></td> <td>0.17</td> <td>0.17</td> <td>0.17</td> <td>0.17</td> <td>0.17</td>	Actuated g/C Ratio		0.11	0.51		0.14	0.62		0.17	0.17	0.17	0.17	0.17	
Queue Delay 0.0 <th< td=""><td>v/c Ratio</td><td></td><td>0.27</td><td>0.35</td><td></td><td>0.45</td><td>0.37</td><td></td><td>0.28</td><td>0.10</td><td>0.15</td><td>0.10</td><td>0.20</td></th<>	v/c Ratio		0.27	0.35		0.45	0.37		0.28	0.10	0.15	0.10	0.20	
Queue Delay 0.0 <th< td=""><td>Control Delay</td><td></td><td>23.0</td><td>10.2</td><td></td><td>25.0</td><td>7.9</td><td></td><td>19.9</td><td>16.5</td><td>2.7</td><td>16.9</td><td>14.7</td></th<>	Control Delay		23.0	10.2		25.0	7.9		19.9	16.5	2.7	16.9	14.7	
Total Delay 23.0 10.2 25.0 7.9 19.9 16.5 2.7 16.9 14.7 LOS C B C A B B A B B Approach Delay 11.2 10.0 13.0 15.3										0.0	0.0	0.0		
LOS C B C A B B A B B Approach Delay 11.2 10.0 13.0 15.3			23.0	10.2		25.0	7.9		19.9	16.5	2.7	16.9		
Approach Delay 11.2 10.0 13.0 15.3				В		С	Α		В	В	Α	В		
	Approach Delay			11.2						13.0				

Intersection Summary

Area Type: Other

Cycle Length: 65

Actuated Cycle Length: 44.7

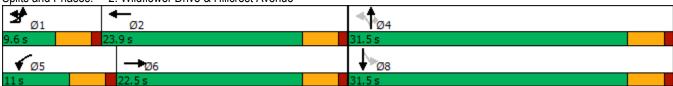
Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.45

Intersection Signal Delay: 10.9 Intersection LOS: B
Intersection Capacity Utilization 45.4% ICU Level of Service A

Analysis Period (min) 15







Lane Group	SBR
Lane Configurations	ODIT
Traffic Volume (vph)	13
Future Volume (vph)	13
Ideal Flow (vphpl)	1900
	0
Storage Length (ft) Storage Lanes	0
	U
Taper Length (ft)	0
Satd. Flow (prot)	0
Flt Permitted	0
Satd. Flow (perm)	0
Right Turn on Red	Yes
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	0.89
Shared Lane Traffic (%)	
Lane Group Flow (vph)	0
Turn Type	
Protected Phases	
Permitted Phases	
Total Split (s)	
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
••	
Intersection Summary	

	۶	→	•	F	•	←	•	•	†	/	>	ļ
Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	*	∱ ∱			Ä	∱ ∱	7	7	∱ ∱		ሻሻ	^
Traffic Volume (vph)	136	150	74	18	34	99	513	95	690	28	770	839
Future Volume (vph)	136	150	74	18	34	99	513	95	690	28	770	839
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	190		0		200		0	230		0	300	
Storage Lanes	1		0		2		1	1		0	2	
Taper Length (ft)	25				75			25			75	
Satd. Flow (prot)	1770	3362	0	0	1770	3024	1441	1770	3518	0	3433	3539
Flt Permitted	0.950				0.950			0.950			0.950	
Satd. Flow (perm)	1770	3362	0	0	1770	3024	1441	1770	3518	0	3433	3539
Right Turn on Red			Yes				No			Yes		
Satd. Flow (RTOR)		77							3			
Link Speed (mph)		45				45			30			30
Link Distance (ft)		707				506			575			888
Travel Time (s)		10.7				7.7			13.1			20.2
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Shared Lane Traffic (%)							50%					
Lane Group Flow (vph)	142	233	0	0	54	370	267	99	748	0	802	874
Turn Type	Prot	NA		Prot	Prot	NA	pt+ov	Prot	NA		Prot	NA
Protected Phases	1	6		5	5	2	23	7	4		3	8
Permitted Phases												
Total Split (s)	16.7	38.0		10.0	10.0	31.3		17.2	30.0		32.0	44.8
Total Lost Time (s)	4.5	4.5			4.5	4.5		4.5	4.5		4.5	4.5
Act Effct Green (s)	11.6	35.0			5.5	26.8	58.5	10.6	25.1		27.2	41.6
Actuated g/C Ratio	0.11	0.32			0.05	0.25	0.54	0.10	0.23		0.25	0.38
v/c Ratio	0.76	0.21			0.61	0.50	0.34	0.57	0.92		0.93	0.64
Control Delay	72.4	19.0			79.2	38.2	16.0	60.2	58.3		59.0	30.6
Queue Delay	0.0	0.0			0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	72.4	19.0			79.2	38.2	16.0	60.2	58.3		59.0	30.6
LOS	Е	В			Е	D	В	Е	Е		Е	С
Approach Delay		39.3				32.8			58.5			41.3
Approach LOS		D				С			Е			D
Intersection Summary												

Area Type: Other

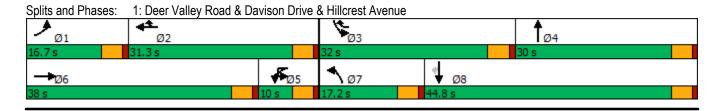
Cycle Length: 110

Actuated Cycle Length: 108.6 Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.93

Intersection Signal Delay: 43.5 Intersection LOS: D Intersection Capacity Utilization 72.7% ICU Level of Service C

Analysis Period (min) 15





Lane Group	SBR
Lane Configurations	7 JOK
	121
Traffic Volume (vph)	121
Future Volume (vph)	
Ideal Flow (vphpl)	1900
Storage Length (ft)	0
Storage Lanes	1
Taper Length (ft)	
Satd. Flow (prot)	1583
Flt Permitted	
Satd. Flow (perm)	1583
Right Turn on Red	Yes
Satd. Flow (RTOR)	149
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	0.96
Shared Lane Traffic (%)	
Lane Group Flow (vph)	126
Turn Type	Perm
Protected Phases	
Permitted Phases	8
Total Split (s)	44.8
Total Lost Time (s)	4.5
Act Effct Green (s)	41.6
Actuated g/C Ratio	0.38
v/c Ratio	0.18
Control Delay	3.1
Queue Delay	0.0
Total Delay	3.1
LOS	Α.
Approach Delay	Α.
Approach LOS	
• •	
Intersection Summary	

	₾	۶	→	\rightarrow	•	←	•	4	†	/	>	ļ
Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations		Ä	∱ ∱		7	∱ ∱		7	†	7	7	₽
Traffic Volume (vph)	26	46	884	29	109	542	32	98	51	94	44	39
Future Volume (vph)	26	46	884	29	109	542	32	98	51	94	44	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		210		0	150		0	50		100	80	
Storage Lanes		1		0	1		0	1		0	1	
Taper Length (ft)		75			75			25			40	
Satd. Flow (prot)	0	1770	3522	0	1770	3511	0	1770	1863	1583	1770	1781
Flt Permitted		0.950			0.950			0.719			0.722	
Satd. Flow (perm)	0	1770	3522	0	1770	3511	0	1339	1863	1583	1345	1781
Right Turn on Red				Yes			Yes			Yes		
Satd. Flow (RTOR)			5			9				101		17
Link Speed (mph)			45			45			30			30
Link Distance (ft)			361			450			224			597
Travel Time (s)			5.5			6.8			5.1			13.6
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	75	951	0	114	598	0	102	53	98	46	58
Turn Type	Prot	Prot	NA		Prot	NA		Perm	NA	Perm	Perm	NA
Protected Phases	1	1	6		5	2			4			8
Permitted Phases								4		4	8	
Total Split (s)	9.5	9.5	23.5		10.0	24.0		31.5	31.5	31.5	31.5	31.5
Total Lost Time (s)		4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5
Act Effct Green (s)		5.0	23.9		5.5	26.2		8.9	8.9	8.9	8.9	8.9
Actuated g/C Ratio		0.11	0.52		0.12	0.57		0.19	0.19	0.19	0.19	0.19
v/c Ratio		0.39	0.52		0.54	0.30		0.39	0.15	0.25	0.18	0.16
Control Delay		27.1	12.3		33.1	9.1		21.1	16.3	6.0	17.1	13.0
Queue Delay		0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay		27.1	12.3		33.1	9.1		21.1	16.3	6.0	17.1	13.0
LOS		С	В		С	Α		С	В	Α	В	В
Approach Delay			13.4			13.0			14.3			14.8
Approach LOS			В			В			В			В

Intersection Summary

Area Type: Other

Cycle Length: 65

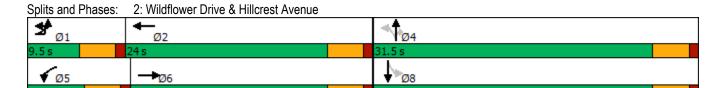
Actuated Cycle Length: 46.2

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.54

Intersection Signal Delay: 13.4 Intersection LOS: B
Intersection Capacity Utilization 54.7% ICU Level of Service A

Analysis Period (min) 15





Lane Group	SBR
Lane Configurations	ODIN
Traffic Volume (vph)	16
Future Volume (vph)	16
Ideal Flow (vphpl)	1900
Storage Length (ft)	0
Storage Lanes	0
Taper Length (ft)	U
Satd. Flow (prot)	0
Flt Permitted	U
Satd. Flow (perm)	0
Right Turn on Red	Yes
Satd. Flow (RTOR)	1 63
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	0.96
Shared Lane Traffic (%)	0.30
Lane Group Flow (vph)	0
Turn Type	U
Protected Phases	
Permitted Phases	
Total Split (s)	
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
••	
Intersection Summary	

Appendix D Queuing Survey Data Sheets





Location: Vacaville Dutch Bros

Date: 2/1/2022 Site Code: 15686807

	Site Code.	15686807
		Timestamp
	Longest Queue	When Longest
Start Time	(# of cars)	Queue Occurs
7:00 AM	9	7:00:31 AM
7:05 AM	8	7:05:11 AM
7:10 AM	11	7:14:25 AM
7:15 AM	17	7:19:06 AM
7:20 AM	15	7:22:02 AM
7:25 AM	13	7:29:14 AM
7:30 AM	12	7:30:48 AM
7:35 AM	13	7:37:03 AM
7:40 AM	13	7:41:17 AM
7:45 AM	14	7:47:49 AM
7:50 AM	14	7:54:32 AM
7:55 AM	21	7:59:13 AM
8:00 AM	21	8:00:20 AM
8:05 AM	22	8:05:08 AM
8:10 AM	20	8:10:26 AM
8:15 AM	16	8:16:48 AM
8:20 AM	15	8:22:49 AM
8:25 AM	11	8:25:05 AM
8:30 AM	10	8:32:31 AM
8:35 AM	9	8:35:10 AM
8:40 AM	9	8:40:59 AM
8:45 AM	11	8:47:13 AM
8:50 AM	13	8:54:14 AM
8:55 AM	13	8:55:31 AM
9:00 AM	9	9:00:08 AM
9:05 AM	10	9:05:38 AM
9:10 AM	12	9:14:23 AM
9:15 AM	11	9:16:06 AM
9:20 AM	10	9:22:44 AM
9:25 AM	7	9:29:42 AM
9:30 AM	5	9:31:02 AM
9:35 AM	7	9:36:53 AM
9:40 AM	9	9:44:59 AM
9:45 AM	13	9:48:10 AM
9:50 AM	12	9:51:17 AM
9:55 AM	8	9:59:40 AM



Location: Vacaville Dutch Bros

Date: 2/1/2022 Site Code: 15686808

	Site Code.	15080808
		Timestamp
	Longest Queue	When Longest
Start Time	(# of cars)	Queue Occurs
3:00 PM	9	3:04:48 PM
3:05 PM	11	3:07:46 PM
3:10 PM	7	3:10:54 PM
3:15 PM	8	3:18:10 PM
3:20 PM	7	3:20:31 PM
3:25 PM	9	3:26:38 PM
3:30 PM	8	3:30:12 PM
3:35 PM	5	3:36:03 PM
3:40 PM	6	3:42:50 PM
3:45 PM	6	3:45:49 PM
3:50 PM	9	3:54:57 PM
3:55 PM	8	3:55:15 PM
4:00 PM	14	4:04:59 PM
4:05 PM	13	4:05:22 PM
4:10 PM	13	4:10:05 PM
4:15 PM	12	4:16:15 PM
4:20 PM	9	4:23:02 PM
4:25 PM	9	4:25:31 PM
4:30 PM	9	4:31:40 PM
4:35 PM	8	4:35:16 PM
4:40 PM	6	4:44:58 PM
4:45 PM	6	4:45:31 PM
4:50 PM	4	4:50:12 PM
4:55 PM	6	4:57:56 PM
5:00 PM	7	5:03:40 PM
5:05 PM	10	5:07:22 PM
5:10 PM	8	5:13:43 PM
5:15 PM	8	5:15:16 PM
5:20 PM	9	5:24:31 PM
5:25 PM	8	5:25:52 PM
5:30 PM	6	5:31:45 PM
5:35 PM	6	5:38:58 PM
5:40 PM	8	5:44:51 PM
5:45 PM	9	5:45:08 PM
5:50 PM	11	5:54:34 PM
5:55 PM	9	5:55:34 PM



Location: Vacaville Dutch Bros

Date: 1/29/2022 Site Code: 15686809

Start Time Longest Queue (# of cars) When Longest Queue Occurs 11:00 AM 17 11:02:36 AM 11:05 AM 11 11:05:00 AM 11:10 AM 10 11:10:25 AM 11:15 AM 13 11:19:30 AM 11:20 AM 13 11:20:07 AM 11:25 AM 14 11:25:54 AM 11:30 AM 17 11:33:47 AM 11:35 AM 17 11:35:24 AM 11:40 AM 13 11:40:12 AM 11:40 AM 13 11:40:12 AM 11:45 AM 15 11:49:52 AM 11:45 AM 15 11:49:52 AM 11:50 AM 14 11:55:03 AM 11:50 AM 14 11:55:03 AM 11:50 AM 14 11:55:03 AM 12:00 PM 18 12:04:48 PM 12:05 PM 22 12:05:40 PM 12:10 PM 15 12:10:03 PM 12:15 PM 15 12:10:03 PM 12:25 PM 12 12:29:05 PM 12:30 PM </th <th></th> <th>Site Code.</th> <th>15080809</th>		Site Code.	15080809
Start Time (# of cars) Queue Occurs 11:00 AM 17 11:02:36 AM 11:05 AM 11 11:05:00 AM 11:10 AM 10 11:10:25 AM 11:15 AM 13 11:19:30 AM 11:20 AM 13 11:20:07 AM 11:25 AM 14 11:25:54 AM 11:30 AM 17 11:33:47 AM 11:35 AM 17 11:35:24 AM 11:40 AM 13 11:40:12 AM 11:40 AM 13 11:40:12 AM 11:45 AM 15 11:49:52 AM 11:45 AM 15 11:49:52 AM 11:50 AM 14 11:54:48 AM 11:55 AM 16 11:55:03 AM 12:00 PM 18 12:04:48 PM 12:05 PM 22 12:05:40 PM 12:10 PM 15 12:10:03 PM 12:10 PM 15 12:10:03 PM 12:25 PM 12 12:29:05 PM 12:30 PM 12 12:31:49 PM 12:30 PM 12			Timestamp
11:00 AM 17 11:02:36 AM 11:05 AM 11 11:05:00 AM 11:10 AM 10 11:10:25 AM 11:15 AM 13 11:19:30 AM 11:20 AM 13 11:20:07 AM 11:25 AM 14 11:25:54 AM 11:30 AM 17 11:33:47 AM 11:35 AM 17 11:35:24 AM 11:40 AM 13 11:40:12 AM 11:45 AM 15 11:49:52 AM 11:50 AM 14 11:54:48 AM 11:55 AM 16 11:55:03 AM 12:00 PM 18 12:04:48 PM 12:05 PM 22 12:05:40 PM 12:10 PM 15 12:10:03 PM 12:10 PM 15 12:10:03 PM 12:20 PM 14 12:22:55 PM 12:25 PM 12 12:29:05 PM 12:30 PM 12 12:31:49 PM 12:35 PM 13 12:39:21 PM 12:40 PM 14 12:41:14 PM 12:45 PM 12 12:45:26 PM 12:55 PM 12 12:55:04 PM			
11:05 AM 11 11:05:00 AM 11:10 AM 10 11:10:25 AM 11:15 AM 13 11:19:30 AM 11:20 AM 13 11:20:07 AM 11:25 AM 14 11:25:54 AM 11:30 AM 17 11:33:47 AM 11:35 AM 17 11:35:24 AM 11:40 AM 13 11:40:12 AM 11:45 AM 15 11:49:52 AM 11:50 AM 14 11:54:48 AM 11:55 AM 16 11:55:03 AM 12:00 PM 18 12:04:48 PM 12:05 PM 22 12:05:40 PM 12:10 PM 15 12:10:03 PM 12:10 PM 15 12:10:03 PM 12:20 PM 14 12:22:55 PM 12:25 PM 12 12:29:05 PM 12:30 PM 12 12:31:49 PM 12:30 PM 12 12:31:49 PM 12:35 PM 13 12:39:21 PM 12:40 PM 14 12:41:14 PM 12:45 PM 12 12:			
11:10 AM 10 11:10:25 AM 11:15 AM 13 11:19:30 AM 11:20 AM 13 11:20:07 AM 11:25 AM 14 11:25:54 AM 11:30 AM 17 11:33:47 AM 11:35 AM 17 11:35:24 AM 11:40 AM 13 11:40:12 AM 11:45 AM 15 11:49:52 AM 11:50 AM 14 11:54:48 AM 11:55 AM 16 11:55:03 AM 12:00 PM 18 12:04:48 PM 12:05 PM 22 12:05:40 PM 12:10 PM 15 12:10:03 PM 12:10 PM 15 12:10:03 PM 12:20 PM 14 12:22:55 PM 12:23 PM 12 12:29:05 PM 12:30 PM 12 12:31:49 PM 12:35 PM 13 12:39:21 PM 12:40 PM 14 12:41:14 PM 12:45 PM 12 12:45:26 PM 12:55 PM 12 12:55:04 PM 1:00 PM 14 1:09			
11:15 AM 13 11:19:30 AM 11:20 AM 13 11:20:07 AM 11:25 AM 14 11:25:54 AM 11:30 AM 17 11:33:47 AM 11:35 AM 17 11:35:24 AM 11:40 AM 13 11:40:12 AM 11:45 AM 15 11:49:52 AM 11:50 AM 14 11:54:48 AM 11:55 AM 16 11:55:03 AM 12:00 PM 18 12:04:48 PM 12:05 PM 22 12:05:40 PM 12:10 PM 15 12:10:03 PM 12:10 PM 15 12:16:26 PM 12:20 PM 14 12:22:55 PM 12:25 PM 12 12:29:05 PM 12:30 PM 12 12:31:49 PM 12:35 PM 13 12:39:21 PM 12:40 PM 14 12:41:14 PM 12:45 PM 12 12:45:26 PM 12:40 PM 14 12:55:55 PM 12:55 PM 12 12:55:04 PM 1:00 PM 14 1:09	11:05 AM	11	11:05:00 AM
11:20 AM 13 11:20:07 AM 11:25 AM 14 11:25:54 AM 11:30 AM 17 11:33:47 AM 11:35 AM 17 11:35:24 AM 11:40 AM 13 11:40:12 AM 11:45 AM 15 11:49:52 AM 11:50 AM 14 11:54:48 AM 11:55 AM 16 11:55:03 AM 12:00 PM 18 12:04:48 PM 12:05 PM 22 12:05:40 PM 12:10 PM 15 12:10:03 PM 12:10 PM 15 12:10:03 PM 12:15 PM 15 12:16:26 PM 12:20 PM 14 12:22:55 PM 12:23 PM 12 12:29:05 PM 12:30 PM 12 12:31:49 PM 12:35 PM 13 12:39:21 PM 12:40 PM 14 12:41:14 PM 12:45 PM 12 12:45:26 PM 12:40 PM 14 12:52:55 PM 12:55 PM 12 12:55:04 PM 1:00 PM 14 1:05			11:10:25 AM
11:25 AM 14 11:25:54 AM 11:30 AM 17 11:33:47 AM 11:35 AM 17 11:35:24 AM 11:40 AM 13 11:40:12 AM 11:45 AM 15 11:49:52 AM 11:50 AM 14 11:54:48 AM 11:55 AM 16 11:55:03 AM 12:00 PM 18 12:04:48 PM 12:05 PM 22 12:05:40 PM 12:10 PM 15 12:10:03 PM 12:15 PM 15 12:16:26 PM 12:20 PM 14 12:22:55 PM 12:23 PM 12 12:29:05 PM 12:33 PM 12 12:31:49 PM 12:35 PM 13 12:39:21 PM 12:40 PM 14 12:41:14 PM 12:45 PM 12 12:45:26 PM 12:45 PM 12 12:55:55 PM 12:55 PM 12 12:55:04 PM 1:00 PM 14 1:02:42 PM 1:05 PM 14 1:09:53 PM 1:10 PM 14 1:13:7 PM 1:15 PM 10 1:15:09 PM			
11:30 AM 17 11:33:47 AM 11:35 AM 17 11:35:24 AM 11:40 AM 13 11:40:12 AM 11:45 AM 15 11:49:52 AM 11:50 AM 14 11:54:48 AM 11:55 AM 16 11:55:03 AM 12:00 PM 18 12:04:48 PM 12:05 PM 22 12:05:40 PM 12:10 PM 15 12:10:03 PM 12:15 PM 15 12:16:26 PM 12:20 PM 14 12:22:55 PM 12:25 PM 12 12:29:05 PM 12:30 PM 12 12:31:49 PM 12:35 PM 13 12:39:21 PM 12:40 PM 14 12:41:14 PM 12:45 PM 12 12:45:26 PM 12:50 PM 14 12:52:55 PM 12:55 PM 12 12:55:04 PM 1:00 PM 14 1:02:42 PM 1:05 PM 14 1:09:53 PM 1:10 PM 14 1:13:7 PM 1:20 PM 15 1:23:34 PM 1:25 PM 19 1:29:45 PM 1:		13	11:20:07 AM
11:35 AM 17 11:35:24 AM 11:40 AM 13 11:40:12 AM 11:45 AM 15 11:49:52 AM 11:50 AM 14 11:54:48 AM 11:55 AM 16 11:55:03 AM 12:00 PM 18 12:04:48 PM 12:05 PM 22 12:05:40 PM 12:10 PM 15 12:10:03 PM 12:15 PM 15 12:16:26 PM 12:20 PM 14 12:22:55 PM 12:25 PM 12 12:31:49 PM 12:30 PM 12 12:33:49 PM 12:35 PM 13 12:39:21 PM 12:40 PM 14 12:41:14 PM 12:45 PM 12 12:45:26 PM 12:45 PM 12 12:55:04 PM 12:55 PM 12 12:55:04 PM 1:00 PM 14 1:02:42 PM 1:05 PM 14 1:09:53 PM 1:10 PM 14 1:11:37 PM 1:15 PM 10 1:15:09 PM 1:25 PM 19 1:29:45 PM 1:30 PM 18 1:30:37 PM 1:3			
11:40 AM 13 11:40:12 AM 11:45 AM 15 11:49:52 AM 11:50 AM 14 11:54:48 AM 11:55 AM 16 11:55:03 AM 12:00 PM 18 12:04:48 PM 12:05 PM 22 12:05:40 PM 12:10 PM 15 12:10:03 PM 12:15 PM 15 12:16:26 PM 12:20 PM 14 12:22:55 PM 12:25 PM 12 12:29:05 PM 12:30 PM 12 12:31:49 PM 12:35 PM 13 12:39:21 PM 12:40 PM 14 12:41:14 PM 12:45 PM 12 12:45:26 PM 12:50 PM 14 12:52:55 PM 12:55 PM 12 12:55:04 PM 1:00 PM 14 1:02:42 PM 1:05 PM 14 1:09:53 PM 1:10 PM 14 1:13:7 PM 1:15 PM 10 1:15:09 PM 1:20 PM 15 1:23:34 PM 1:25 PM 19 1:29:45 PM			
11:45 AM 15 11:49:52 AM 11:50 AM 14 11:54:48 AM 11:55 AM 16 11:55:03 AM 12:00 PM 18 12:04:48 PM 12:05 PM 22 12:05:40 PM 12:10 PM 15 12:10:03 PM 12:15 PM 15 12:16:26 PM 12:20 PM 14 12:22:55 PM 12:25 PM 12 12:29:05 PM 12:30 PM 12 12:31:49 PM 12:35 PM 13 12:39:21 PM 12:40 PM 14 12:41:14 PM 12:45 PM 12 12:45:26 PM 12:50 PM 14 12:52:55 PM 12:55 PM 12 12:55:04 PM 1:00 PM 14 1:02:42 PM 1:05 PM 14 1:09:53 PM 1:10 PM 14 1:13:7 PM 1:20 PM 15 1:23:34 PM 1:20 PM 15 1:23:34 PM 1:25 PM 19 1:29:45 PM 1:30 PM 18 1:30:37 PM	11:35 AM	17	
11:50 AM 14 11:54:48 AM 11:55 AM 16 11:55:03 AM 12:00 PM 18 12:04:48 PM 12:05 PM 22 12:05:40 PM 12:10 PM 15 12:10:03 PM 12:15 PM 15 12:16:26 PM 12:20 PM 14 12:22:55 PM 12:25 PM 12 12:29:05 PM 12:30 PM 12 12:31:49 PM 12:35 PM 13 12:39:21 PM 12:40 PM 14 12:41:14 PM 12:45 PM 12 12:45:26 PM 12:50 PM 14 12:52:55 PM 12:55 PM 12 12:55:04 PM 1:00 PM 14 1:09:53 PM 1:00 PM 14 1:09:53 PM 1:10 PM 14 1:11:37 PM 1:15 PM 10 1:15:09 PM 1:20 PM 15 1:23:34 PM 1:25 PM 19 1:29:45 PM 1:30 PM 18 1:30:37 PM 1:35 PM 20 1:36:42 PM			
11:55 AM 16 11:55:03 AM 12:00 PM 18 12:04:48 PM 12:05 PM 22 12:05:40 PM 12:10 PM 15 12:10:03 PM 12:15 PM 15 12:16:26 PM 12:20 PM 14 12:22:55 PM 12:25 PM 12 12:29:05 PM 12:30 PM 12 12:31:49 PM 12:35 PM 13 12:39:21 PM 12:40 PM 14 12:41:14 PM 12:45 PM 12 12:45:26 PM 12:50 PM 14 12:52:55 PM 12:55 PM 12 12:55:04 PM 1:00 PM 14 1:02:42 PM 1:05 PM 14 1:09:53 PM 1:10 PM 14 1:137 PM 1:15 PM 10 1:15:09 PM 1:20 PM 15 1:23:34 PM 1:25 PM 19 1:29:45 PM 1:30 PM 18 1:30:37 PM 1:35 PM 20 1:36:42 PM 1:40 PM 19 1:45:43 PM </td <td>11:45 AM</td> <td></td> <td></td>	11:45 AM		
12:00 PM 18 12:04:48 PM 12:05 PM 22 12:05:40 PM 12:10 PM 15 12:10:03 PM 12:15 PM 15 12:16:26 PM 12:20 PM 14 12:22:55 PM 12:25 PM 12 12:29:05 PM 12:30 PM 12 12:31:49 PM 12:35 PM 13 12:39:21 PM 12:40 PM 14 12:41:14 PM 12:45 PM 12 12:45:26 PM 12:50 PM 14 12:52:55 PM 12:55 PM 12 12:55:04 PM 1:00 PM 14 1:02:42 PM 1:05 PM 14 1:09:53 PM 1:10 PM 14 1:11:37 PM 1:15 PM 10 1:15:09 PM 1:20 PM 15 1:23:34 PM 1:25 PM 19 1:29:45 PM 1:30 PM 18 1:30:37 PM 1:35 PM 20 1:36:42 PM 1:40 PM 19 1:45:43 PM 1:45 PM 9 1:45:43 PM <td>11:50 AM</td> <td>14</td> <td>11:54:48 AM</td>	11:50 AM	14	11:54:48 AM
12:05 PM 22 12:05:40 PM 12:10 PM 15 12:10:03 PM 12:15 PM 15 12:16:26 PM 12:20 PM 14 12:22:55 PM 12:25 PM 12 12:29:05 PM 12:30 PM 12 12:31:49 PM 12:35 PM 13 12:39:21 PM 12:40 PM 14 12:41:14 PM 12:45 PM 12 12:45:26 PM 12:50 PM 14 12:52:55 PM 12:55 PM 12 12:55:04 PM 1:00 PM 14 1:02:42 PM 1:05 PM 14 1:09:53 PM 1:10 PM 14 1:11:37 PM 1:15 PM 10 1:15:09 PM 1:20 PM 15 1:23:34 PM 1:25 PM 19 1:29:45 PM 1:30 PM 18 1:30:37 PM 1:35 PM 20 1:36:42 PM 1:40 PM 19 1:45:43 PM 1:45 PM 9 1:45:43 PM 1:50:29 PM 1:50:29 PM	11:55 AM	16	11:55:03 AM
12:10 PM 15 12:10:03 PM 12:15 PM 15 12:16:26 PM 12:20 PM 14 12:22:55 PM 12:25 PM 12 12:29:05 PM 12:30 PM 12 12:31:49 PM 12:35 PM 13 12:39:21 PM 12:40 PM 14 12:41:14 PM 12:45 PM 12 12:45:26 PM 12:50 PM 14 12:52:55 PM 12:55 PM 12 12:55:04 PM 1:00 PM 14 1:02:42 PM 1:05 PM 14 1:09:53 PM 1:10 PM 14 1:11:37 PM 1:15 PM 10 1:15:09 PM 1:20 PM 15 1:23:34 PM 1:25 PM 19 1:29:45 PM 1:30 PM 18 1:30:37 PM 1:35 PM 20 1:36:42 PM 1:40 PM 19 1:45:43 PM 1:50 PM 7 1:50:29 PM		18	12:04:48 PM
12:15 PM 15 12:16:26 PM 12:20 PM 14 12:22:55 PM 12:25 PM 12 12:29:05 PM 12:30 PM 12 12:31:49 PM 12:35 PM 13 12:39:21 PM 12:40 PM 14 12:41:14 PM 12:45 PM 12 12:45:26 PM 12:50 PM 14 12:52:55 PM 12:55 PM 12 12:55:04 PM 1:00 PM 14 1:02:42 PM 1:05 PM 14 1:09:53 PM 1:10 PM 14 1:11:37 PM 1:15 PM 10 1:15:09 PM 1:20 PM 15 1:23:34 PM 1:25 PM 19 1:29:45 PM 1:30 PM 18 1:30:37 PM 1:35 PM 20 1:36:42 PM 1:40 PM 19 1:40:45 PM 1:45 PM 9 1:45:43 PM 1:50:29 PM 1:50:29 PM	12:05 PM	22	12:05:40 PM
12:20 PM 14 12:22:55 PM 12:25 PM 12 12:29:05 PM 12:30 PM 12 12:31:49 PM 12:35 PM 13 12:39:21 PM 12:40 PM 14 12:41:14 PM 12:45 PM 12 12:45:26 PM 12:50 PM 14 12:52:55 PM 12:55 PM 12 12:55:04 PM 1:00 PM 14 1:02:42 PM 1:05 PM 14 1:09:53 PM 1:10 PM 14 1:11:37 PM 1:15 PM 10 1:15:09 PM 1:20 PM 15 1:23:34 PM 1:25 PM 19 1:29:45 PM 1:30 PM 18 1:30:37 PM 1:35 PM 20 1:36:42 PM 1:40 PM 19 1:40:45 PM 1:45 PM 9 1:45:43 PM 1:50 PM 7 1:50:29 PM	12:10 PM		12:10:03 PM
12:25 PM 12 12:29:05 PM 12:30 PM 12 12:31:49 PM 12:35 PM 13 12:39:21 PM 12:40 PM 14 12:41:14 PM 12:45 PM 12 12:45:26 PM 12:50 PM 14 12:52:55 PM 12:55 PM 12 12:55:04 PM 1:00 PM 14 1:02:42 PM 1:05 PM 14 1:09:53 PM 1:10 PM 14 1:11:37 PM 1:15 PM 10 1:15:09 PM 1:20 PM 15 1:23:34 PM 1:25 PM 19 1:29:45 PM 1:30 PM 18 1:30:37 PM 1:35 PM 20 1:36:42 PM 1:40 PM 19 1:40:45 PM 1:45 PM 9 1:45:43 PM 1:50 PM 7 1:50:29 PM		15	
12:30 PM 12 12:31:49 PM 12:35 PM 13 12:39:21 PM 12:40 PM 14 12:41:14 PM 12:45 PM 12 12:45:26 PM 12:50 PM 14 12:52:55 PM 12:55 PM 12 12:55:04 PM 1:00 PM 14 1:02:42 PM 1:05 PM 14 1:09:53 PM 1:10 PM 14 1:11:37 PM 1:15 PM 10 1:15:09 PM 1:20 PM 15 1:23:34 PM 1:25 PM 19 1:29:45 PM 1:30 PM 18 1:30:37 PM 1:35 PM 20 1:36:42 PM 1:40 PM 19 1:40:45 PM 1:45 PM 9 1:45:43 PM 1:50 PM 7 1:50:29 PM	12:20 PM	14	12:22:55 PM
12:35 PM 13 12:39:21 PM 12:40 PM 14 12:41:14 PM 12:45 PM 12 12:45:26 PM 12:50 PM 14 12:52:55 PM 12:55 PM 12 12:55:04 PM 1:00 PM 14 1:02:42 PM 1:05 PM 14 1:09:53 PM 1:10 PM 14 1:11:37 PM 1:15 PM 10 1:15:09 PM 1:20 PM 15 1:23:34 PM 1:25 PM 19 1:29:45 PM 1:30 PM 18 1:30:37 PM 1:35 PM 20 1:36:42 PM 1:40 PM 19 1:40:45 PM 1:45 PM 9 1:45:43 PM 1:50 PM 7 1:50:29 PM	12:25 PM	12	12:29:05 PM
12:40 PM 14 12:41:14 PM 12:45 PM 12 12:45:26 PM 12:50 PM 14 12:52:55 PM 12:55 PM 12 12:55:04 PM 1:00 PM 14 1:02:42 PM 1:05 PM 14 1:09:53 PM 1:10 PM 14 1:11:37 PM 1:15 PM 10 1:15:09 PM 1:20 PM 15 1:23:34 PM 1:25 PM 19 1:29:45 PM 1:30 PM 18 1:30:37 PM 1:35 PM 20 1:36:42 PM 1:40 PM 19 1:40:45 PM 1:45 PM 9 1:45:43 PM 1:50 PM 7 1:50:29 PM	12:30 PM	12	12:31:49 PM
12:45 PM 12 12:45:26 PM 12:50 PM 14 12:52:55 PM 12:55 PM 12 12:55:04 PM 1:00 PM 14 1:02:42 PM 1:05 PM 14 1:09:53 PM 1:10 PM 14 1:11:37 PM 1:15 PM 10 1:15:09 PM 1:20 PM 15 1:23:34 PM 1:25 PM 19 1:29:45 PM 1:30 PM 18 1:30:37 PM 1:35 PM 20 1:36:42 PM 1:40 PM 19 1:40:45 PM 1:45 PM 9 1:45:43 PM 1:50 PM 7 1:50:29 PM	12:35 PM	13	12:39:21 PM
12:50 PM 14 12:52:55 PM 12:55 PM 12 12:55:04 PM 1:00 PM 14 1:02:42 PM 1:05 PM 14 1:09:53 PM 1:10 PM 14 1:11:37 PM 1:15 PM 10 1:15:09 PM 1:20 PM 15 1:23:34 PM 1:25 PM 19 1:29:45 PM 1:30 PM 18 1:30:37 PM 1:35 PM 20 1:36:42 PM 1:40 PM 19 1:40:45 PM 1:45 PM 9 1:45:43 PM 1:50 PM 7 1:50:29 PM	12:40 PM	14	12:41:14 PM
12:55 PM 12 12:55:04 PM 1:00 PM 14 1:02:42 PM 1:05 PM 14 1:09:53 PM 1:10 PM 14 1:11:37 PM 1:15 PM 10 1:15:09 PM 1:20 PM 15 1:23:34 PM 1:25 PM 19 1:29:45 PM 1:30 PM 18 1:30:37 PM 1:35 PM 20 1:36:42 PM 1:40 PM 19 1:40:45 PM 1:45 PM 9 1:45:43 PM 1:50 PM 7 1:50:29 PM	12:45 PM	12	12:45:26 PM
1:00 PM 14 1:02:42 PM 1:05 PM 14 1:09:53 PM 1:10 PM 14 1:11:37 PM 1:15 PM 10 1:15:09 PM 1:20 PM 15 1:23:34 PM 1:25 PM 19 1:29:45 PM 1:30 PM 18 1:30:37 PM 1:35 PM 20 1:36:42 PM 1:40 PM 19 1:40:45 PM 1:45 PM 9 1:45:43 PM 1:50 PM 7 1:50:29 PM	12:50 PM	14	12:52:55 PM
1:05 PM 14 1:09:53 PM 1:10 PM 14 1:11:37 PM 1:15 PM 10 1:15:09 PM 1:20 PM 15 1:23:34 PM 1:25 PM 19 1:29:45 PM 1:30 PM 18 1:30:37 PM 1:35 PM 20 1:36:42 PM 1:40 PM 19 1:40:45 PM 1:45 PM 9 1:45:43 PM 1:50 PM 7 1:50:29 PM		12	12:55:04 PM
1:10 PM 14 1:11:37 PM 1:15 PM 10 1:15:09 PM 1:20 PM 15 1:23:34 PM 1:25 PM 19 1:29:45 PM 1:30 PM 18 1:30:37 PM 1:35 PM 20 1:36:42 PM 1:40 PM 19 1:40:45 PM 1:45 PM 9 1:45:43 PM 1:50 PM 7 1:50:29 PM			
1:15 PM 10 1:15:09 PM 1:20 PM 15 1:23:34 PM 1:25 PM 19 1:29:45 PM 1:30 PM 18 1:30:37 PM 1:35 PM 20 1:36:42 PM 1:40 PM 19 1:40:45 PM 1:45 PM 9 1:45:43 PM 1:50 PM 7 1:50:29 PM		14	1:09:53 PM
1:20 PM 15 1:23:34 PM 1:25 PM 19 1:29:45 PM 1:30 PM 18 1:30:37 PM 1:35 PM 20 1:36:42 PM 1:40 PM 19 1:40:45 PM 1:45 PM 9 1:45:43 PM 1:50 PM 7 1:50:29 PM	1:10 PM	14	1:11:37 PM
1:25 PM 19 1:29:45 PM 1:30 PM 18 1:30:37 PM 1:35 PM 20 1:36:42 PM 1:40 PM 19 1:40:45 PM 1:45 PM 9 1:45:43 PM 1:50 PM 7 1:50:29 PM			
1:30 PM 18 1:30:37 PM 1:35 PM 20 1:36:42 PM 1:40 PM 19 1:40:45 PM 1:45 PM 9 1:45:43 PM 1:50 PM 7 1:50:29 PM		15	1:23:34 PM
1:35 PM 20 1:36:42 PM 1:40 PM 19 1:40:45 PM 1:45 PM 9 1:45:43 PM 1:50 PM 7 1:50:29 PM	1:25 PM	19	
1:35 PM 20 1:36:42 PM 1:40 PM 19 1:40:45 PM 1:45 PM 9 1:45:43 PM 1:50 PM 7 1:50:29 PM			1:30:37 PM
1:45 PM 9 1:45:43 PM 1:50 PM 7 1:50:29 PM	1:35 PM	20	1:36:42 PM
1:50 PM 7 1:50:29 PM		19	1:40:45 PM
	1:45 PM		
1:55 PM 8 1:59:53 PM	1:50 PM	7	1:50:29 PM
	1:55 PM	8	1:59:53 PM



Location: Stockton Dutch Bros

Date: 2/10/2022 Site Code: 15686810

		Timestamp
	Longest Queue	When Longest
Start Time	(# of cars)	Queue Occurs
7:00 AM	(# 01 Cars) 8	7:00:00 AM
7:05 AM	8	
7:10 AM	10	7:08:59 AM 7:11:03 AM
7:10 AM	6	7:15:17 AM
7:15 AM	9	7:24:31 AM
7:25 AM	9	7:24.31 AM 7:29:54 AM
	9	
7:30 AM	_	7:34:17 AM
7:35 AM	11	7:36:48 AM
7:40 AM	10	7:44:39 AM
7:45 AM	12	7:47:40 AM
7:50 AM	11	7:54:58 AM
7:55 AM	12	7:58:17 AM
8:00 AM	12	8:00:30 AM
8:05 AM	11	8:09:24 AM
8:10 AM	10	8:14:39 AM
8:15 AM	7	8:19:49 AM
8:20 AM	8	8:20:24 AM
8:25 AM	3	8:29:27 AM
8:30 AM	10	8:34:38 AM
8:35 AM	10	8:36:47 AM
8:40 AM	10	8:43:03 AM
8:45 AM	10	8:45:43 AM
8:50 AM	8	8:50:07 AM
8:55 AM	7	8:59:32 AM
9:00 AM	11	9:04:56 AM
9:05 AM	12	9:06:12 AM
9:10 AM	11	9:12:26 AM
9:15 AM	7	9:19:08 AM
9:20 AM	2	9:24:25 AM
9:25 AM	4	9:29:32 AM
9:30 AM	4	9:33:32 AM
9:35 AM	6	9:39:16 AM
9:40 AM	5	9:41:14 AM
9:45 AM	4	9:48:37 AM
9:50 AM	4	9:54:15 AM
9:55 AM	4	9:59:54 AM



Location: Stockton Dutch Bros

Date: 2/10/2022 Site Code: 15686811

	Site Code.	15080611
		Timestamp
	Longest Queue	When Longest
Start Time	(# of cars)	Queue Occurs
3:00 PM	10	3:01:37 PM
3:05 PM	5	3:07:32 PM
3:10 PM	7	3:13:43 PM
3:15 PM	9	3:17:19 PM
3:20 PM	8	3:23:09 PM
3:25 PM	8	3:25:29 PM
3:30 PM	6	3:30:50 PM
3:35 PM	7	3:39:19 PM
3:40 PM	10	3:44:17 PM
3:45 PM	9	3:45:00 PM
3:50 PM	5	3:54:21 PM
3:55 PM	4	3:56:01 PM
4:00 PM	2	4:00:09 PM
4:05 PM	6	4:07:39 PM
4:10 PM	9	4:14:13 PM
4:15 PM	11	4:18:53 PM
4:20 PM	11	4:22:21 PM
4:25 PM	11	4:27:13 PM
4:30 PM	9	4:34:25 PM
4:35 PM	10	4:37:29 PM
4:40 PM	6	4:40:06 PM
4:45 PM	7	4:49:34 PM
4:50 PM	6	4:54:49 PM
4:55 PM	7	4:55:04 PM
5:00 PM	6	5:04:35 PM
5:05 PM	6	5:09:23 PM
5:10 PM	6	5:13:56 PM
5:15 PM	8	5:18:23 PM
5:20 PM	10	5:24:47 PM
5:25 PM	10	5:26:44 PM
5:30 PM	10	5:30:36 PM
5:35 PM	8	5:35:35 PM
5:40 PM	4	5:44:17 PM
5:45 PM	2	5:46:39 PM
5:50 PM	4	5:50:11 PM
5:55 PM	3	5:59:37 PM



Location: Stockton Dutch Bros

Date: 1/29/2022 Site Code: 15686812

	Site Code.	15080812
		Timestamp
	Longest Queue	When Longest
Start Time	(# of cars)	Queue Occurs
11:00 AM	12	11:04:22 AM
11:05 AM	12	11:09:24 AM
11:10 AM	13	11:10:50 AM
11:15 AM	8	11:15:20 AM
11:20 AM	6	11:22:24 AM
11:25 AM	5	11:26:30 AM
11:30 AM	4	11:30:04 AM
11:35 AM	8	11:39:07 AM
11:40 AM	7	11:40:02 AM
11:45 AM	8	11:49:50 AM
11:50 AM	11	11:53:49 AM
11:55 AM	11	11:55:24 AM
12:00 PM	10	12:01:14 PM
12:05 PM	9	12:05:41 PM
12:10 PM	10	12:11:38 PM
12:15 PM	8	12:15:25 PM
12:20 PM	5	12:21:16 PM
12:25 PM	7	12:28:27 PM
12:30 PM	8	12:31:34 PM
12:35 PM	7	12:36:25 PM
12:40 PM	6	12:40:01 PM
12:45 PM	6	12:46:55 PM
12:50 PM	9	12:52:41 PM
12:55 PM	8	12:55:16 PM
1:00 PM	7	1:01:30 PM
1:05 PM	10	1:06:25 PM
1:10 PM	10	1:12:28 PM
1:15 PM	13	1:18:02 PM
1:20 PM	13	1:20:40 PM
1:25 PM	6	1:25:20 PM
1:30 PM	6	1:33:38 PM
1:35 PM	7	1:35:05 PM
1:40 PM	8	1:43:44 PM
1:45 PM	7	1:45:48 PM
1:50 PM	8	1:51:24 PM
1:55 PM	10	1:57:51 PM

Appendix E Intersection Queuing Data Sheets



Intersection: 1: Deer Valley Road & Davison Drive & Hillcrest Avenue

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	Т	TR	UL	Т	TR	L	Т	TR	L	L	T
Maximum Queue (ft)	178	118	116	120	92	106	226	350	320	260	298	301
Average Queue (ft)	92	36	49	48	24	51	51	222	173	140	197	187
95th Queue (ft)	160	84	100	98	67	92	140	316	278	230	271	275
Link Distance (ft)		642	642			426		514	514			839
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	190			200	200		230			300	300	
Storage Blk Time (%)	1							6		0	0	0
Queuing Penalty (veh)	0							4		0	1	1

Intersection: 1: Deer Valley Road & Davison Drive & Hillcrest Avenue

Movement	SB	SB
Directions Served	Т	R
Maximum Queue (ft)	297	11
Average Queue (ft)	184	0
95th Queue (ft)	265	8
Link Distance (ft)	839	839
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 2: Wildflower Drive & Hillcrest Avenue

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	
Directions Served	UL	Т	TR	L	T	TR	L	Т	R	L	TR	
Maximum Queue (ft)	74	131	157	128	171	111	62	80	52	56	91	
Average Queue (ft)	31	49	68	48	67	27	29	23	26	15	34	
95th Queue (ft)	65	109	130	96	134	71	58	58	49	44	69	
Link Distance (ft)		284	284		402	402		143	143		551	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	210			150			50			80		
Storage Blk Time (%)				0	0		4	2		0	1	
Queuing Penalty (veh)				0	0		1	1		0	0	

Zone Summary

Zone wide Queuing Penalty: 9

Scenario 1 SimTraffic Report

Intersection: 1: Deer Valley Road & Davison Drive & Hillcrest Avenue

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	TR	UL	Т	TR	L	Т	TR	L	L	Т
Maximum Queue (ft)	200	143	118	101	83	111	255	444	378	337	375	757
Average Queue (ft)	101	52	46	43	24	49	107	272	221	300	340	381
95th Queue (ft)	173	108	96	86	61	89	257	399	336	391	421	773
Link Distance (ft)		642	642			426		514	514			839
Upstream Blk Time (%)								0				2
Queuing Penalty (veh)								0				0
Storage Bay Dist (ft)	190			200	200		230			300	300	
Storage Blk Time (%)	1							19		6	26	0
Queuing Penalty (veh)	1							18		27	109	1

Intersection: 1: Deer Valley Road & Davison Drive & Hillcrest Avenue

Movement	SB	SB
Directions Served	Т	R
Maximum Queue (ft)	665	17
Average Queue (ft)	303	1
95th Queue (ft)	610	12
Link Distance (ft)	839	839
Upstream Blk Time (%)	0	
Queuing Penalty (veh)	0	
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 2: Wildflower Drive & Hillcrest Avenue

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	
Directions Served	UL	T	TR	L	T	TR	L	Т	R	L	TR	
Maximum Queue (ft)	99	223	236	126	157	113	73	103	74	66	87	
Average Queue (ft)	50	115	133	51	76	32	42	35	33	30	30	
95th Queue (ft)	91	202	219	94	135	80	71	80	61	61	67	
Link Distance (ft)		299	299		402	402		143	143		551	
Upstream Blk Time (%)								0				
Queuing Penalty (veh)								0				
Storage Bay Dist (ft)	210			150			50			80		
Storage Blk Time (%)		0		0	0		8	4		0	0	
Queuing Penalty (veh)		0		0	0		4	4		0	0	

Zone Summary

Zone wide Queuing Penalty: 164

Scenario 1 SimTraffic Report

ATTACHMENT E CONTRA COSTA FIRE COMMENTS (SEPARATE PAGE)

Contra Costa County



Fire Protection District

10/21/2021

Mr. Jose Cortez City of Antioch PO Box 5007 Antioch, CA 94531-5007

Subject:

Dutch Bros Coffee Drive-Thru 0 Hillcrest Ave. Antioch CA

Planning #: UP-21-08

CCCFPD Project No.: P-2021-05225

Dear Mr. Sidhu:

We have reviewed the development plan to establish a building of 2533 SQFT of type VB construction at the subject location. The following is required for Fire District approval in accordance with the 2019 California Fire Code (CFC), the 2019 California Building Code (CBC), the 2019 California Residential Code (CRC), and Local and County Ordinances and adopted standards:

1. Access shall comply with Fire District requirements.

Provide emergency apparatus access roadways with all-weather (paved) driving surfaces of not less than 20-feet unobstructed width, and not less than 13 feet 6 inches of vertical clearance, to within 150 feet of travel distance to all portions of the exterior walls of every building. Access shall have a minimum outside turning radius of 45 feet, and must be capable of supporting the imposed fire apparatus loading of 37 tons.

- 2. Fire hydrants shall be in compliance with Chapter 5 and Appendix D of the California Fire Code. (C103.1) CFC. Fire hydrants are required to have a minimum flow of 1500 gpm @ 20 PSI residual for 2 hours.
- 3. A land development permit is required for access and water supply review and approval prior to submitting building construction plans.

The developer shall submit a minimum of two (2) copies of full size, scaled site improvement plans indicating:

All existing or proposed hydrant locations,

Fire apparatus access,

Elevations of building,

Size of building and type of construction,

Gates, fences, retaining walls, bio-retention basins, any obstructions to access.

Striping and signage plan to include "NO PARKING-FIRE LANE" markings

This is a separate submittal from the building construction plans. These plans shall be approved prior to submitting building plans for review. (501.3) CFC

- 4. New buildings shall have approved radio coverage for emergency responders. An emergency responder radio coverage system shall be installed when the conditions of CFC 510.4.1 are not met. Testing shall be conducted and the results submitted to the Fire District prior to the building final. (510.1) CFC
- 5. The owner or the owner's authorized agent shall be responsible for the development, implementation and maintenance of a written plan in compliance with NFPA 241, establishing a fire prevention program at the project site applicable throughout all phases of the construction. The plan shall be made available for review by the fire code official upon request. (Ch.33) CFC

The fire prevention program superintendent shall develop and maintain an approved prefire plan in cooperation with the fire chief. The fire chief and fire code official shall be notified of changes affecting the utilization of information contained in such prefire plans. (Ch.33) CFC

- 6. The developer shall submit a minimum of two (2) complete sets of building construction plans and specifications for the subject project to the Fire District. After the new construction / tenant improvement plans are approved, plans and specifications for all deferred submittals shall be submitted, including, but not limited to the following.
 - Carbon Dioxide Systems
 - Emergency Responder Radio Coverage System (ERRCS)

Plans shall be submitted to the Fire District for review and approval **prior to** construction of the building or installation of the systems to ensure compliance with minimum requirements related to fire and life safety. Plan review and inspection fees shall be submitted at the time of plan review submittal. (105.4.1) CFC, (901.2) CFC, (107) CBC

Our preliminary review comments shall not be construed to encompass the complete project. Additional plans and specifications may be required after further review.

If you have any questions regarding this matter, please contact this office at (925) 941-3300.

Sincerely, Sofia Bach Fire Inspector I

cc: Mr. Sidhu 221 Walnut Creek Court Danville, CA 94506

File: 0 HILLCREST - PLN - P-2021-05225



PROJECT REFERRAL – REQUEST FOR REVIEW

The City of Antioch Planning Division is requesting your review of the project information and plans referenced below.

Please provide feedback on availability of services, potential design or code conflicts, requirements for additional permits, and draft conditions of project approval.

DATE OF REQUEST: 10/8/2021

SUBMIT COMMENTS TO: Jose Cortez (925-779-6118 or Jcortez@antiochca.gov)

COMMENTS DUE BY: **** FRI 10/29/21 ****

PROJECT NAME: DUTCH BROS COFFEE DRIVE-THRU

Project No: UP-21-08, AR-21-05 **Application Type:** Use Permit, Design Review

Project Address: Parcel between ARCO and Safeway

(APN 052-460-033)

Project Description: Use Permit and Design Review for a pad with a 1400 square foot food/restaurant suite and a

1133 square foot Dutch Bros with drive through and associated site improvements.

Applicant Name: Amar Sidhu

Mailing Address: 221 Walnut Creek Court Danville, CA 94506 Phone: 510.579.3326 E-mail: amarssidhu@yahoo.com

The following documents are included / referenced in this transmittal:

Project Description:

https://www.antiochca.gov/fc/communitydevelopment/planning/ProjectDOCs/UP-21-08-d.pdf

Signage:

https://www.antiochca.gov/fc/communitydevelopment/planning/ProjectDOCs/UP-21-08-s.pdf

Plans: https://www.antiochca.gov/fc/community-development/planning/ProjectDOCs/UP-21-08-p.pdf

FOR CITY STAFF ONLY							
Due Date as above Please submit your comments or draft conditions of approval to the planner by dates listed above							
Due Date TBD Planning staff will follow up with you to request a meeting for project discussion and to develop the schedule for comments and draft conditions							
Additional information will be routed to you (via email and/or hard copy)							

ROUTED TO

☐ (CCFPD) Contra Costa Fire ☐ City Engineer / Dev Services

CONTRA COSTA FIRE DISTRICT

COMMUNITY DEVELOPMENT DEPARTMENT

200 H Street Antioch, CA. 94509 **AntiochlsOpportunity.com**

Police Dept

Phone: (925) 779-7035 Fax: (925) 779-7034 **Antiochca.gov**





Project Description

TO

Jose Cortez

DATE 06-30-21

Associate Planner City of Antioch P.O. Box 5007

Antioch, CA 94531-5007

Project Description:

We are proposing a new 2-tenant building containing a 1133 sf Dutch Bros drive thru and a 1400 sf tenant on Hillcrest Avenue. The current site is an un-developed piece of land (approx. .95 acres) adjacent to an Arco/AM-PM gas station and along the backside of The Crossings Shopping Center (pictures included below).

The building consists of horizontal composite siding at the Dutch Bros tower, stucco, brick base and steel awnings. The 1400 sf tenant space will also have a stucco finish and the same brick finish at the entry tower and wall base.

1133 sf Dutch Bros (info from nearest 2 locations in Oakley and Brentwood)

Business Type: Drive-thru retail coffee business.

Activities: Customers order in either lane and pick up at drive-thru window. There maybe be some walk-up

customer orders but most are drive-thru

Number of Employees: (3) shifts with 5 employees each

Parking: 21 total stalls, shared with pad building

Customers: Mostly drive thru, very little walk-up, no interior seating

Days/Hours of Operation: 24 hours/day, 7 days/week

Outdoor Activities: 2 drive-thru lanes to order coffee and 2 tables for outdoor seating

Hours of Traffic: Weekday peak hours 3pm-4pm (approx. 60 cars/hr)

Weekend peak hours: 11am-12pm

Deliveries: Early morning deliveries via small delivery trucks.

1400 sf Pad Bldg

Business Type: Small food use (sandwich shop, ice cream, etc)

Number of Employees: 2-3 employees

Parking: 21 total stalls, shared with pad building Customers: All walk-in, no drive-thru proposed

Days/Hours of Operation: TBD

Outdoor Activities: 2 tables for outdoor seating

Deliveries: Early morning deliveries via small delivery trucks.







Thank you, Gerry Nicol Johnson Lyman Architects 510.334.6728 gerry@johnsonlyman.com