Appendix A:

Cordoba Center Project – Final EIR Research Items

CYPRESS ENVIRONMENTAL AND LAND USE PLANNING
P.O. BOX 1844
APTOS CALIFORNIA

(831) 685-1007 **kimt@cypressenv.com**

December 3, 2018

Dave Rader, Senior Planner
Planning Department
County of Santa Clara
70 West Hedding Street, East Wing, 7th floor
San José, CA 95110-1705

Subject: Cordoba Center Project – Final EIR Research Items

Dear Mr. Rader,

Introduction

As part of the preparation of the Final EIR on the Cordoba Center project, County Planning staff has requested the Cordoba project team provide information on the following items:

- Water demand estimate for the project to substantiate the "will serve" commitment from the West San Martín Water Works;
- Enhanced wastewater treatment to replace the previously proposed MultiFlo filters to meet the requirement of Mitigation Measure 4.4-3 specified in the Draft EIR;
- Drainage improvements to respond to 100-year storm events;
- Traffic queuing analysis for northbound traffic leaving the site.

The remainder of this letter provides information for these four items so these issues can be adequately addressed in the Final EIR.

Water Demand Estimate

The information below was obtained from Brian Ukestad, General Manager, of the West San Martín Water Works (WSMWW). The water company serves the area of San Martín west of Monterey Road as shown on Attachment 1. The service area is divided into three geographic pressure zones:

- Pressure Zone 1 – the valley floor
- Pressure Zone 2 – foothills west of the valley floor
- Pressure Zone 3 – foothills west of the valley floor at elevations higher than Zone 2

Water is produced by three water wells located within the service area boundaries with an average combined production of 1,000 gpm. Water is pumped from these three wells directly into two storage tanks, and then, when needed, pumped up to one tank in Pressure Zone 2 and another tank in Pressure

Zone 3. The capacities of these storage tanks are:

- 400,000 gal. – serves Zone 1
- 50,000 gal. – serves Zone 1
- 50,000 gal. – serves Zone 2
- 50,000 gal. – serves Zone 3

When the water level in any of the tanks drop 1.5─4 feet, the well pumps are automatically activated to fill the tank. The highest customer demand is in early mornings and during early evenings in the summer when people are using water for irrigation and bathing and cooking at the same time. Water in the largest tank can drop as low as 200,000 gallons at these peak times. It never goes below 150,000 gallons (except during irregular operations such as a water main break).

The Cordoba project site is located in Zone 1. The average monthly water demand in all of Zone 1 is approximately 938,148 cubic feet. The average monthly water demand/connection is 3,400 cubic feet/month/connection. While the WSMWW does not have any existing customers that are comparable to the Cordoba project, Mr. Ukestad has calculated a use estimate for the Cordoba project at 12,000 cu. ft./month. This usage translates to about 400 cu. ft./day (12,000 cu. ft ÷ 30 days = 400 cu. ft./day) or 2,992 gpd (400 $ft.^3$ X 7.4805 = 2,992 gal.).[1] This estimate is based on a daily maximum use of 300 people on-site for 8 hours/day. While it is understood that 300 parishioners will be on-site for significantly less time than 8 hours/day and this number of people is only anticipated one day/week, it provides a reasonable estimate for highest potential water use, except for special event gatherings proposed four times per year.

The estimated water demand for Cordoba is higher than the average customer demand in Zone 1, but would only be equal to 1.3% of the existing average water demand in the zone (12,000 $ft.^3$ ÷ 938,148 $ft.^3$ = 0.01279). The projected daily use of 400 cu. ft. (2,992 gal.) will not generate a substantial draw on the storage capacity of tank serving Zone 1. Therefore, the WSMWW has adequate production and storage capacity to serve the Cordoba project.

Enhanced Wastewater Treatment

The Draft EIR determined the originally proposed secondary treatment units in the project wastewater system would not remove enough nitrogen from the wastewater to achieve the desired metric of 20 mg/L. The desired nitrogen performance limit can be achieved by replacing the originally proposed MultiFlo treatment units with Advantex treatment units. Orenco Systems has prepared a proposal and supplementary information (Attachments 2−4) explaining how the non-residential wastewater system can be modified to meet a nitrogen performance limit of 15 mg/L, which is 5 mg/L better than the requirement of Mitigation Measure 4-4.3.

The modified system would retain the primary holding tank, the equalization tank and the pump chamber as previously proposed. The wastewater would be discharged into the drip dispersal field as modified by Mitigation Measure 4-4.2. The MultiFlo units originally proposed within a 500 sq. ft. area proximate the equalization tank would be replaced by Advantex units as follows:

[1] 1 cubic foot of a liquid = 7.4805 liquid gallons

- Secondary treatment unit AX-MAX225-35 (size = 35’ X 7.5’ X 8’);
- Advanced secondary treatment unit AX-MAX075-14 (size = 14’ X 7.5’ X 8’);
- Moving bed bio-filter reactor (MBBR) unit MBBRD0807 (size = 8’ X 7’ X 8’); and
- Control and equipment building (size = 8’ X 12’ X 8’)[2]

The two secondary treatment units could locate within the 500 sq. ft. area previously dedicated for MultiFlo secondary treatment. The control and equipment building would contain the control panel for system operation and one liquid storage tank (3’ diameter cylinder 3’ in height) and one dry material storage tank (30” x 62” X 18”). The liquid tank contains a 30-day supply of a liquid form of carbon, called micro-C. The dry tank contains a 30-day supply of soda ash to change the pH of the wastewater to be more alkaline. Neither material is hazardous or deleterious to humans or the environment. These materials are added to the wastewater as shown in Attachment 3 as part of the treatment process.

A 96 sq. ft. control and equipment building could be located between the play court and terminus of the entry drive to the east parking lot as shown on Attachment 5. There is a 650 sq. ft. rectangular space within this area to locate the building and retain the Valley oak tree proposed within this space. The oak will need to be moved a few feet from the center of this space to provide areas for the small building. The building exterior would have the same materials and design as the proximate community building.

The MBBR unit must be located between the secondary treatment units and the pump chamber. The submerged pump chamber will be relocated 10−12 feet northward to provide space for the MBBR unit. The plans show the proposed planting of an interior live oak tree in this area. This tree will be e moved northward and may need to be replaced another evergreen species with a less expansive root system. Like the secondary treatment units, the MBBR will be totally submerged except for access plates located at grade.

The sequencing of all equipment is diagramed on Attachment 3. A detailed description of the Advantex treatment process is provided in Attachment 4. A site plan showing locations of new treatment units is provided as Attachment 5.

Drainage Improvements for a 100-year Storm

The Santa Clara Valley Water District submitted comments on the Draft EIR. One of the comments stated the DEIR should discuss post-project runoff leaving the site under a 100-year storm event and how increased runoff will be mitigated. While not acknowledged in the DEIR, the project drainage facilities have been designed for both a 10-year and a 100-year storm event. This is shown by notation on sheet C-1 of the project plans. According to R. I. Engineering, the bioswale and attached detention basin are sized for the larger storm event. Sizing has been determined by engineering calculations for both storms. Outlet pipes in the basin will be sized and located to discharge overflow for the two different storm events in a manner that does not exceed pre-development discharge rates. Details for

[2] All dimensions are in the sequence of length X width X height (or depth)

the outlet pipes are typically not shown at this stage in the process, but rather in construction documents.

The memo from R. I. Engineering (Attachment 6) explains the depressed bioswale/detention basin has been sized greater than 18,500 sq. ft. and will have ample storage capacity for runoff from the new 135,590 sq. ft. of impervious surfacing for both a 10-year and a 100-year storm. Plan sheet C-1 notes the bioswale/basin will have a 6,000-cu. ft. storage capacity. This volume equals 44,883 gallons.[3] The memo further explains a buried detention chamber at the southeast corner of the site will receive the small proportion of site runoff from the caretakers dwelling and driveway. The chamber has been sized and designed for both storm events. It is the only facility that will discharge on the Monterey Road right-of-way. Similar to the bioswale/basin, the chamber outlet pipes have been sized and designed to discharge at the pre-development rate.

Traffic Queuing Analysis

Draft EIR Mitigation Measure 4-6.3 recommends northbound project traffic exiting the project driveway to first tun right and drive southbound on Monterey Road and make a U-turn at California Avenue rather than turning left out of the project driveway. Measure 4-6.3 further stipulates that a queueing analysis be conducted to determine the length of the queuing lane needed for vehicles waiting to make the U-turn at the Monterey Road/California Avenue intersection. The mitigation measure also recommends a deceleration lane for southbound traffic entering the project driveway, but requires the length of the deceleration lane to be determined. Pinnacle Traffic Engineering conducted a queuing analysis in November 2018 for project traffic making U-turns as described above. The scope of the study was done in consultation with the County Roads and Airports Department. The analysis included traffic counts at the California Avenue. The length of a deceleration lane was also determined.

Pinnacle's report (Attachment 7) uses Caltrans Highway Design Manual specifications to determine the appropriate vehicle storage length of the U-turn pocket lane. As discussed in the report, the lane must accommodate the number of vehicles anticipated to arrive within a 2-minute period during peak hour conditions and each vehicle shall be provided a length of 25 feet. Pinnacle concluded 14 vehicles/hour are expected to use the U-turn pocket lane during the PM peak hour thereby requiring a 50-foot long pocket lane to accommodate 1−2 vehicles waiting to make a U-turn within a 2-minute period. The turning movement can be successful if the bus stop on the east side of Monterey Road was moved 4 feet eastward. The length of larger vehicles, such as delivery trucks, exceeds that which can make this turning movement even after the bus stop is relocated. The report states that these vehicles can use two alternate northbound routes. They can travel south on Monterey Road to either California Avenue or San Martín Avenue. Trucks turning right (west) on California Avenue would travel to Santa Teresa Blvd. and turn right (north) towards Morgan Hill. Trucks can also turn left (east) at San Martín Avenue where there is a traffic signal and travel to U. S. Highway 101 towards San José. Of course, these two alternative routes are also available to smaller vehicles.

Pinnacle prepared a diagram (Attachment 8) which shows how lane striping would need to be reconfigured to provide the U-turn pocket lane. Relocation of the bus stop is also shown. The report also concludes the southbound deceleration lane for project traffic entering the project driveway

[3] 1 cubic foot of a liquid = 7.4805 liquid gallons

should be 285 feet in length. This will provide storage for two vehicles and an additional 235 feet for these vehicles to safely decelerate.

Information Sources

Brian Ukestad, General Manager, West San Martin Water Works, 1005 Highland Avenue San Martin, CA 95046, (408) 683-2098, brian.ukestad@wsmwater.com

Keith Fortenbach, Orenco Systems, 814 Airway Avenue, Sutherlin, OR, 97479, (800) 348-9843, ext. 412, kfortenbach@orenco.com

David Gill, Bonny Doon Environmental Systems, Inc., 5905 Hwy. 9, Felton, CA, 95018, (831) 335-3666, david@bonnydoon.info

Mark Grofcsik, PE, R. I. Engineering, Inc., 303 Potrero Street, Suite 42-202, Santa Cruz, CA, 95060, (831) 425-3901, ext. 12, mark@riengineering.com

Larry Hail, CE, TE, PTOE, Pinnacle Traffic Engineering, 831 C Street, Hollister, CA, 95023, (831) 638-9260, pte@sbcglobal.net

Sincerely,

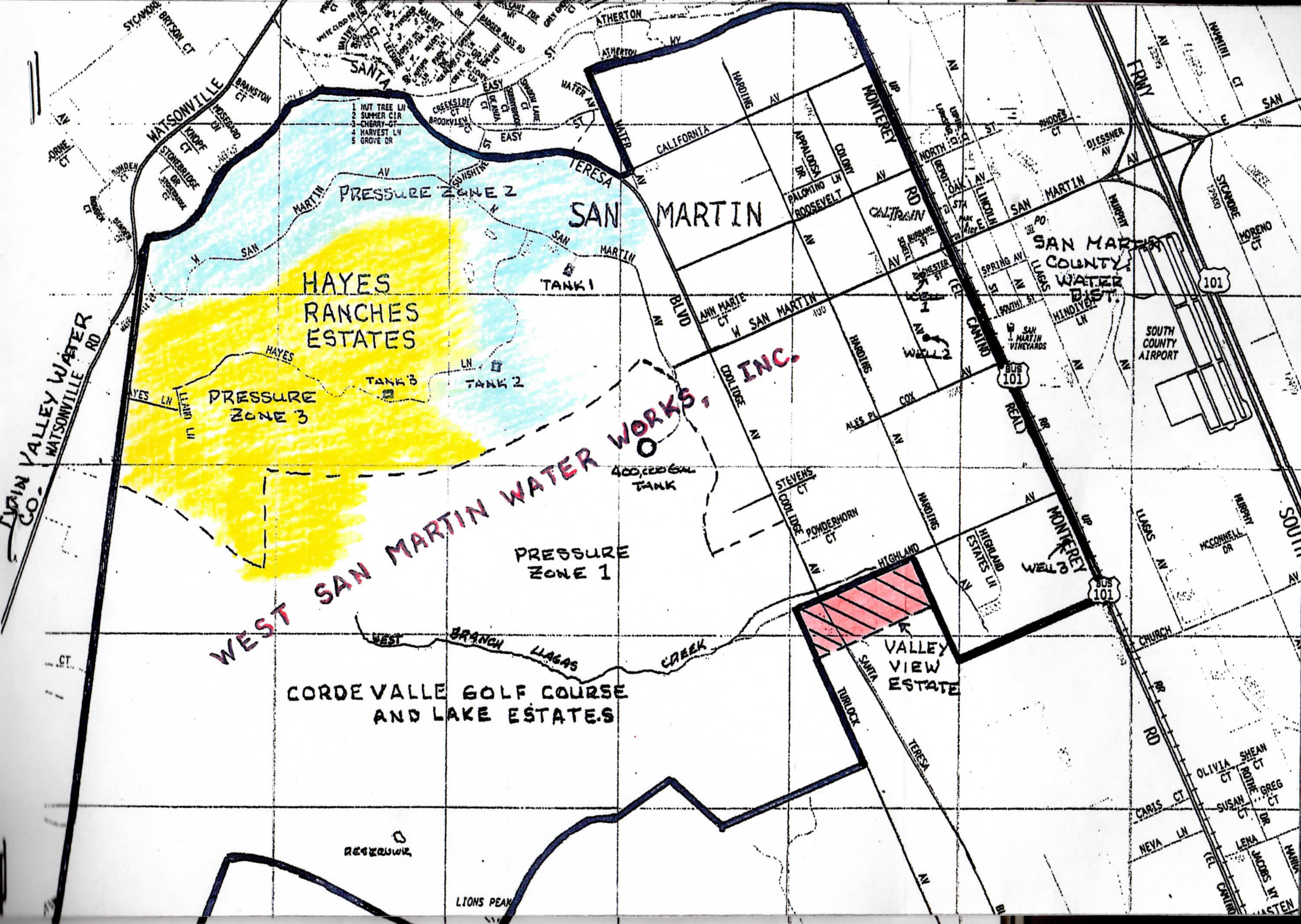
Kim Tschantz

Kim Tschantz, MSP, CEP

Attachments:

1. Map of WSMWW Service Area provided by WSMWW
2. Advantex Treatment System Proposal
3. Sequence Diagram of Modified Wastewater Treatment Facilities
4. Detailed Description of the Advantex Treatment Process
5. Site Map Showing Locations for Wastewater Facilities
6. Memo from R. I. Engineering dated November 20, 2018
7. Traffic Queuing Analysis Report prepared by Pinnacle Traffic Engineering, dated November 26, 2018
8. Diagram of Improvements for Southbound U-turn Lane, prepared by Pinnacle Traffic Engineering, dated November 26, 2018

cc: Sal Akhter, SVIC
Donald Solbelman and Kathryn Oehlschager, Downey Brand Law, LLP



WEST SAN MARTIN WATER WORKS, INC.
SAN MARTIN
HAYES RANCHES ESTATES
PRESSURE ZONE 2
PRESSURE ZONE 3
PRESSURE ZONE 1
TANK 1
TANK 2
TANK 3
400,000 GAL TANK
WELL 1
WELL 2
WELL 3
SAN MARTIN COUNTY WATER DIST.
TWIN VALLEY WATER CO.
VALLEY VIEW ESTATE
CORDEVALLE GOLF COURSE AND LAKE ESTATES
RESERVOIR
WEST BRANCH LLAGAS CREEK
SOUTH COUNTY AIRPORT
SAN MARTIN VINEYARDS
CALTRAIN
1 NUT TREE LN
2 SUMMER CIR
3 CHERRY CT
4 HARVEST LN
5 GROVE DR
WATSONVILLE RD
MONTEREY RD
SANTA TERESA BLVD
W SAN MARTIN AV
HAYES LN
LIONS PEAK

Advantex® Treatment System Project Proposal

Project Name: Cordoba Center

Project Location: San Martin, CA

Application: Church

Date: 11/26/18

DESIGN PARAMETERS

The facility addressed in this proposal includes a mosque, community building, cemetery, maintenance building, caretaker's dwelling, youth camp, playfield and playground, plaza, and orchard. Projected wastewater flow rates and assumed organic loading were provided and based upon projected usage for the new facility. A designer will need to verify the design basis.

Wastewater Flow Rates

Wastewater design flows for the service area were provided by Cypress Environmental & Land Use on 12 October 2018 and are outlined in the table below.

Table 1. Hydraulic Design Parameters —Design Maximum Day Flow (DMDF)

Hydraulic Design Parameters for Proposed Facilities		
Service Type	**Flow Assumptions**	**Daily Flow (gpd)**
Church	Regulatory Tables	6000

Wastewater Strengths

Assumed wastewater strengths for the service area are outlined in the tables below. For nitrogen restrictive permit limits, the primary treated effluent should have a minimum temperature of 15ºC, with pH ranging from 7.2 to 8, and a residual alkalinity of greater than 100 mg/L maintained throughout the process. This will typically require an alkalinity feed system.

Table 2. Constituent Loading Assumptions

Parameter	**DMDF, gpd**	**Concentration (mg/L)**	**Primary Treated Load (lbs/day)**
Biochemical Oxygen Demand (BOD_5), mg/L:	6,000	300	15.02
Total Suspended Solids (TSS), mg/L:	6,000	150	7.51
Total Kjeldahl Nitrogen (TKN), mg/L:	6,000	120	6.01

Permit Limits and Loading Rates

The following table provides the discharge limitations as provided by Cypress Environmental & Land Use on 12 October 2018. The scope of this proposal is pertinent only to BOD_5, TSS, and TN.

Table 3. Permit Limits

Permit Constituent or Parameter	Average
Biochemical Oxygen Demand (BOD_5), mg/L:	30
Total Suspended Solids (TSS), mg/L:	30
Total Nitrogen (TN), mg/L:	15

Table 4. Standard AdvanTex Loading Rates

Permit Constituent or Parameter	Design AVERAGE Day	Design MAXIMUM Day
Hydraulic	25 gpd/sq.ft•d	50 gpd/sq.ft•d
BOD_5	0.04 lbs/sq.ft•d	0.08 lbs/sq.ft•d
TKN	0.014 lbs/sq.ft•d	0.028 lbs/sq.ft•d
NH_3-N	0.01 lbs/sq.ft•d	0.02 lbs/sq.ft•d

TECHNOLOGY DESCRIPTION & SIZING

Packed bed filters (PBFs) – incorporating treatment media such as sand, gravel, and textile – have been used successfully for decades to treat onsite wastewater flows. These filters reliably produce high quality effluent that is superior to that discharged by the majority of our nation's municipal treatment facilities. The most effective of these filters is AdvanTex Treatment System. This proposal provides an estimate of system sizing and costs based upon the information provided. This proposal does not constitute a design.

Table 5. Treatment Tank Minimum Recommendations

Tank Stage	HRT @ DMDF	VOLUME
Primary	2.0 days	12000 U.S. Gallons
Pre-Anoxic	1.0 days	6000 U.S. Gallons
Post-Anoxic Tank	0.3 days	1500 U.S. Gallons

Table 6. Standard AdvanTex System Sizing

Permit Constituent or Parameter	Load Value (DMDF)	Loading Rate	AdvanTex Unit Size
Hydraulic	6000 gpd	50 gpd/sq.ft•d	120 sq.ft.
Biochemical Oxygen Demand (BOD_5), mg/L:	15.02 lbs	0.08 lbs/sq.ft•d	188 sq. ft.
Total Suspended Solids (TSS), mg/L:	7.51 lbs	0.08 lbs/sq.ft•d	94 sq. ft.
Total Nitrogen (TN), mg/L:	6.01 lbs	0.028 lbs/sq.ft.•d	215 sq. ft.

Table 7. Stage 2 AdvanTex System Sizing

Permit Constituent or Parameter	Load Value (DADF)*	Loading Rate	AdvanTex Unit Size
Hydraulic	6000 gpd - DMDF	125 gpd/sq.ft.	48 sq.ft.
Biochemical Oxygen Demand (BOD_5), mg/L:	1.26 lbs	0.02 lbs/sq.ft.•d	63 sq.ft.
Total Nitrogen (TN), mg/L:	0.15 lbs	0.007 lbs/sq.ft.•d	21 sq.ft.

* Hydraulic load value and loading rate selected using most conservative sizing value, other constituents based on average day design flow

* Pounds shown for all nitrogen constituents are for TKN component only

EQUIPMENT SELECTION

Table 8. Orenco AX-Max Treatment Equipment

First Stage Treatment Unit(s):	AX-MAX225-35
First Stage Pumping Setup:	Duplex PF7510
First Stage Treatment Volume:	7264 U.S. Gallons
Second Stage Treatment Unit(s):	AX-MAX075-14
Second Stage Treatment Volume:	2880 U.S. Gallons
Second Stage Pumping Setup:	Duplex PF3007

Table 9. Alkalinity Feed System

Feed System:	Alkalinity Feed System, DCF-3018
Chemical Used:	Soda Ash (Sodium Carbonate)
Feed Rate:	0.57 lbs/hour
30 Day Storage:	6.9 cu. ft.

Table 10. Carbon Feed System

Feed System:	LCF3636-AG
Chemical Used:	MicroC
Feed Rate:	0.01 U.S. gal/hour
30 Day Storage:	31.3 U.S. Gallons
System Type:	MBBR
MBBR Model(s):	MBBRD0807

Table 11. Orenco AX-Max Treatment Equipment and Estimated Installation Costs

Project Estimated Costs	**Total Low**	**Total High**
Primary Treatment Subtotal	--	--
Pre-Secondary Treatment Subtotal	--	--
Secondary Treatment Subtotal	$94,000	$98,000
Advanced Secondary Treatment Subtotal	$53,000	$54,500
Discharge System Subtotal	$2,500	$3,500
Ancillary Equipment Subtotal	$115,019	$122,000
Materials and Equipment Subtotal	**$264,500**	**$278,000**
Shipping, Commissioning, and Operator Training	$17,000	$37,000
Construction Estimate	$66,500	$114,000
Total Project Estimate	**$348,000**	**$429,000**

See Appendix for complete material breakdown.

All estimates are for budgetary purposes only. See Appendix for breakdown of estimated costs. Actual quotes will be produced once the design and project plans are completed and provided by the designer. All estimates include Orenco provided materials and are F.O.B. Sutherlin or Winchester, Oregon. Freight costs can be determined after plans are finalized and are the responsibility of the purchaser, but will typically range from 5-12% of materials.

Cost estimates do not include material and labor costs for site work, utilities, state or local taxes, permitting, inspections, administration, engineering, etc.

SCHEDULING / MANUFACTURING

Lead Times

Lead times are currently estimated at 10-12 weeks upon time of purchase order.

Payment Terms & Conditions

100% at time of purchase order unless otherwise negotiated.

Warranty

Equipment will be warrantied against manufacturer's defects in accordance with Orenco Systems Inc. standard warranty of Five (5) years from time of purchase.

Proposal Period Validity

This proposal is valid for a period of sixty (60) days unless extended in writing by Orenco Systems Inc.

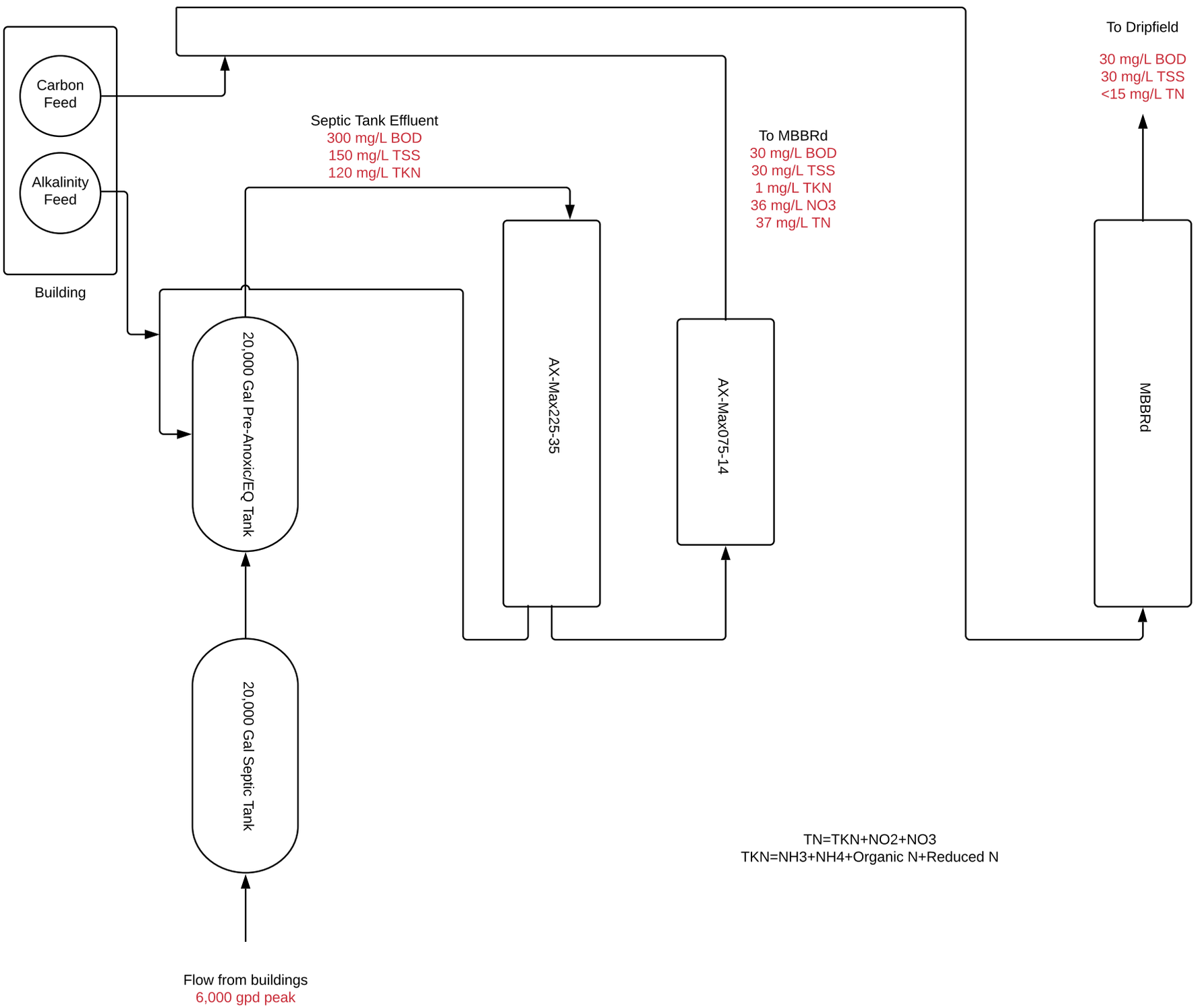
APPENDIX: Estimated Cost Breakdown

WWTP Budgetary Estimate					
Qty	**Primary Treatment Materials**	**Unit Low**	**Unit High**	**Total Low**	**Total High**
	Primary Tankage, Minimum 12000 U.S. Gallons - Existing	--	--	--	--
	Primary Treatment Subtotal			**--**	**--**
	Pre-Secondary Treatment Materials	**Unit Low**	**Unit High**	**Total Low**	**Total High**
	Pre-Anoxic Tank, Minimum 6000 U.S. Gallons - Existing	--	--	--	--
	Pre-Secondary Treatment Subtotal			**--**	**--**
	Secondary Treatment Materials (Stage One)				
1	AX-MAX225-35	$74,469	$78,383	$74,469	$78,383
1	Anti-Floatation Flange for AX-MAX225-35	$12,051	$12,051	$12,051	$12,051
1	PF7510 D Pumping system	$3,800	$4,100	$3,800	$4,100
	RNE Pump	$1,300	$1,500	$1,300	$1,500
1	Ventilation Assemblies — NO HEATER SELECTED	$2,220	$2,220	$2,220	$2,220
	Float Assembly	$105	$162	$105	$162
1	Piping, fittings, glue	$75	$150	$75	$150
	Secondary Treatment Subtotal			**$94,020**	**$98,566**
	Advanced Secondary Treatment Materials (Stage Two)				
1	AX-MAX075-14	$43,672	$45,011	$43,672	$45,011
1	Anti-Floatation Flange for AX-MAX075-14	$4,017	$4,017	$4,017	$4,017
1	PF3007 DA Pumping system	$2,600	$2,900	$2,600	$2,900
1	Ventilation Assemblies — NO HEATER SELECTED	$2,220	$2,220	$2,220	$2,220
	Float Assembly	$105	$162	$105	$162
1	Piping, fittings, glue	$75	$150	$75	$150
	Advanced Secondary Treatment Subtotal			**$52,689**	**$54,460**
	Discharge System Materials				
1	Discharge Pumping Equipment	$2,540	$3,560	$2,540	$3,560
	Discharge System Subtotal			**$2,540**	**$3,560**
	Ancillary Materials				
1	MBBRD0807	$41,200	$41,200	$41,200	$41,200
1	Anti-Flotation Flange for MBBRD0807	$4,017	$4,017	$4,017	$4,017
	Telemetry Control Panel	$12,450	$16,700	$12,450	$16,700
	Alkalinity Feed System, DCF-3018	$11,500	$13,500	$11,500	$13,500
	Post-Anoxic Carbon Feed System, LCF3636-AG	$6,300	$7,300	$6,300	$7,300
	Control/Equipment Building, 8'x8'x20'	$39,552	$39,552	$39,552	$39,552
	Ancillary Equipment Subtotal			**$115,019**	**$122,269**
	Shipping, Commissioning, and Operator Training				
	Commissioning and Operator Training			$3,000	$3,000
	Operation & Maintenance Manual			$300	$300
	Shipping (as percent of materials)	(5 % of Materials)	(12 % of Materials)	$13,299	$34,084
	Construction Estimate				
	Labor and Misc. Equipment (% of Materials)	25%	40%	$66,496	$113,614

Only items shown are estimated. This budgetary estimate	**Materials and Equipment Subtotal**	$264,983	$278,035
does not include materials and labor costs for controls building,	**Construction Estimate**	$66,496	$113,614
site work, dispersal system, utilities, state or local taxes,	**Shipping and Commissioning**	$16,599	$37,384
permitting, inspections, administration, engineering, etc.	**Total Project Estimate**	$348,078	$429,033

Cordoba Center

Process Modeling



TN=TKN+NO2+NO3
TKN=NH3+NH4+Organic N+Reduced N

Packed Bed Filters

Packed bed filters (PBFs) – incorporating treatment media such as sand, gravel, and textile – have been used successfully for treating small-to-medium volume wastewater flows for decades. These filters reliably produce high quality effluent that is superior to that discharged by the majority of our nation's municipal treatment facilities.

Process Description

A typical packed bed media filter system is comprised of three major components: the septic tank(s) or primary treatment, the recirculation/dilution (R/D) tank, and an open media filter bed. The treatment of wastewater begins in the septic tank. There, residential waste strength, as measured by five-day biochemical oxygen demand (BOD_5), is reduced by more than 45 - 60%. Treated effluent flows from the septic tank into the R/D tank, mixing with its contents. A timer-controlled pump in the R/D tank periodically doses effluent to a distribution system on top of the filter bed. Each time the filter is dosed, effluent percolates through the filter media and is treated by naturally occurring microorganisms that populate the filter. Effluent is then collected in an underdrain pipe at the bottom of the filter and conveyed back to the R/D tank. Depending on the liquid level in the R/D tank, a flow-splitting device either returns all of the flow to the R/D tank or splits the flow so that a portion of the effluent is shunted to final disposal and the remainder is returned to the R/D tank. Effluent typically recirculates four times before final disposal.

As wastewater percolates slowly through the filter medium, physical, biological, and chemical processes remove contaminants. A naturally occurring, microscopically thin zoogleal film composed of large populations of bacteria and other microorganisms grows on the surface of the media. As blended effluent flows over the surface of the zoogleal film, organic material contained in the wastewater is absorbed onto the film where it becomes food for the bacteria. For maximum treatment, then, it is essential that all the wastewater have sustained contact (hydraulic residence time, HRT) with the film attached to the medium. And because the aerobic organisms in the zoogleal film need oxygen to live, it is also essential to maintain unsaturated flow conditions through the filter medium.

Unsaturated flow and sustained contact are achieved by distributing the wastewater evenly over the surface of the filter medium and by keeping doses small and frequent over the course of the day. Even distribution also ensures that all of the filter medium is used, thus preventing clogging that can result when parts of a filter go unused and others are hydraulically and organically overloaded. Even distribution is best accomplished by applying septic tank effluent to the surface of the media by means of uniformly spaced distribution nozzles or other method. Even distribution is also dependent on the infiltrative capacity of the treatment media, the rate of flow through the orifices, and the total volume of the dose.

AdvanTex PBF Treatment Systems

Launched in 2000, AdvanTex Treatment Systems are Orenco's 21st century packed bed

media filter. Like other PBFs, AdvanTex Treatment Systems provide low-cost, high-level treatment without high energy consumption or the need for chemicals. Unlike other PBFs, however, AdvanTex Treatment Systems are modular and factory-built, use an engineered textile for the treatment media, and require a much smaller footprint than sand or gravel media filters. The filter's modular construction allows addition of treatment capacity as demand for service warrants. Additionally, the treatment units can be distributed throughout the service area so that they are in close proximity for irrigation or re-use.

AdvanTex Treatment Systems are a non-submerged, attached-growth biological treatment facility, similar to but different than a conventional trickling filter. Typical trickling filters have specific surface (ft^2/ft^3) of between 50 and 100 ft^2/ft^3, with hydraulic loading rates between 28 gpd/ft^2 (low rate) and 230 gpd/ft^2 (intermediate rate) or higher. AdvanTex systems, on the other hand, have a specific surface (ft^2/ft^3) greater than 2,400 ft^2/ft^3, with hydraulic loading rates between 10 $gal/day/ft^2$ and 50 $gal/day/ft^2$, depending upon permit requirements.

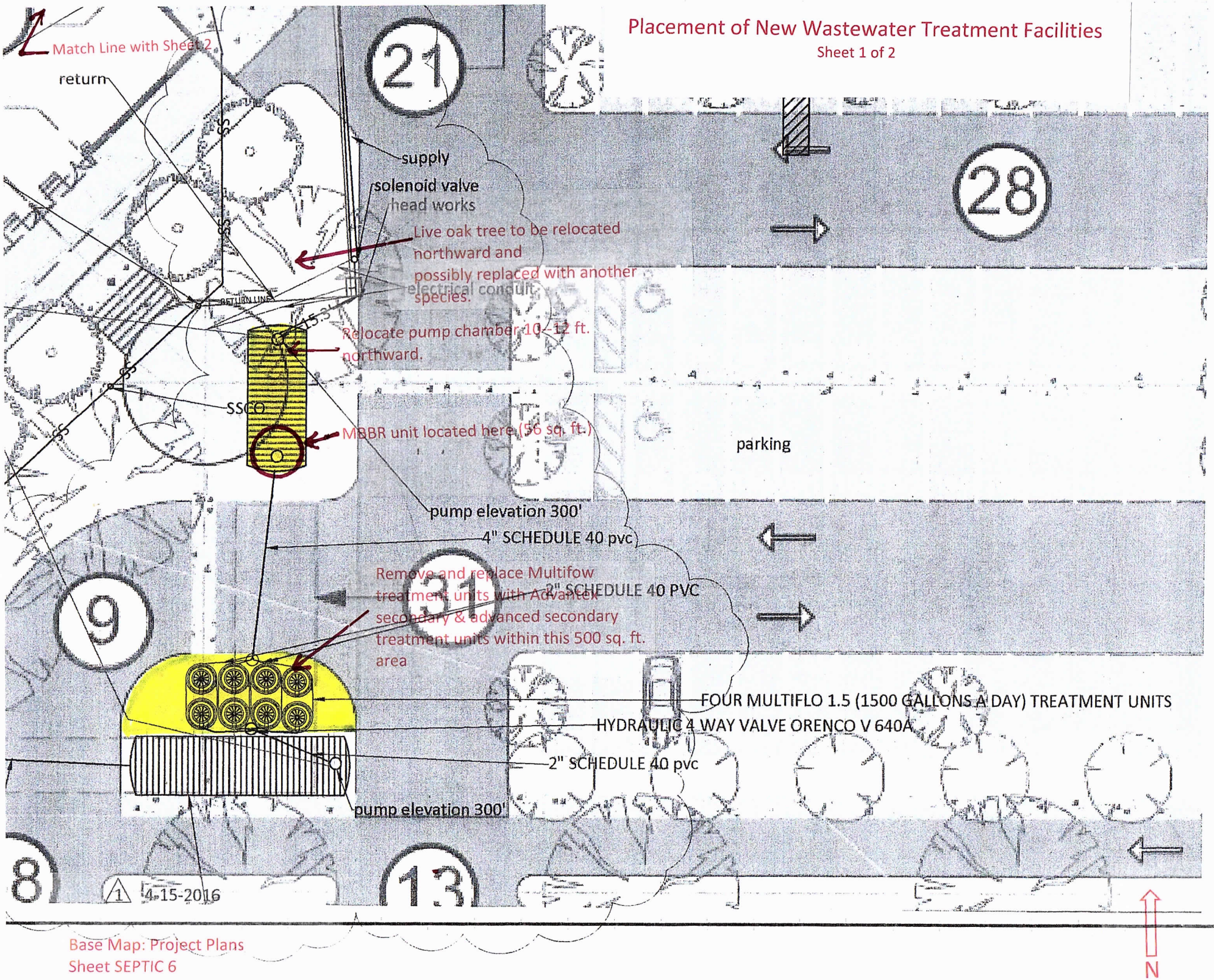
AdvanTex systems are dosed intermittently with doses that are approximately 1/4 to 1/3 the moisture-holding capacity of the media to avoid hydraulic channeling and achieve "thin film" flow of wastewater over the filtering medium. Operationally, conventional trickling filters are dosed intermittently (often continuously) but with significantly larger dose volumes, thus hydraulic channeling is a feature of the design, resulting in sloughing (periodic or continuous). When influent characteristics are of typical residential strength, effluent output from media filters (AdvanTex) typically averages <10 mg/L 5-day Biochemical Oxygen Demand (BOD_5), <10 mg/L Total Suspended Solids (TSS), and <1 mg/L Ammonia-Nitrogen (NH_3-N), depending on configuration and design. AdvanTex systems are sized based upon an actual hydraulic load of 25 $gal/day/ft^2$, a peak hydraulic load of 50 $gal/day/ft^2$, and an organic load of 0.04 lbs $BOD/day/ft^2$. Sloughing is extremely minimized, and AdvanTex treatment processes can be used in concert with many other pre- and post- treatment processes for advanced polishing and nutrient removal.

AdvanTex Performance

Effluent quality is dependent on a number of factors, including influent wastewater characteristics, hydraulic loading rates, organic loading rates, ammonia-nitrogen loading rates, temperature, and process configuration. Performance data from applications similar to those proposed is available upon request.

Placement of New Wastewater Treatment Facilities

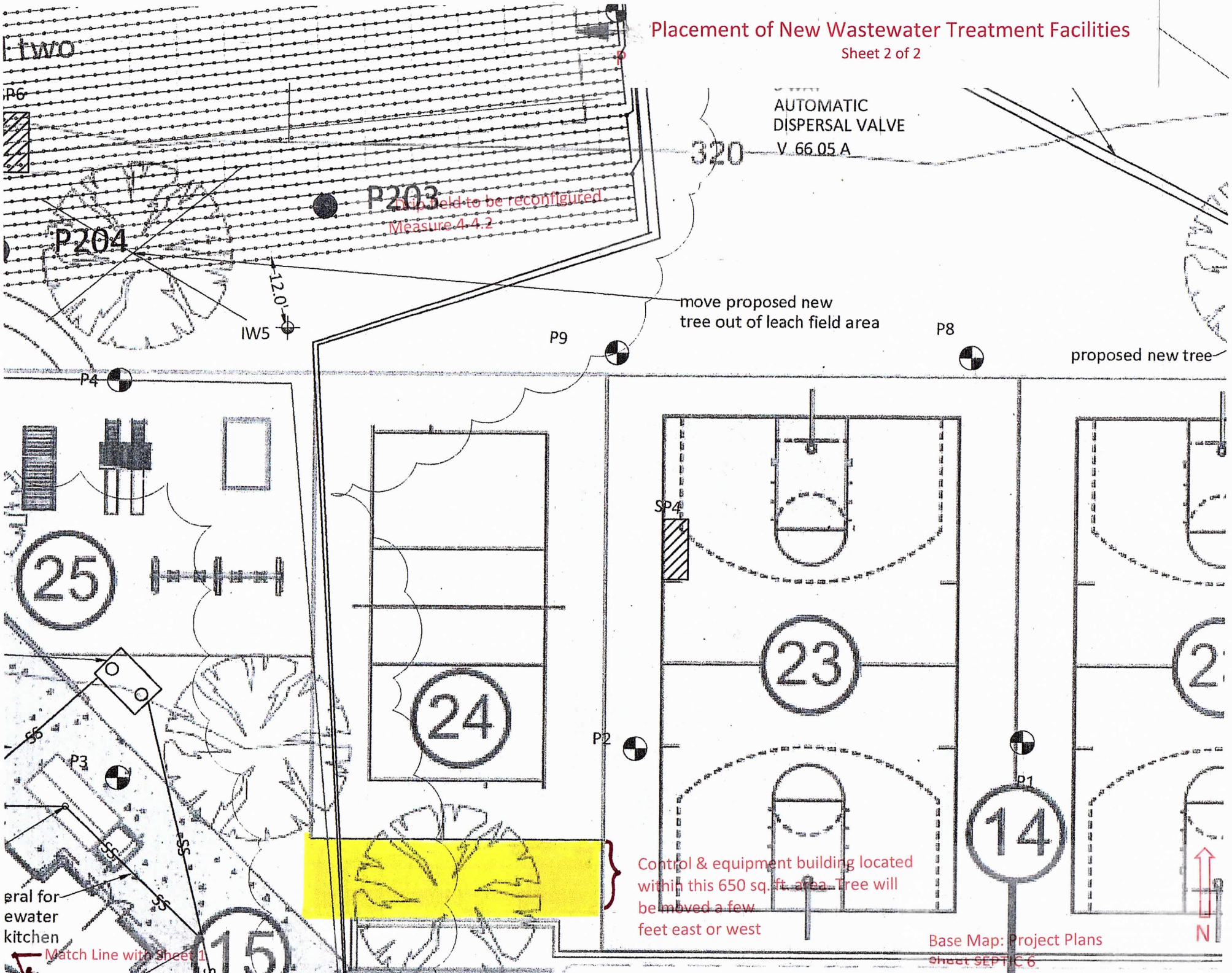
Sheet 1 of 2



Base Map: Project Plans
Sheet SEPTIC 6

Placement of New Wastewater Treatment Facilities

Sheet 2 of 2



RI Engineering, Inc.

Civil Engineering
303 Potrero St., Suite 42-202
Santa Cruz, CA 95060
831-425-3901
mark@riengineering.com

Memorandum

To: Kim Tchantz, MSP, CEP

From: Mark Grofcsik

Date: 11/20/2018

Re: Cordoba Center – Supplemental Drainage Information to Respond to SCVWD Comments on Draft EIR

The proposed drainage system for the project has been designed to detain stormwater and release runoff at a rate equal to the predevelopment flowrates for the 10 and 100-year design storms. Metered runoff will be achieved by using drainage outlet structures with two orifices that are sized to match the pre-development flow rates. During smaller storms, the lower orifice will discharge at the 10-year design rate. During larger storms, a second orifice set at a higher elevation will concurrently release stormwater so that the overall stormwater discharge rate leaving the site will match the 100-year predevelopment discharge rate. Exact orifice diameters and pipe sizes will be determined at the construction document stage.

The majority of the site will drain to a proposed bioretention swale in a large area at the southern portion of the site. This depressed area is over 18, 500 square feet in area, and has ample storage volume for stormwater generated by the addition of 135,590 square feet of impervious surface on the site. The bioretention swale will allow for stored runoff to infiltrate into the ground. The outlet structure at the southwestern corner of the site will be metered to discharge at the predevelopment 10 and 100-year design storm runoff rate.

On the eastern side of the property, a combined buried retention and detention chamber will infiltrate and store runoff before releasing at pre-development rates for the 10 and 100-year design storms.

Our design has set aside adequate stormwater storage and treatment areas to meet the low impact development and post-construction management requirements. Through using metered stormwater runoff to release at predevelopment rates, adverse downstream impacts are not anticipated for the 10 and 100-year design storms. Preliminary engineering calculations support the conclusions above. More refined calculations and details will be provided as we progress further towards final design, as is typically done with drainage plans.

Regards,

Mark Grofcsik
RCE 83644

PINNACLE TRAFFIC ENGINEERING
831 C Street
Hollister, California 95023
(831) 638-9260
PinnacleTE.com

November 26, 2018

c/o Kim Tschantz, MSP, CEP
South Valley Islamic Center
P.O. Box 1777
Morgan Hill, CA 95038

RE: Cordoba Center Project; Santa Clara County (San Martin), California
Supplemental Traffic Analysis Material

Dear Mr. Tschantz,

The Supplemental Traffic Analysis Material has been prepared in response to comments received on the Draft Environmental Impact Report (DEIR; May 30, 2018). The DEIR Transportation and Circulation Section (4.6) is based on the traffic analysis prepared by Fehr & Peers (April 28, 2017). The DEIR identified a potentially significant traffic impact related to project access on Monterey Highway (Impact 4.6-3, Substantially increase hazards because of a design feature). The DEIR states that the County's Department of Roads and Airports has determined that options for ingress / egress at the project driveway are limited due to the curvature of Monterey Highway. Therefore, left turns out of the project driveway cannot be made safely and all exiting traffic should turn right. The impact discussion also states that exiting vehicles with a desire to go north on Monterey Highway could turn right (go south) and then potentially make a U-turn at California Avenue. The DEIR indicates there is adequate room to accommodate a U-turn lane at California Avenue (length of this lane was not evaluated). Implementation of the recommended improvement would mitigate the potentially significant impact to a level of "less than significant."

The DEIR Mitigation Measure 4.6-3 states, "the project applicant shall submit a queuing analysis to determine the length of the left turn pocket at California Avenue needed to accommodate the number of northbound vehicles exiting the project site during peak hours." Though the impact discussion suggest the recommended mitigation measure could be developed during the design process the project applicant has elected to provide the supplemental material for incorporation in to the Final EIR (and in response to comments on the DEIR). The queuing analysis scope was developed in consultation with staff at the County's Roads and Airports Department. County staff has also requested that the supplemental analysis material include a conceptual layout of the U-turn pocket on the Monterey Highway (southbound approach) at California Avenue.

Queuing Analysis

The queuing analysis was conducted using the (1) procedures outlined in the Caltrans Highway Design Manual and (2) output from the Synchro 9 intersection analysis software. Both procedures utilize the project traffic volumes to determine the appropriate design volume for the southbound U-turn pocket on Monterey Highway at California Avenue. The project and total cumulative peak hour traffic volumes were referenced from the Fehr & Peers traffic analysis. To document existing conditions at the Monterey Highway and California Avenue intersection, new traffic count data was collected on November 7, 2018 (Wednesday). For consistency with the Fehr & Peers traffic analysis and DEIR, the existing north-south peak hour traffic volumes on Monterey Highway were used for the queueing analysis. The existing peak hour traffic volumes are illustrated on Figure 1.

The total cumulative (with project traffic) were also referenced from the Fehr & Peers analysis. The project trips exiting the driveway on Monterey Highway were re-assigned with all egress vehicles turning right and going south. The project trips that were originally assigned to go north on Monterey Highway were re-assigned to the southbound U-turn pocket (left turn lane) at California Avenue. It's noted that the existing traffic volumes entering and exiting California Avenue were increased by 10% to account for future background traffic growth. The total cumulative (with project traffic) peak hour traffic volumes are illustrated on Figure 2. Figure 1, Figure 2, and a copy of the new count data are included with the attachment material.

- Caltrans Highway Design Manual (HDM) - The Caltrans HDM includes Intersection Design Standards (Topic 405), which describe the "Left-Turn Channelization" requirements (405.2). The Caltrans HDM requires a left turn lane to provide adequate vehicle storage. At unsignalized intersections, the "storage length may be based on the number of turning vehicles likely to arrive in an average 2-minute period during the peak hour. At a minimum, space for 2 vehicles should be provided at 25 feet per vehicle." The total cumulative PM peak hour volumes illustrated on Figure 2 demonstrate that 14 vehicles per hour (vph) are projected to use the southbound U-turn pocket (left turn lane) on Monterey Highway at California Avenue (about 0.5 vehicles in a 2-minute period). Therefore, vehicle storage should be provided for at least 2 vehicles (50').

- Synchro 9 Software - The Synchro 9 software evaluates intersection delays and provides a 95th percentile queue for vehicles on the stop sign controlled approaches and vehicles in the main street left turn lanes. The total cumulative (with project traffic) peak hour traffic volumes shown on Figure 2 were evaluated using the Synchro 9 software. The Synchro 9 software demonstrates that the 95th percentile queue for the southbound left turn lane would not exceed 1-2 vehicles. Therefore, vehicle storage should be provided for at least 1-2 vehicles. Copies of the Synchro 9 software "level of service" (LOS) worksheets are included with the attachment material.

Southbound U-Turn Pocket (Left Turn Lane) - Conceptual Layout

As previously stated, the Caltrans HDM includes Intersection Design Standards that describe the "Left-Turn Channelization" requirements. The requirements include providing the appropriate

vehicle storage plus adequate room for vehicle deceleration (Table 405.2B). The queuing analysis demonstrates that vehicle storage should be provided for 2 vehicles (50'). Monterey Highway is posted with a 50 mile-per-hour (MPH) speed limit near the project site and California Avenue. The Caltrans HDM indicates the design speed for deceleration may be reduced by 10-20 MPH for a lower entry design speed. Since the project driveway will be located only about 650' north of California Avenue, it was deemed reasonable to use a 30 MPH entry speed. The southbound left turn lane improvements will need to be a total of 285' (50' storage + 235' deceleration).

A layout of the conceptual improvements for the southbound U-turn pocket (left turn lane) was developed using topographic survey data provided by RI Engineering and aerial photographic images. The Conceptual Plan illustrates the existing and proposed conditions (copy attached). Based on direction from County staff, the AASHTO standard passenger car turning template (R=24') was used to determine if improvements would be required on Monterey Highway to accommodate the southbound U-turn movement. The proposed conditions illustrate that the VTA bus stop would need to be moved approximately 4' east to accommodate the southbound U-turn movement for a standard passenger car. County staff also requested that the turning template be performed for a standard delivery truck (e.g. 30' single unit). However, the turning radius for a 30' single unit truck is 42' which would require a turnaround diameter of 84'. This could not be constructed within the County right-of-way (ROW) and would impact the existing railroad tracks, which would not be physically or economically feasible. It's noted that any project related truck traffic will be able to use California Avenue-Santa Teresa Boulevard (local traffic) and San Martin Avenue-US 101 (regional traffic) for access to points north of the project site. It's also noted that any additional room for vehicle storage or deceleration will be able to be accommodated within the existing striping median north of the proposed southbound U-turn pocket (left turn lane).

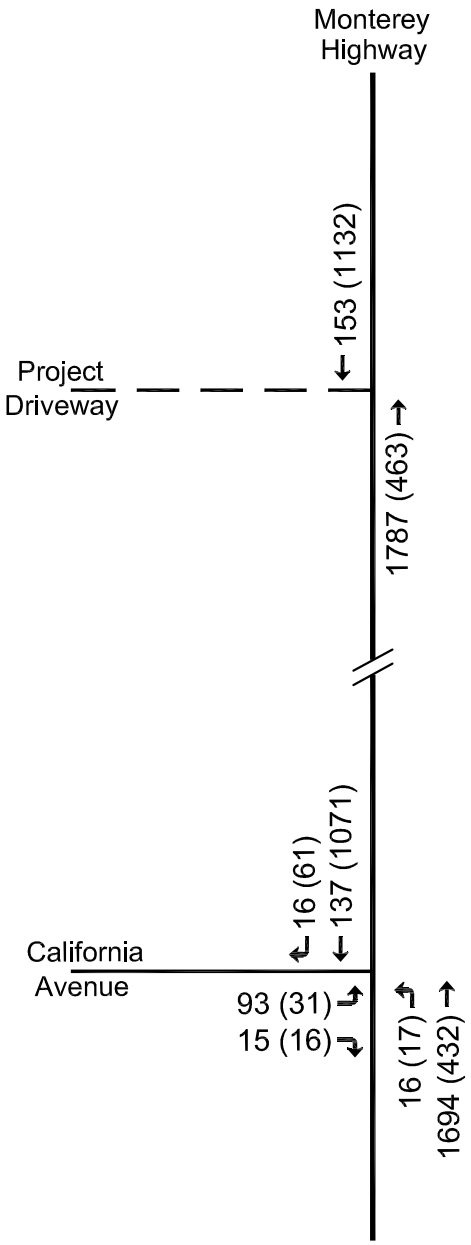
Please contact my office with any questions regarding the queuing analysis or conceptual layout.

Pinnacle Traffic Engineering

Larry D. Hail, CE, TE, PTOE
President

ldh:msw

Attachments: Figure 1 - Existing Peak Hour Traffic Volumes
Figure 2 - Total Cumulative (with Project Traffic) Peak Hour Traffic Volumes
New Peak Period Traffic Count Data (November 7, 2018)
Synchro 9 - Total Cumulative Synchro 9 Software LOS Analysis Worksheets
Conceptual Plan - Southbound Left Turn Lane



LEGEND

← 00 (00) = AM (PM) Peak Hour Volume

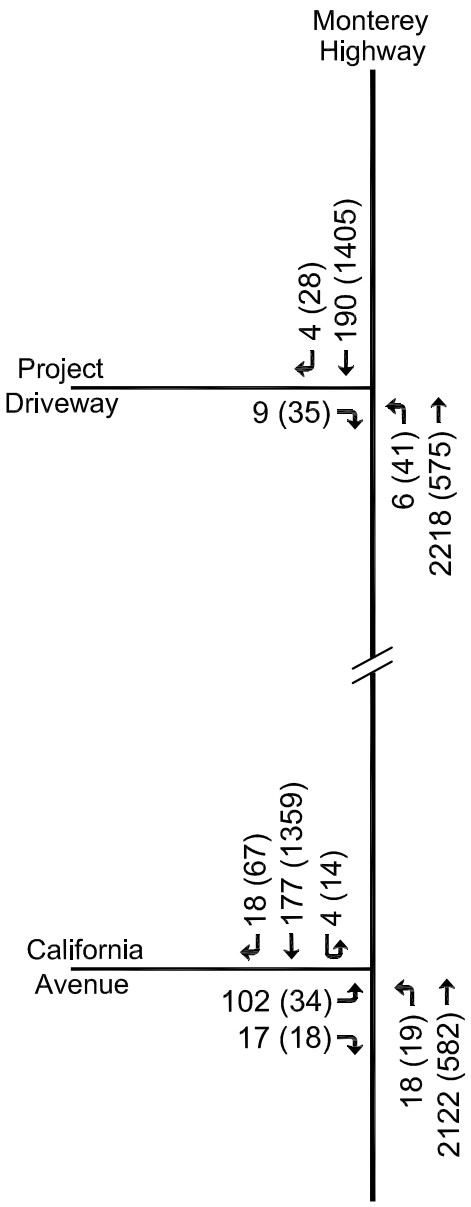
Morning Peak Hour (7:00 - 8:00 AM)
Afternoon Peak Hour (4:30 - 5:30 PM)

NORTH

PINNACLE TRAFFIC ENGINEERING

Cordoba Center Project
- Supplemental Traffic Analysis -

FIGURE 1
EXISTING
TRAFFIC VOLUMES



LEGEND

← 00 (00) = AM (PM) Peak Hour Volume

NORTH

PINNACLE TRAFFIC ENGINEERING

Cordoba Center Project
- Supplemental Traffic Analysis -

FIGURE 2
TOTAL CUMULATIVE TRAFFIC VOLUMES

National Data & Surveying Services

Intersection Turning Movement Count

Location: Monterey Hwy & California Ave
City: San Martin
Control:

Project ID: 18-08542-001
Date: 11/7/2018

Total

NS/EW Streets:	Monterey Hwy				Monterey Hwy				California Ave				California Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	271	0	0	0	55	1	0	26	0	5	0	0	0	0	0	358
7:15 AM	3	330	0	0	0	60	1	0	25	0	2	0	0	0	0	0	421
7:30 AM	2	280	0	0	0	92	4	0	22	0	6	0	0	0	0	0	406
7:45 AM	11	259	0	0	0	86	10	0	20	0	2	0	0	0	0	0	388
8:00 AM	3	199	0	0	0	63	4	0	19	0	1	0	0	0	0	0	289
8:15 AM	2	204	0	0	0	75	1	0	10	0	2	0	0	0	0	0	294
8:30 AM	4	127	0	0	0	73	3	0	17	0	1	0	0	0	0	0	225
8:45 AM	2	115	0	1	0	85	4	0	9	0	2	0	0	0	0	0	218
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	27	1785	0	1	0	589	28	0	148	0	21	0	0	0	0	0	2599
APPROACH %'s :	1.49%	98.46%	0.00%	0.06%	0.00%	95.46%	4.54%	0.00%	87.57%	0.00%	12.43%	0.00%					
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	16	1140	0	0	0	293	16	0	93	0	15	0	0	0	0	0	1573
PEAK HR FACTOR :	0.364	0.864	0.000	0.000	0.000	0.796	0.400	0.000	0.894	0.000	0.625	0.000	0.000	0.000	0.000	0.000	0.934
	0.868				0.805				0.871								

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	2	91	0	0	0	232	4	0	7	0	5	0	0	0	0	0	341
4:15 PM	5	105	0	0	0	232	13	0	6	0	4	0	0	0	0	0	365
4:30 PM	4	112	0	0	0	287	17	0	10	0	2	0	0	0	0	0	432
4:45 PM	4	100	0	0	0	285	15	0	8	0	5	0	0	0	0	0	417
5:00 PM	2	95	0	0	0	282	15	0	6	0	6	0	0	0	0	0	406
5:15 PM	7	100	0	0	0	269	14	0	7	0	3	0	0	0	0	0	400
5:30 PM	4	79	0	0	0	269	8	0	6	0	2	0	0	0	0	0	368
5:45 PM	3	72	0	0	0	232	4	0	5	0	3	0	0	0	0	0	319
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	31	754	0	0	0	2088	90	0	55	0	30	0	0	0	0	0	3048
APPROACH %'s :	3.95%	96.05%	0.00%	0.00%	0.00%	95.87%	4.13%	0.00%	64.71%	0.00%	35.29%	0.00%					
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	17	407	0	0	0	1123	61	0	31	0	16	0	0	0	0	0	1655
PEAK HR FACTOR :	0.607	0.908	0.000	0.000	0.000	0.978	0.897	0.000	0.775	0.000	0.667	0.000	0.000	0.000	0.000	0.000	0.958
	0.914				0.974				0.904								

Prepared by National Data & Surveying Services

Monterey Hwy & California Ave

Peak Hour Turning Movement Count

ID: 18-08542-001
City: San Martin

Day: Wednesday
Date: 11/07/2018

PEAK HOURS
AM: 07:00 AM - 08:00 AM
NOON: NONE
PM: 04:30 PM - 05:30 PM

COUNT PERIODS
AM: 07:00 AM - 09:00 AM
NOON: NONE
PM: 04:00 PM - 06:00 PM

Monterey Hwy — SOUTHBOUND

AM	16	293	0	0	1233	AM
NOON	0	0	0	0	0	NOON
PM	61	1123	0	0	438	PM

California Ave — EASTBOUND

AM	NOON	PM	
32	0	78	
0	0	0	0
93	0	31	0
0	0	0	0
15	0	16	0
AM	NOON	PM	

California Ave — WESTBOUND

PM	NOON	AM	
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	
PM	NOON	AM	

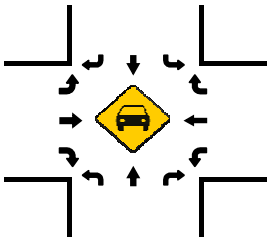
CONTROL: 0

TEV	1573 AM	0 NOON	1655 PM
PHF	0.93		0.96

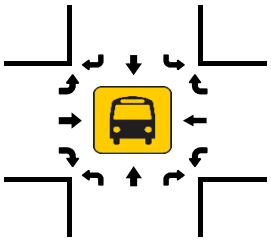
Monterey Hwy — NORTHBOUND

PM	1139	0	17	407	0	PM
NOON	0	0	0	0	0	NOON
AM	308	0	16	1140	0	AM

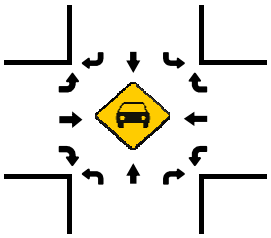
Total Vehicles (AM)



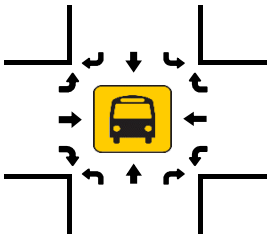
Total Vehicles (AM)



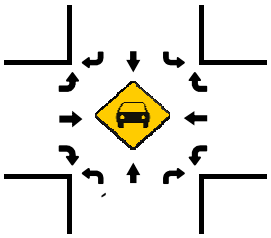
Total Vehicles (NOON)



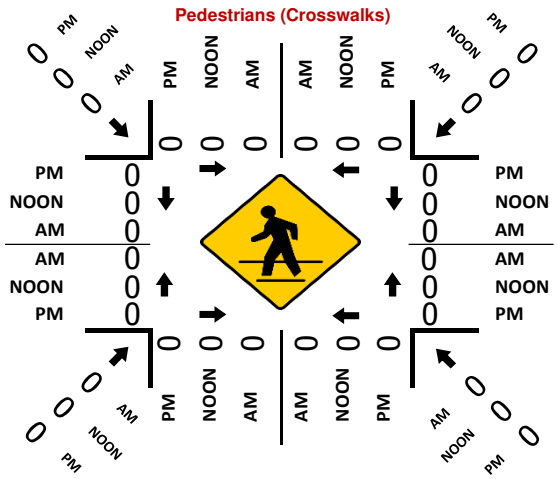
Total Vehicles (NOON)



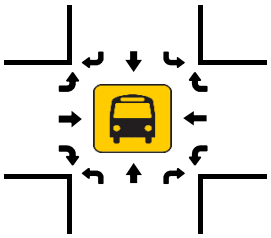
Total Vehicles (PM)



Pedestrians (Crosswalks)



Total Vehicles (PM)



Intersection	
Int Delay, s/veh	5.8

Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations							
Traffic Vol, veh/h	102	17	18	2122	4	177	18
Future Vol, veh/h	102	17	18	2122	4	177	18
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	-	None
Storage Length	0	-	165	-	100	-	-
Veh in Median Storage, #	0	-	-	0	-	0	-
Grade, %	0	-	-	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	2	2	2	0
Mvmt Flow	110	18	19	2282	4	190	19

Major/Minor	Minor2		Major1		Major2		
Conflicting Flow All	1387	105	209	0	2282	-	0
Stage 1	208	-	-	-	-	-	-
Stage 2	1179	-	-	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	6.44	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	2.52	-	-
Pot Cap-1 Maneuver	136	936	1374	-	48	-	-
Stage 1	813	-	-	-	-	-	-
Stage 2	259	-	-	-	-	-	-
Platoon blocked, %				-		-	-
Mov Cap-1 Maneuver	123	936	1374	-	48	-	-
Mov Cap-2 Maneuver	123	-	-	-	-	-	-
Stage 1	802	-	-	-	-	-	-
Stage 2	238	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	116	0.1	1.8
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBU	SBT	SBR
Capacity (veh/h)	1374	-	140	48	-	-
HCM Lane V/C Ratio	0.014	-	0.914	0.09	-	-
HCM Control Delay (s)	7.7	-	116	87.3	-	-
HCM Lane LOS	A	-	F	F	-	-
HCM 95th %tile Q(veh)	0	-	6.2	0.3	-	-

Intersection	
Int Delay, s/veh	2.4

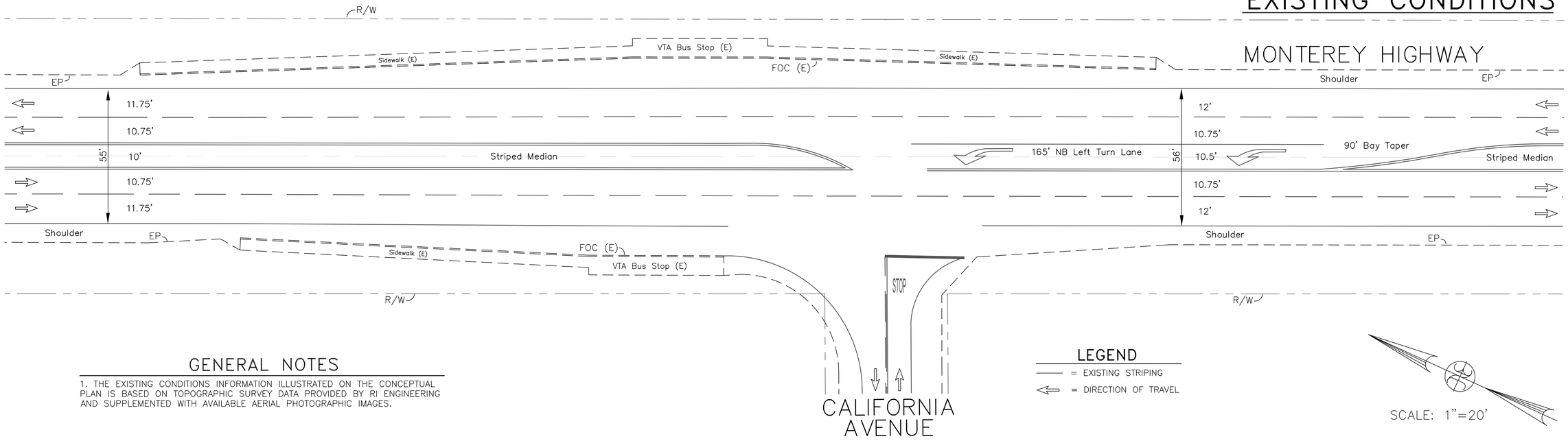
Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations							
Traffic Vol, veh/h	34	18	19	582	14	1359	67
Future Vol, veh/h	34	18	19	582	14	1359	67
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	-	None
Storage Length	0	-	165	-	100	-	-
Veh in Median Storage, #	0	-	-	0	-	0	-
Grade, %	0	-	-	0	-	0	-
Peak Hour Factor	96	96	96	96	92	96	96
Heavy Vehicles, %	0	0	0	2	2	2	0
Mvmt Flow	35	19	20	606	15	1416	70

Major/Minor	Minor2		Major1		Major2		
Conflicting Flow All	1824	743	1486	0	606	-	0
Stage 1	1481	-	-	-	-	-	-
Stage 2	343	-	-	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	6.44	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	2.52	-	-
Pot Cap-1 Maneuver	70	362	458	-	593	-	-
Stage 1	179	-	-	-	-	-	-
Stage 2	696	-	-	-	-	-	-
Platoon blocked, %				-		-	-
Mov Cap-1 Maneuver	65	362	458	-	593	-	-
Mov Cap-2 Maneuver	65	-	-	-	-	-	-
Stage 1	171	-	-	-	-	-	-
Stage 2	679	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	90.9	0.4	0.1
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBU	SBT	SBR
Capacity (veh/h)	458	-	91	593	-	-
HCM Lane V/C Ratio	0.043	-	0.595	0.026	-	-
HCM Control Delay (s)	13.2	-	90.9	11.2	-	-
HCM Lane LOS	B	-	F	B	-	-
HCM 95th %tile Q(veh)	0.1	-	2.8	0.1	-	-

EXISTING CONDITIONS



GENERAL NOTES

1. THE EXISTING CONDITIONS INFORMATION ILLUSTRATED ON THE CONCEPTUAL PLAN IS BASED ON TOPOGRAPHIC SURVEY DATA PROVIDED BY RI ENGINEERING AND SUPPLEMENTED WITH AVAILABLE AERIAL PHOTOGRAPHIC IMAGES.

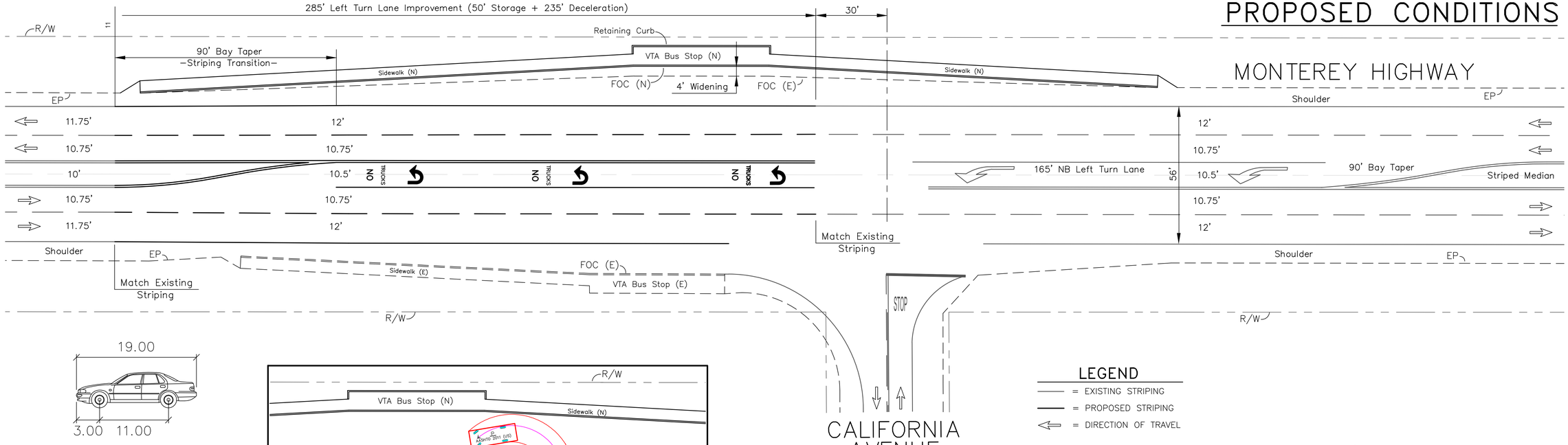
LEGEND

= EXISTING STRIPING

= DIRECTION OF TRAVEL

SCALE: 1"=20'

PROPOSED CONDITIONS



LEGEND

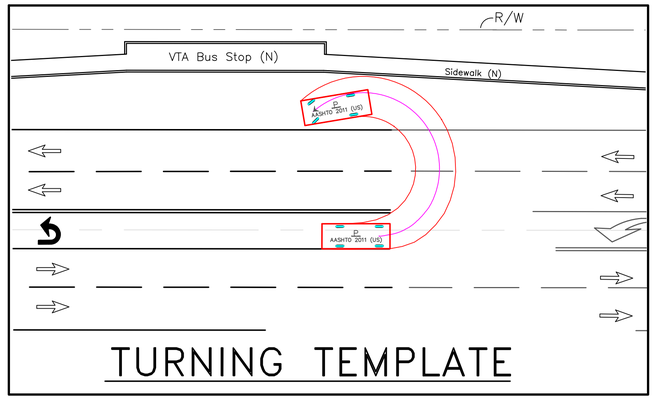
= EXISTING STRIPING

= PROPOSED STRIPING

= DIRECTION OF TRAVEL

SCALE: 1"=20'

P	feet
Width	: 7.00
Track	: 6.00
Lock to Lock Time	: 6.0
Steering Angle	: 31.6



TURNING TEMPLATE

Underground Service Alert

LI BEFORE YOU DIG

Call: TOLL FREE "811" OR 1-800-227-2600

TWO WORKING DAYS BEFORE YOU DIG

#	DESC:	REVISIONS	DATE
-	-	-	-

PINNACLE TRAFFIC ENGINEERING
PINNACLETE.COM
831 C STREET
HOLLISTER, CA 95023
(831) 638-9260 / (805) 644-9260

THE CORDOBA CENTER
14045 Monterey Highway
Santa Clara County, CA 95046-9548

CONCEPTUAL PLAN
SOUTHBOUND LEFT TURN LANE

DATE: 11-26-2018
SCALE: 1"=20'
DESIGN BY: LH
JOB: PTE-232A

C-1.0

SHEET: 1 OF 1