UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, DC 20549

FORM 10-Q

(Mark One)

☒ **QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the quarterly period ended March 31, 2018

OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from to

Commission File Number: 001-34674

Calix, Inc.
(Exact Name of Registrant as Specified in Its Charter)

Delaware	**68-0438710**
(State or Other Jurisdiction of Incorporation or Organization)	**(I.R.S. Employer Identification No.)**

1035 N. McDowell Blvd., Petaluma, CA 94954
(Address of Principal Executive Offices) (Zip Code)

(707) 766-3000
(Registrant's Telephone Number, Including Area Code)

Indicate by check mark whether the registrant: (1) has filed all reports required to be filed by Section 13 or 15(d) the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes: ☒ No: ☐

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes: ☒ No: ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large Accelerated Filer	☐	Accelerated Filer	☒
Non-accelerated filer	☐ (Do not check if a smaller reporting company)	Smaller Reporting Company	☐
Emerging Growth Company	☐		

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act). ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes: ☐ No: ☒

As of May 4, 2018 , there were 51,971,783 shares of the Registrant's common stock, par value $0.025 outstanding.

Calix, Inc.

Form 10-Q

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PART I. FINANCIAL INFORMATION

ITEM 1. Financial Statements

CALIX, INC.

CONDENSED CONSOLIDATED BALANCE SHEETS
(In thousands, except par value)

	March 31, 2018	December 31, 2017
	(Unaudited)	(See Note 1)
ASSETS		
Current assets:		
Cash and cash equivalents	$ 42,628	$ 39,775
Accounts receivable, net	55,746	80,392
Inventory	27,061	31,529
Prepaid expenses and other current assets	12,551	10,759
Total current assets	137,986	162,455
Property and equipment, net	14,808	15,681
Goodwill	116,175	116,175
Other assets	1,943	759
	$ 270,912	$ 295,070
LIABILITIES AND STOCKHOLDERS’ EQUITY		
Current liabilities:		
Accounts payable	$ 17,836	$ 35,977
Accrued liabilities	48,783	49,279
Deferred revenue	14,676	13,076
Line of credit	30,000	30,000
Total current liabilities	111,295	128,332
Long-term portion of deferred revenue	20,712	20,645
Other long-term liabilities	866	1,130
Total liabilities	132,873	150,107
Commitments and contingencies (See Note 7)		
Stockholders’ equity:		
Preferred stock, $0.025 par value; 5,000 shares authorized; no shares issued and outstanding as of March 31, 2018 and December 31, 2017	—	—
Common stock, $0.025 par value; 100,000 shares authorized; 57,047 shares issued and 51,717 shares outstanding as of March 31, 2018, and 56,839 shares issued and 51,509 shares outstanding as of December 31, 2017	1,426	1,421
Additional paid-in capital	853,809	851,054
Accumulated other comprehensive income (loss)	110	(169)
Accumulated deficit	(677,320)	(667,357)
Treasury stock, 5,330 shares as of March 31, 2018 and December 31, 2017	(39,986)	(39,986)
Total stockholders’ equity	138,039	144,963
	$ 270,912	$ 295,070

See accompanying notes to condensed consolidated financial statements.

CALIX, INC.

CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS
(In thousands, except per share data)
(Unaudited)

	Three Months Ended	
	March 31, 2018	April 1, 2017
Revenue:		
Systems	$ 93,291	$ 91,605
Services	6,112	25,913
Total revenue	99,403	117,518
Cost of revenue:		
Systems [1]	51,633	57,373
Services [1]	5,711	25,768
Total cost of revenue	57,344	83,141
Gross profit	42,059	34,377
Operating expenses:		
Research and development [1]	25,536	33,808
Sales and marketing [1]	19,901	22,429
General and administrative [1]	9,095	10,257
Gain on sale of product line	(6,704)	—
Restructuring charges	5,340	699
Total operating expenses	53,168	67,193
Loss from operations	(11,109)	(32,816)
Interest and other income (expense), net:		
Interest income (expense), net	(223)	44
Other income (expense), net	(294)	120
Total interest and other income (expense), net	(517)	164
Loss before provision for income taxes	(11,626)	(32,652)
Provision for income taxes	110	673
Net loss	$ (11,736)	$ (33,325)
Net loss per common share:		
Basic and diluted	$ (0.23)	$ (0.67)
Weighted-average number of shares used to compute net loss per common share:		
Basic and diluted	51,611	49,525
Net loss	$ (11,736)	$ (33,325)
Other comprehensive loss, net of tax:		
Unrealized losses on available-for-sale marketable securities, net	—	(4)
Foreign currency translation adjustments, net	279	61
Total other comprehensive income, net of tax	279	57
Comprehensive loss	$ (11,457)	$ (33,268)

[1] Includes stock-based compensation as follows:

	March 31, 2018	April 1, 2017
Cost of revenue:		
Systems	$ 112	$ 116
Services	77	56
Research and development	983	1,326
Sales and marketing	850	1,111

General and administrative	735	931

See accompanying notes to condensed consolidated financial statements.

CALIX, INC.

CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(In thousands)
(Unaudited)

	Three Months Ended	
	March 31, 2018	April 1, 2017
Operating activities:		
Net loss	$ (11,736)	$ (33,325)
Adjustments to reconcile net loss to net cash used in operating activities:		
Stock-based compensation	2,757	3,540
Depreciation and amortization	2,623	2,463
Amortization of intangible assets	—	813
Loss on retirement of property and equipment	244	80
Gain on sale of product line	(6,704)	—
Amortization of discount related to available-for-sale securities	—	(5)
Changes in operating assets and liabilities:		
Accounts receivable, net	25,137	(12,852)
Inventory	2,451	(1,993)
Prepaid expenses and other assets	(2,521)	(6,659)
Accounts payable	(17,871)	276
Accrued liabilities	(805)	7,110
Deferred revenue	866	17,201
Other long-term liabilities	(264)	(103)
Net cash used in operating activities	(5,823)	(23,454)
Investing activities:		
Purchases of property and equipment	(1,875)	(2,106)
Purchases of marketable securities	—	(8,732)
Maturities of marketable securities	—	11,266
Proceeds from sale of product line	10,350	—
Net cash provided by investing activities	8,475	428
Financing activities:		
Proceeds from exercise of stock options	8	13
Taxes paid for awards vested under equity incentive plan	(5)	(1,093)
Proceeds from line of credit	163,238	—
Repayment of line of credit	(163,238)	—
Net cash provided by (used in) financing activities	3	(1,080)
Effect of exchange rate changes on cash and cash equivalents	198	65
Net increase (decrease) in cash and cash equivalents	2,853	(24,041)
Cash and cash equivalents at beginning of period	39,775	50,359
Cash and cash equivalents at end of period	$ 42,628	$ 26,318

See accompanying notes to condensed consolidated financial statements.

CALIX, INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(Unaudited)

1. Company and Basis of Presentation

Company

Calix, Inc. (together with its subsidiaries, “Calix” or the “Company”) was incorporated in August 1999, and is a Delaware corporation. The Company is a leading global provider of cloud and software platforms, systems and services required to deliver the unified access network, smart home and business services of tomorrow. The Company’s platforms and services help its customers to build next generation networks by embracing a DevOps operating model, optimizing the subscriber experience by leveraging big data analytics and turn the complexity of the smart home and business into new revenue streams. The Company's cloud and software platforms, systems and services enable communication service providers (“CSPs”) to provide a wide range of revenue-generating services, from basic voice and data to advanced broadband services, over legacy and next-generation access networks. The Company focuses on CSP access networks, the portion of the network that governs available bandwidth and determines the range and quality of services that can be offered to subscribers.

Basis of Presentation

The accompanying unaudited condensed consolidated financial statements, including the accounts of Calix, Inc. and its wholly-owned subsidiaries, have been prepared in accordance with the requirements of the U.S. Securities and Exchange Commission (“SEC”) for interim reporting. As permitted under those rules, certain footnotes or other financial information that are normally required by U.S. generally accepted accounting principles (“GAAP”) can be condensed or omitted. In the opinion of management, the financial statements include all normal and recurring adjustments that are considered necessary for the fair presentation of the Company’s financial position and operating results. All significant intercompany balances and transactions have been eliminated in consolidation. The Condensed Consolidated Balance Sheet at December 31, 2017 has been derived from the audited financial statements at that date.

The results of the Company’s operations can vary during each quarter of the year. Therefore, the results and trends in these interim financial statements may not be the same as those for the full year or any future periods. The information included in this Quarterly Report on Form 10-Q should be read in conjunction with the audited financial statements included in the Company’s Annual Report on Form 10-K for the year ended December 31, 2017 .

The Company’s fiscal year begins on January 1st and ends on December 31st. Quarterly periods are based on a 4-4-5 calendar with the first, second and third quarters ending on the 13th Saturday of each fiscal period. As a result, the Company had one fewer day in the three months ended March 31, 2018 than in the three months ended April 1, 2017 . The preparation of financial statements in conformity with GAAP for interim financial reporting requires management to make estimates and assumptions that affect the amounts reported in the condensed consolidated financial statements and accompanying notes. Actual results could differ from those estimates.

Liquidity and Capital Resources

Since its inception, the Company has incurred significant losses, and as of March 31, 2018 , the Company had an accumulated deficit of $677.3 million . Based on its current operating plan and operating cash flows, management plans to finance its future operations and capital expenditures with existing cash and cash equivalents and its existing credit facility with Silicon Valley Bank (“SVB”), which it believes will be sufficient to fund its operations and capital expenditures through at least the next twelve months. See Note 5 for more information on the Company's credit facility with SVB. The Company may also need to seek other sources of liquidity, including the sale of equity or incremental borrowings, to support its working capital needs. However, there can be no assurances that such capital will be available on terms which are acceptable to the Company or at all or that the Company will achieve profitable operations. If the Company is unable to generate sufficient cash flows or obtain other sources of liquidity, the Company will be forced to limit its development activities, reduce its investment in growth initiatives and institute cost-cutting measures, all of which may adversely impact the Company’s business and growth. The accompanying consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty.

2. Significant Accounting Policies

The Company’s significant accounting policies are disclosed in its Annual Report on Form 10-K for the year ended December 31, 2017 . The Company’s significant accounting policies did not change during the three months ended March 31, 2018 , except for those impacted by the newly adopted accounting standard below.

Newly Adopted Accounting Standards

Revenue from Contracts with Customers

In May 2014, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update No. 2014-09, Revenue from Contracts with Customers (Topic 606) ("ASU 2014-09"), which provides guidance for revenue recognition. ASU 2014-09 supersedes the revenue recognition requirements in Topic 605, Revenue Recognition, and most industry-specific guidance. Additionally, it supersedes some cost guidance included in Subtopic 605-35, Revenue Recognition-Construction-Type and Production-Type Contracts, and creates new Subtopic 340-40, Other Assets and Deferred Costs-Contracts with Customers. The Company determines revenue recognition through the following steps: identification of the contract, or contracts, with a customer; identification of the performance obligations in the contract; determination of the transaction price; allocation of the transaction price to the performance obligations in the contract; and recognition of revenue when, or as, the Company satisfies a performance obligation. The standard's core principle is that a company will recognize revenue when it transfers promised goods or services to customers in an amount that reflects the consideration to which the company expects to be entitled in exchange for those goods or services. In doing so, companies will need to use more judgment and make more estimates than under the previous guidance. These may include identifying performance obligations in the contract, estimating the amount of variable consideration to include in the transaction price and allocating the transaction price to each separate performance obligation. The new standard permits adoption either by using (i) a full retrospective approach for all periods presented in the period of adoption or (ii) a modified retrospective approach with the cumulative effect of initially applying the new standard recognized at the date of initial application and providing certain additional disclosures.

On January 1, 2018, the Company adopted Topic 606 and Subtopic 340-40 using the modified retrospective transition method applied to those contracts which were not completed as of January 1, 2018. Accordingly, results for reporting period beginning after January 1, 2018 are presented under Topic 606, while the comparative information has not been restated and continues to be reported under the accounting standards in effect for those periods. The Company recognized the cumulative effect of initially applying the standards as an adjustment to the opening balance of accumulated deficit of $1.8 million as of January 1, 2018, with the impact primarily relating to deferring the costs of obtaining contracts (sales commissions) and the upfront recognition of software license revenue. The impact to revenue for the three months ended March 31, 2018 was an increase of $1.2 million as a result of applying Topic 606.

Significant changes to the Company's accounting policies as a result of adopting Topic 606 are discussed below.

Revenue Recognition

Revenue is recognized when a performance obligation is satisfied, which occurs when control of the promised goods or services is transferred to the customer, in an amount that reflects the consideration the Company expects to be entitled to in exchange for those goods or services.

A performance obligation is a promise in a contract to transfer a distinct good or service to the customer and is the unit of account in Topic 606. A contract's transaction price is allocated to each distinct performance obligation and recognized as revenue when, or as, the performance obligation is satisfied. The Company's hardware products contain both software and non-software components that function together to deliver the products' essential functionality and therefore constitutes a single performance obligation as the promise to transfer the individual software and non-software components is not separately identifiable and, therefore, not distinct. The Company's contracts may include multiple performance obligations. For such arrangements, the Company allocates the contract's transaction price to each performance obligation using the relative stand-alone selling price of each distinct good or service in the contract. The Company generally determines stand-alone selling prices based on the prices charged to customers or its best estimate of stand-alone selling price. The Company's estimate of stand-alone selling price is established considering multiple factors including, but not limited to, geographies, market conditions, competitive landscape, internal costs, gross margin objectives, characteristics of targeted customers and pricing practices. The determination of estimated stand-alone selling price is made through consultation with and formal approval by management, taking into consideration the go-to-market strategy.

For certain revenue arrangements involving delivery of both systems and professional services, each is considered a distinct performance obligation. Systems revenue is recognized at a point in time when management has determined that control over systems has transferred to the customer, which is generally when legal title has transferred to the customer. For the same revenue arrangements, management believes that control of the associated professional services is transferred to the customer over time. As such, professional services revenue is recognized over the period in which the services are provided using a cost input measure. Prior to adoption of Topic 606, the Company recognized revenue (and corresponding cost of revenue) for systems and associated professional services under the same revenue arrangement as services were delivered and milestones were accepted by the customer and as the systems were installed or delivered to the customer. Accordingly, the Company now recognizes revenue when control of the systems and services has been transferred to the customer, which may be earlier than system installation or customer acceptance, in accordance with the agreed-upon specifications in the contract.

The Company derives revenue from contracts with customers primarily from the following and categorizes its revenue as follows:

- Systems include revenue derived from the sale of access systems and software and cloud-based platforms.
- Services include revenue from professional services, software maintenance, support services for access systems, extended warranty and training services.

The following is a summary of revenue disaggregated by geographic region based upon the location of the customers (in thousands):

	Three Months Ended	
	March 31, 2018	April 1, 2017
United States	$ 89,389	$ 106,528
Caribbean	1,137	947
Canada	2,286	1,512
Europe	1,227	1,577
Other	5,364	6,954
Total	$ 99,403	$ 117,518

Concentration of Customer Risk

The Company had one customer that accounted for more than 10% of its total revenue for the three months ended March 31, 2018 and two customers that each accounted for more than 10% of its total revenue for the three months ended April 1, 2017 . The one customer represented 14% of the Company's total revenue for the three months ended March 31, 2018 . The two customers represented 55% of the Company's total revenue for the three months ended April 1, 2017 . The one customer represented more than 10% of the Company's accounts receivable as of March 31, 2018 and December 31, 2017 .

Deferred Revenue

Deferred revenue results from transactions where the Company billed the customer for products or services and when cash payments are received or due prior to transferring control of the promised goods or services to the customer. The increase in the deferred revenue balance for the three months ended March 31, 2018 is primarily driven by cash payments received or due in advance of satisfying our performance obligations, offset by $5.5 million of revenue recognized that was included in the deferred revenue balance at the beginning of the period.

Revenue allocated to remaining performance obligations represent contract revenue that has not yet been recognized, which includes deferred revenue and amounts that will be invoiced and recognized as revenue in future periods. This amount was approximately $35.4 million as of the end of the first quarter of 2018 and the Company expects to recognize approximately 41.5% of such revenue over the next 12 months and the remainder thereafter.

Payment terms to customers typically range from net 30 to net 90 days and vary by the type and location of customer and the products or services offered. The period between the transfer of control of the promised good or service to a customer and when payment is due is not significant.

Contract Costs

In connection with the adoption of Topic 606 on January 1, 2018, the Company also adopted the guidance in ASC 340-40, Other Assets and Deferred Costs - Contracts with Customers, with respect to capitalization and amortization of incremental costs of obtaining a contract. The new cost guidance requires the capitalization of all incremental costs incurred to obtain a contract with a customer that it would not have incurred if the contract had not been obtained, provided it expects to recover the costs. As a result of this new guidance, the Company capitalizes certain sales commissions related primarily to extended warranty and Calix Cloud products for which the expected amortization period is greater than one year.

The Company expects that sales commissions as a result of obtaining customer contracts are recoverable, and therefore the Company defers and capitalizes them as contract costs.

Capitalized commissions are amortized as sales and marketing expenses over the period that the related revenue is recognized, which typically range from three to ten years for extended warranty and cloud offerings. The Company classifies the unamortized portion of deferred commissions as current or noncurrent based on the timing of when the Company expects to

recognize the expense. The current and noncurrent portions of deferred commissions are included in prepaid expenses and other current assets and other assets, respectively, in the Company's Condensed Consolidated Balance Sheets.

As of March 31, 2018, the unamortized balance of deferred commissions was $0.8 million . For the three months ended March 31, 2018, the amount of amortization was less than $0.1 million , and there was no impairment loss in relation to the costs capitalized.

Practical Expedients

The Company expenses sales commissions as sales and marketing expenses when incurred if the expected amortization period is one year or less. This applies generally to all transactions other than extended warranty contracts and Calix Cloud products.

The Company does not disclose the value of unsatisfied performance obligations for (i) contracts with an original expected length of one year or less and (ii) contracts for which the Company recognizes revenue at the amount to which it has the right to invoice for services performed.

The Company does not adjust the promised amount of consideration for the effects of a significant financing component if the Company expects, at contract inception, that the period between when the Company transfers a promised good or service to a customer and when the customer pays for that good or service will be one year or less.

Cumulative Effect of Adoption

The cumulative effect of changes made to the Condensed Consolidated January 1, 2018 Balance Sheet was as follows (in thousands):

	Balance at December 31, 2017	Adjustments	Balance at January 1, 2018
Accounts receivable, net	$ 80,392	$ 491	$ 80,883
Prepaid expenses and other current assets	10,759	(245)	10,514
Other assets	759	698	1,457
Total assets	295,070	944	296,014
Deferred revenue	13,076	(829)	12,247
Total liabilities	150,107	(829)	149,278
Accumulated deficit	(667,357)	1,773	(665,584)
Total liabilities and stockholders' equity	295,070	944	296,014

The impact of adopting the new revenue standard on the Company's consolidated financial statements as of and for the three months ended March 31, 2018 were as follows (in thousands):

Condensed Consolidated Balance Sheet

As of March 31, 2018 (Unaudited)	As Reported	Adjustments	Balances Without Adoption of Topic 606
Accounts receivable, net	$ 55,746	$ (2,071)	$ 53,675
Prepaid expenses and other current assets	12,551	1,023	13,574
Other assets	1,943	(699)	1,244
Total assets	270,912	(1,747)	269,165
Accrued liabilities	48,783	(959)	47,824
Deferred revenue	14,676	1,427	16,103
Total liabilities	132,873	468	133,341
Accumulated deficit	(677,320)	(2,215)	(679,535)
Total liabilities and stockholders' equity	270,912	(1,747)	269,165

Condensed Consolidated Statement of Comprehensive Loss

Three Months Ended March 31, 2018 (Unaudited)	As Reported	Adjustments	Balances Without Adoption of Topic 606
Revenue:			
Systems	$ 93,291	$ (681)	$ 92,610
Services	6,112	(539)	5,573
Total revenue	99,403	(1,220)	98,183
Cost of revenue:			
Systems	51,633	(485)	51,148
Services	5,711	(278)	5,433
Total cost of revenue	57,344	(763)	56,581
Gross profit	42,059	(457)	41,602
Sales and marketing	19,901	(15)	19,886
Net loss	(11,736)	(442)	(12,178)

Recent Accounting Pronouncements Not Yet Adopted

Leases

In February 2016, the FASB issued Accounting Standards Update No. 2016-02, Leases (Topic 842) (“ASU 2016-02”), which requires recognition of an asset and liability for lease arrangements longer than twelve months. ASU 2016-02 will be effective for the Company beginning in the first quarter of 2019. Early application is permitted, and it is required to recognize and measure leases at the beginning of the earliest period presented using a modified retrospective approach. The Company is not planning to early adopt, and accordingly, it will adopt the new standard effective January 1, 2019. The Company intends to elect the available practical expedients on adoption. The Company is currently assessing the potential impact of adopting this new guidance on its consolidated financial statements. The Company expects its assets and liabilities to increase as the new standard requires recognition of right-of-use assets and lease liabilities for operating leases, but does not expect any material impact on its loss from operations or net loss as a result of the adoption of this standard.

Income taxes

On December 22, 2017, the SEC staff issued Staff Accounting Bulletin No. 118 ("SAB 118") which provides guidance on accounting for the tax effects of the Tax Act. SAB 118 provides a measurement period that should not extend beyond one year from the Tax Act enactment date for companies to complete the accounting under ASC 740, Income Taxes, for the year ended December 31, 2017. In accordance with SAB 118, a company must reflect the income tax effects of those aspects of the Tax Act for which the accounting under ASC 740 is complete.

The Company has not completed their accounting for tax reform with respect to the December 31, 2017 year relating to the calculation of the transition tax. The Company is still within the measurement period as of the first quarter of 2018 and no further conclusions have been made, as the Company reviews SAB 118 and the impact to the Company.

3. Cash and Cash Equivalents

Cash and cash equivalents consisted of the following (in thousands):

	March 31, 2018	December 31, 2017
Cash and cash equivalents:		
Cash	$ 38,840	$ 35,999
Money market funds	3,788	3,776
	$ 42,628	$ 39,775

The carrying amounts of the Company’s money market funds approximate their fair values due to their nature, duration and short maturities.

4. Fair Value Measurements

The Company measures its cash equivalents and marketable securities at fair value on a recurring basis. Fair value is an exit price, representing the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction

between market participants. As such, fair value is a market-based measurement that should be determined based on assumptions that market participants would use in pricing an asset or liability. The Company utilizes the following three-tier value hierarchy which prioritizes the inputs used in measuring fair value:

Level 1 – Observable inputs that reflect quoted prices (unadjusted) for identical assets or liabilities in active markets.

Level 2 – Observable inputs other than quoted prices included in Level 1 for similar instruments in active markets, quoted prices for identical or similar instruments in markets that are not active, and model-driven valuations in which all significant inputs and significant value drivers are observable in active markets.

Level 3 – Unobservable inputs to the valuation derived from fair valuation techniques in which one or more significant inputs or significant value drivers are unobservable.

The following table sets forth the Company's financial assets measured at fair value on a recurring basis as of March 31, 2018 and December 31, 2017 , based on the three-tier fair value hierarchy (in thousands):

As of March 31, 2018	Level 1	Level 2	Total
Money market funds	$ 3,788	$ —	$ 3,788
	3,788	$ —	$ 3,788

As of December 31, 2017	Level 1	Level 2	Total
Money market funds	$ 3,776	$ —	$ 3,776
	$ 3,776	$ —	$ 3,776

The fair values of money market funds classified as Level 1 were derived from quoted market prices as active markets for these instruments exist. The Company has no level 2 or level 3 financial assets.

5. Balance Sheet Details

Accounts receivable, net consisted of the following (in thousands):

	March 31, 2018	December 31, 2017
Accounts receivable	$ 56,134	$ 81,793
Allowance for doubtful accounts	(388)	(579)
Product return reserve [1]	—	(822)
	$ 55,746	$ 80,392

(1) With adoption of Topic 606 on January 1, 2018, the product return reserve is considered a contract liability and has been reclassified to accrued liabilities.

Inventory consisted of the following (in thousands):

	March 31, 2018	December 31, 2017
Raw materials	$ 2,244	$ 1,211
Finished goods	24,817	30,318
	$ 27,061	$ 31,529

Property and equipment, net consisted of the following (in thousands):

	March 31, 2018	December 31, 2017
Test equipment	$ 40,908	$ 39,952
Computer equipment and software	33,206	32,175
Furniture and fixtures	2,744	2,714
Leasehold improvements	5,206	6,029
Total	82,064	80,870
Accumulated depreciation and amortization	(67,256)	(65,189)
	$ 14,808	$ 15,681

Accrued liabilities consisted of the following (in thousands):

	March 31, 2018	December 31, 2017
Accrued compensation and related benefits	$ 18,367	$ 15,563
Accrued warranty and retrofit	8,097	8,708
Accrued professional and consulting fees	5,349	9,604
Accrued restructuring charges	4,927	1,417
Accrued excess and obsolete inventory at contract manufacturers	3,371	2,430
Accrued non-income related taxes	1,604	1,778
Customer over payments	968	1,050
Product return reserve	959	—
Accrued insurance	717	827
Accrued freight	695	593
Accrued business events	—	1,272
Accrued other	3,729	6,037
	$ 48,783	$ 49,279

Accrued Warranty and Retrofit

The Company provides a standard warranty for its hardware products. Hardware generally has a one -, three - or five -year standard warranty from the date of shipment. Under certain circumstances, the Company also provides fixes on specifically identified performance failures for products that are outside of the standard warranty period and recognizes estimated costs related to retrofit activities upon identification of such product failures. The Company accrues for potential warranty and retrofit claims based on the Company's historical product failure rates and historical costs incurred in correcting product failures along with other relevant information related to any specifically identified product failures. The Company's warranty and retrofit accruals are based on estimates of losses that are probable based on information available. The adequacy of the accrual is reviewed on a periodic basis and adjusted, if necessary, based on additional information as it becomes available. Changes in the Company's warranty and retrofit reserves in the periods as indicated were as follows (in thousands):

	Three Months Ended	
	March 31, 2018	April 1, 2017
Balance at beginning of period	$ 8,708	$ 12,214
Provision for warranty and retrofit charged to cost of revenue	1,469	1,862
Utilization of reserve	(2,080)	(3,298)
Balance at end of period	$ 8,097	$ 10,778

Accrued Restructuring Charges

The Company adopted a restructuring plan in March 2017. This restructuring plan realigned the Company's business, increasing its focus towards its investments in software defined access and cloud products, while reducing its expense structure in its traditional systems business. The Company began to take actions under this plan beginning in March 2017 and recognized $4.2 million of restructuring charges for the year ended December 31, 2017 consisting primarily of severance and other one-time termination benefits. Actions pursuant to this restructuring plan were complete as of December 31, 2017.

The Company established a new restructuring plan in February 2018 to further realign its business resources based on the production releases of its platform offerings. The Company incurred restructuring charges of approximately $5.3 million , consisting of primarily of severance and other termination related benefits, in the first quarter of 2018.

The following table summarizes the activities pursuant to the above restructuring plans (in thousands):

	Severance and Related Benefits	Facilities
Balance at December 31, 2017	$ 975	$ 442
Restructuring charges	4,567	773
Cash payments	(1,501)	(329)
Balance at March 31, 2018	$ 4,041	$ 886

Deferred revenue consisted of the following (in thousands):

	March 31, 2018	December 31, 2017
Current:		
Products and services	$ 10,675	$ 9,125
Extended warranty	4,001	3,951
	14,676	13,076
Long-term:		
Products and services	493	18
Extended warranty	20,219	20,627
	20,712	20,645
	$ 35,388	$ 33,721

6. Credit Facility

On August 7, 2017, the Company entered into a loan and security agreement (the "Loan Agreement") with SVB. The Loan Agreement provides for a senior secured revolving credit facility with SVB, pursuant to which SVB agreed to make revolving advances available to the Company in a principal amount of up to $30.0 million based on a customary accounts receivable borrowing base, subject to certain exceptions for accounts originating outside the United States and certain specific accounts, which could reduce the amount available to the Company under the credit facility. The credit facility matures, and all outstanding amounts become due and payable, on August 7, 2019.

The credit facility includes affirmative and negative covenants applicable to the Company and its subsidiaries. Furthermore, the Loan Agreement requires the Company to maintain a liquidity ratio at minimum levels set forth in more detail in the Loan Agreement. The credit facility also includes events of default, the occurrence and continuation of which would provide SVB with the right to demand immediate repayment of any principal and unpaid interest under the credit facility, and to exercise remedies against the Company and the collateral securing the loans under the credit facility. For the month ended November 30, 2017, the Company was not able to maintain the minimum Adjusted Quick Ratio (as defined in the Loan Agreement) at the level required in the Loan Agreement, which constituted an event of default. Although SVB waived this event of default effective as of November 30, 2017 and, therefore, this default did not change the Company's ability to borrow under the Loan Agreement, the Company was required to amend certain covenants under the Loan Agreement. In February 2018, the Company entered into an amendment to the Loan Agreement that, among other things, amended certain affirmative financial covenants, including reductions to the required minimum level of the Adjusted Quick Ratio and the inclusion of an additional financial covenant related to the maintenance of Adjusted EBITDA (as defined in the Loan Agreement). As of March 31, 2018 , the Company was in compliance with these requirements.

As of March 31, 2018 , the Company had borrowings outstanding of $30.0 million , representing the full amount available under the line of credit.

7. Commitments and Contingencies

Lease Commitments

The Company leases office space under non-cancelable operating leases. Certain of the Company's operating leases contain renewal options and rent acceleration clauses. Future minimum payments under the non-cancelable operating leases consisted of the following as of March 31, 2018 (in thousands):

Period	Minimum Future Lease Payments
Remainder of 2018	$ 2,403
2019	3,227
2020	2,947
2021	2,531
2022	2,332
Thereafter	6,927
	$ 20,367

The Company leases its headquarters office space in Petaluma, California under a lease agreement (“Petaluma Lease”) that expires February 2019. The above table also includes future minimum lease payments for our facilities in Minneapolis, Minnesota; Nanjing, China; Richardson, Texas; and San Jose and Santa Barbara, California, which expire at various dates through 2025.

In March 2018, the Company entered into a new office lease agreement for 65,000 square feet in San Jose, California as its current office lease in San Jose, California expires in August 2018. The lease commences in August 2018 for a term of 87 months . The future minimum lease payments under the lease are approximately $16.1 million and are included in the table above.

For the three months ended March 31, 2018 , total rent expense of the Company was $0.8 million . For the three months ended April 1, 2017 , total rent expense of the Company was $0.9 million .

Purchase Commitments

The Company’s primary contract manufacturers place orders for component inventory in advance based upon the Company’s build forecasts in order to reduce manufacturing lead times and ensure adequate component supply. The components are used by the contract manufacturers to build the products included in the build forecasts. The Company generally does not take ownership of the components held by contract manufacturers. The Company places purchase orders with its contract manufacturers in order to fulfill its monthly finished product inventory requirements. The Company incurs a liability when the contract manufacturer has converted the component inventory to a finished product and takes ownership of the inventory when transferred to the designated shipping warehouse. In the event of termination of services with a contract manufacturer, the Company may be required to purchase the remaining components inventory held by the contract manufacturer as well as any outstanding orders pursuant to the contractual provisions with such contract manufacturer. As of March 31, 2018 , the Company had approximately $57.4 million of outstanding purchase commitments for inventories to be delivered by its suppliers, including contract manufacturers, within one year.

The Company has from time to time, and subject to certain conditions, reimbursed its primary contract manufacturer for component inventory purchases when this inventory has been rendered excess or obsolete, for example due to manufacturing and engineering change orders resulting from design changes, manufacturing discontinuation of parts by its suppliers, or in cases where inventory levels greatly exceed projected demand. The estimated excess and obsolete inventory liabilities related to such manufacturing and engineering change orders and other factors, which are included in accrued liabilities in the accompanying balance sheets, were $3.4 million and $2.4 million as of March 31, 2018 and December 31, 2017 , respectively. The Company records the related charges in cost of systems revenue in its Condensed Consolidated Statements of Comprehensive Loss.

In March 2018, the Company entered into an agreement with a vendor for engineering services pursuant to which the Company will be obligated to make future minimum payments of $17.5 million through 2022.

Litigation

From time to time, the Company is involved in various legal proceedings arising from the normal course of business activities.

The Company is not currently a party to any legal proceedings that, if determined adversely to the Company, in management’s opinion, are currently expected to individually or in the aggregate have a material adverse effect on the Company’s business, operating results or financial condition taken as a whole.

8. Stockholders’ Equity

Equity Incentive Plans

As of March 31, 2018 , the Company maintains two equity incentive plans, the 2002 Stock Plan and the 2010 Equity Incentive Award Plan (together, the “Plans”). These plans were approved by the stockholders and are described in the Company’s Annual Report on Form 10-K filed with the SEC on March 14, 2018 . Currently, the Company only grants shares from the 2010 Equity Incentive Award Plan. To date, awards granted under the Plans consist of stock options, restricted stock units (“RSUs”) and performance restricted stock units (“PRSUs”).

Stock Options

During the three months ended March 31, 2018 , 65,000 shares of stock options were granted with a grant date fair value of $6.20 per share.

In August 2017, the Company granted 1.2 million shares of performance-based stock option awards to its executives. In February 2018, the Compensation Committee of the Company's Board of Directors concluded that the performance target was not met and all such performance-based stock options were forfeited and canceled at that time.

During the three months ended March 31, 2018 , 1,420 shares of stock options were exercised at a weighted-average exercise price of $5.42 per share. As of March 31, 2018 , unrecognized stock-based compensation expense of $3.7 million related to stock options, net of estimated forfeitures, is expected to be recognized over a weighted-average period of 2.9 years .

Restricted Stock Units

During the three months ended March 31, 2018 , 27,586 shares of RSUs were granted with a grant date fair value of $7.25 per share. During the three months ended March 31, 2018 , 152,821 shares of RSUs vested. As of March 31, 2018 , unrecognized stock-based compensation expense of $6.6 million related to RSUs, net of estimated forfeitures, was expected to be recognized over a weighted-average period of 1.6 years .

Performance Restricted Stock Units

During the three months ended March 31, 2018 , 75,000 PRSUs vested. As of March 31, 2018 , unrecognized stock-based compensation expense of $0.1 million related to PRSUs, net of estimated forfeitures, is expected to be recognized over a weighted-average period of 0.9 years .

Employee Stock Purchase Plans

The Company's Amended and Restated Employee Stock Purchase Plan ("ESPP") allows employees to purchase shares of the Company's common stock through payroll deductions of up to 15% of their annual compensation subject to certain Internal Revenue Code limitations. In addition, no participant may purchase more than 2,000 shares of common stock in each offering period.

The offering periods under the ESPP are six-month periods commencing on May 15 th and November 15 th of each year. The price of common stock purchased under the ESPP is 85% of the lower of the fair market value of the common stock on the commencement date and the end date of each six -month offering period. As of March 31, 2018 , there were 2.5 million shares available for issuance under the ESPP. During the three months ended March 31, 2018 , no shares were purchased under the ESPP. As of March 31, 2018 , unrecognized stock-based compensation expense of $0.2 million related to the ESPP is expected to be recognized over a remaining service period of 1.5 months.

Under the 2017 Nonqualified Employee Stock Purchase Plan ("Nonqualified ESPP"), eligible employees can purchase shares of the Company's common stock through payroll deductions of up to 25% of their annual compensation. Eligible employees have the right to (a) purchase the maximum number of whole shares of common stock that can be purchased with the elected payroll deductions during each offering period for which the employee is enrolled at a purchase price equal to the closing price of the Company's common stock on the last day of such offering period and (b) receive an equal number of shares of the Company's common stock that are subject to a risk of forfeiture in the event the employee terminates employment within the one year period immediately following the purchase date. The Nonqualified ESPP provides two six -month offering periods, from January 1 through June 30 and July 1 through December 31 of each year. The maximum number of shares of common stock currently authorized for issuance under the Nonqualified ESPP is 1,000,000 shares, with a maximum of 500,000 shares allocated per purchase period. As of March 31, 2018 , there were 0.6 million shares available for issuance under the Nonqualified ESPP. As of March 31, 2018 , unrecognized stock-based compensation expense of $1.8 million related to the Nonqualified ESPP is expected to be recognized over a remaining service period of 0.9 years .

9. Accumulated Other Comprehensive Income (Loss)

The table below summarizes the changes in accumulated other comprehensive income (loss) by component for the periods indicated (in thousands):

	Three Months Ended			
	March 31, 2018	April 1, 2017		
	Foreign Currency Translation Adjustments	Unrealized Gains and Losses on Available-for-Sale Marketable Securities	Foreign Currency Translation Adjustments	Total
Balance at beginning of period	$ (169)	$ (6)	$ (650)	$ (656)
Other comprehensive income (loss)	279	(4)	61	57
Balance at end of period	$ 110	$ (10)	$ (589)	$ (599)

Realized gains and losses on sales of available-for-sale marketable securities, if any, are reclassified from accumulated other comprehensive loss to "Other income (expense)" in the accompanying Condensed Consolidated Statements of Comprehensive Loss.

10. Product Line Divestiture

In February 2018, the Company sold its outdoor cabinet product line to Clearfield, Inc. ("Clearfield") for $10.4 million in cash as well as the assumption by Clearfield of the related product warranty liabilities and open purchase order commitments with its contract manufacturer. The Company transferred $2.1 million in net inventory and agreed to solicit orders on Clearfield's behalf on the newly transferred outdoor cabinets product lines free of charge for 15 months . The Company established a liability of $1.6 million in deferred revenue for providing this service and is amortizing this amount to service revenue over the corresponding 15-month period. The Company also recognized a $6.7 million gain for the three months ended March 31, 2018 within operating expenses in the Condensed Consolidated Statements of Comprehensive Loss.

11. Income Taxes

The following table presents the provision for income taxes from continuing operations and the effective tax rates for the periods indicated (in thousands, except percentages):

	Three Months Ended	
	March 31, 2018	April 1, 2017
Provision for income taxes	$ 110	$ 673
Effective tax rate	(0.9)%	(2.1)%

The income tax provision for the three months ended March 31, 2018 and April 1, 2017 consisted primarily of foreign and state income taxes. The effective tax rate for the three months ended March 31, 2018 and April 1, 2017 was determined using an estimated annual effective tax rate adjusted for discrete items, if any, that occurred during the respective periods. The Company's effective tax rate for the three months ended March 31, 2018 and April 1, 2017 is impacted by the change in foreign income tax expense.

Deferred tax assets are recognized if realization of such assets is more likely than not. The Company has established and continues to maintain a full valuation allowance against its net deferred tax assets, with the exception of certain foreign deferred tax assets, as the Company does not believe that realization of those assets is more likely than not .

The Company's effective tax rate may be subject to fluctuation during the year as new information is obtained, which may affect the assumptions used to estimate the annual effective tax rate, including factors such as the mix of forecasted pre-tax earnings in the various jurisdictions in which it operates, valuation allowances against deferred tax assets, the recognition or de-recognition of tax benefits related to uncertain tax positions, and changes in or the interpretation of tax laws in jurisdictions where it conducts business .

12. Net Loss Per Common Share

The following table sets forth the computation of basic and diluted net loss per common share for the periods indicated (in thousands, except per share data):

	Three Months Ended	
	March 31, 2018	April 1, 2017
Numerator:		
Net loss	$ (11,736)	$ (33,325)
Denominator:		
Weighted-average common shares outstanding used to compute basic net loss per share	51,611	49,525
Basic and diluted net loss per common share	$ (0.23)	$ (0.67)
Potentially dilutive shares, weighted average	6,870	6,145

Potentially dilutive shares have been excluded from the computation of diluted net loss per common share when their effect is antidilutive. These antidilutive shares were primarily from stock options, restricted stock units and performance restricted stock units. For each of the periods presented where the Company reported a net loss, the effect of all potentially dilutive securities would be antidilutive, and as a result diluted net loss per common share is the same as basic net loss per common share.

ITEM 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

This report includes "forward-looking statements" within the meaning of Section 27A of the Securities Act and Section 21E of the Securities and Exchange Act of 1934, as amended. All statements other than statements of historical facts are "forward-looking statements" for purposes of these provisions, including any projections of earnings, revenue or other financial items, any statement of or concerning the following: the plans and objectives of management for future operations, proposed new products or licensing, product development, anticipated customer demand or capital expenditures, future economic and/or market conditions or performance, and assumptions underlying any of the above. In some cases, forward-looking statements can be identified by the use of terminology such as "may," "will," "expects," "believes," "intends," "plans," "anticipates," "estimates," "projects," "potential," or "continue" or the negative thereof or other comparable terminology. Although we believe that the expectations reflected in the forward-looking statements contained herein are reasonable, there can be no assurance that such expectations or any of the forward-looking statements will prove to be correct, and actual results could differ materially from those projected or assumed in the forward-looking statements. Our future financial condition and results of operations, as well as any forward-looking statements, are subject to inherent risks and uncertainties, including those identified in the Risk Factors discussed in Part II, Item 1A, in the discussion below, as well as in other sections of this report and in our Annual Report on Form 10-K for the year ended December 31, 2017 . All forward-looking statements and reasons why results may differ included in this Quarterly Report on Form 10-Q are made as of the date hereof, and we assume no obligation to update these forward-looking statements or reasons why actual results might differ.

Overview

We are a leading global provider of cloud and software platforms, systems and software for fiber- and copper-based network architectures and a pioneer in software defined access and cloud products focused on access networks and the subscriber. Calix's portfolio allows for a broad range of subscriber services to be provisioned and delivered over a single unified network. Our access systems can deliver voice and data services, advanced broadband services, mobile broadband, as well as high-definition video and online gaming. Our premises systems will allow CSPs to master the complexity of the smart home and business and offer new services to their device enabled subscribers. Importantly, all of these platforms and systems can be monitored, analyzed, managed and supported by Calix Cloud.

We market our cloud and software platforms, systems and services to CSPs globally through our direct sales force as well as select resellers. Our customers range from smaller, regional CSPs to some of the world's largest CSPs. We have enabled over 1,400 customers to deploy gigabit passive optical network, Active Ethernet and point-to-point Ethernet fiber access networks.

Our revenue was $99.4 million for the three months ended March 31, 2018 , compared to $117.5 million for the three months ended April 1, 2017 . Our revenue and revenue growth will depend on our ability to sell and license our cloud and software platforms, systems and services to existing customers as well as our ability to attract new customers, particularly larger CSPs, in the U.S. and internationally. For the three months ended March 31, 2018, our revenue was impacted by slower spending by several large customers partially offset by a strong quarter with our smaller regional customers and continued shipments to a large Tier 1 customer that we added last quarter.

During the first quarter of 2018, we recognized revenue based on the ASU 2014-09, “Revenue from Contracts with Customers (Topic 606),” but revenue for the three months ended April 1, 2017 was recognized based on Topic 605. Revenue for the first quarter of fiscal 2018 was $1.2 million higher than it would be if recognized under Topic 605. For additional information on the impact of the new accounting standard on our revenue, see Note 2 to the unaudited condensed consolidated financial statements set forth in Part I, Item 1 of this Quarterly Report on Form 10-Q.

Revenue fluctuations result from many factors, including: increases or decreases in customer orders for our products and services, market, financial or other factors that may delay or materially impact customer purchasing decisions, contractual terms with customers that result in delayed revenue recognition and varying budget cycles and seasonal buying patterns of our customers. More specifically, our customers tend to spend less in the first quarter as they are finalizing their annual budgets, and in certain regions, customers are also challenged by winter weather conditions that inhibit fiber deployment in outside infrastructure. Our revenue is also dependent upon our customers’ timing of purchases, capital expenditure plans and decisions to upgrade their network or adopt new technologies, including expenditure plans for turnkey solutions projects, which are generally non-recurring in nature. In particular, since the end of 2017, we experienced significantly lower order volumes by our largest customer due to the timing of their recent acquisition, and we expect that this acquisition may continue to disrupt the customer’s expenditure plans and result in continued delays and reduction in purchases of our products and services.

Cost of revenue is strongly correlated to revenue and tends to fluctuate due to all of the above factors that could impact revenue. Factors that impacted our cost of revenue for the three months ended March 31, 2018, and that may impact cost of revenue in future periods, also include: changes in the mix of products delivered, customer location and regional mix, changes in product warranty and incurrence of retrofit costs, changes in the cost of our inventory and inventory write-downs. Cost of revenue also includes fixed expenses related to our internal operations, which could impact our cost of revenue as a percentage of revenue if there are large fluctuations in revenue.

During the three months ended March 31, 2018, our gross profit and gross margin were positively impacted by the customer mix shift as well as a decrease in our services revenue, which carries a lower than corporate average gross margin, as a mix of total revenue. Overall, our gross profit and gross margin fluctuate based on timing of factors such as new product introductions or upgrades to existing products, changes in customer mix, changes in the mix of products demanded and sold (and any related write-downs of existing inventory), increases in mix of revenue towards professional services, increases in mix of revenue from channel sales rather than direct sales or other unfavorable customer or product mix, shipment volumes and any related volume discounts, changes in our product and services costs, pricing decreases or discounts, customer rebates and incentive programs due to competitive pressure.

Our operating expenses have fluctuated based on the following factors: changes in headcount and personnel costs, which comprise a significant portion of our operating expenses; timing of variable compensation expenses due to fluctuations in order volumes; timing of research and development expenses, including investments in innovative solutions, such as next generation solutions and new customer segments, prototype builds and outsourced development projects; fluctuations in stock-based compensation expenses due to timing of equity grants or other factors affecting vesting; and investments in our cloud-based infrastructure. During the three months ended March 31, 2018 as compared with the corresponding period in 2017, our total operating expense decreased largely due to the restructuring actions we took in 2017 and the first quarter of 2018. In March 2017, we adopted a restructuring plan to realign our business to increase focus towards investments in software platforms and to reduce the expense structure in our traditional systems business. We incurred pre-tax restructuring charges of $4.2 million in 2017 under this plan. In the first quarter of 2018, we established a new restructuring plan to further align our business resources based on the production releases of our platform offerings and incurred restructuring charges of $5.3 million. We anticipate that our operating expenses will be relatively consistent over the next several quarters in absolute dollars but will decline as a percentage of revenue over time.

Our net loss was $11.7 million for the three months ended March 31, 2018 , compared to a net loss of $33.3 million for the three months ended April 1, 2017 . Since our inception we have incurred significant losses, and as of March 31, 2018 , we had an accumulated deficit of $677.3 million . Further, as a result of the fluctuations described above and a number of other factors, many of which are outside our control, our quarterly operating results fluctuate from period to period. Comparing our operating results on a period-to-period basis may not be meaningful, and you should not rely on our past results as an indication of our future performance.

Product Line Divestiture

In February 2018, we sold our outdoor cabinet product line to Clearfield, Inc. for $10.4 million in cash as well as the assumption by Clearfield of related product warranty liabilities and open purchase order commitments with our contract manufacturer. The divestiture of this non-strategic product line reflects our continued focus on execution on our platforms and business strategy.

Critical Accounting Policies and Estimates

Our financial statements are prepared in accordance with U.S. GAAP. These accounting principles require us to make certain estimates and judgments that can affect the reported amounts of assets and liabilities as of the date of the financial statements, as well as the reported amounts of revenue and expenses during the periods presented. Management bases its estimates, assumptions and judgments on historical experience and on various other factors that are believed to be reasonable under the circumstances. To the extent there are material differences between these estimates and actual results, our financial statements may be affected. Our management evaluates its estimates, assumptions and judgments on an ongoing basis.

Our critical accounting policies and estimates are described under "Critical Accounting Policies and Estimates" in "Management's Discussion and Analysis of Financial Condition and Results of Operations" included in our Annual Report on Form 10-K for the year ended December 31, 2017 . For the three months ended March 31, 2018 , there have been no significant changes in our critical accounting policies and estimates other than the adoption of Accounting Standards Update No. 2014-09, Revenue from Contracts with Customers (Topic 606) ("ASU 2014-09").

Recent Accounting Pronouncements

See Note 2 to the unaudited condensed consolidated financial statements set forth in Part I, Item 1 of this Quarterly Report on Form 10-Q for a full description of recent accounting pronouncements, including the expected dates of adoption and estimated effects on results of operations and financial condition, which is incorporated herein by reference.

Results of Operations

Comparison of the Three Months Ended March 31, 2018 and April 1, 2017

Revenue

Our revenue is comprised of the following:

- Systems include revenue from the sale of access and premises systems, platform software licenses and cloud-based software subscriptions.
- Services include revenue from professional services, customer support, software and cloud-based maintenance, extended warranty subscriptions, training and managed services.

The following table sets forth our revenue (dollars in thousands):

	Three Months Ended			
	March 31, 2018	April 1, 2017	Variance in Dollars	Variance in Percent
Revenue:				
Systems	$ 93,291	$ 91,605	$ 1,686	2 %
Services	6,112	25,913	(19,801)	(76)%
	$ 99,403	$ 117,518	$ (18,115)	(15)%
Percent of total revenue:				
Systems	94%	78%		
Services	6%	22%		
	100%	100%		

Our revenue decreased by $18.1 million , or 15% , for the three months ended March 31, 2018 as compared with the corresponding period in 2017 . This was due to a decrease in services revenue by $19.8 million , or 76% , for the three months ended March 31, 2018 , primarily driven by the substantial completion of services associated with a significant turnkey network improvement project during the first quarter of 2017. Our systems revenue increase d by $1.7 million for the three months ended March 31, 2018 as compared with the corresponding period in 2017 , mainly due to greater traction with our AXOS software platform and systems and Calix Cloud platforms offsetting declines in our traditional systems. During the three months ended March 31, 2018 , revenue generated in the United States was $89.1 million , or 90% of our total revenue, compared to $106.5 million , or 91% of our total revenue, for the same period in 2017 . International revenue was $10.3 million , or 10% of our total revenue, for the three months ended March 31, 2018 , as compared to $11.0 million , or 9% of our total revenue, for the same period in 2017 .

We had one customer that accounted for more than 10% of our total revenue during the three months ended March 31, 2018 as compared to two customers in the same period a year ago. See Note 2 to the unaudited condensed consolidated financial

statements set forth in Part I, Item 1 of this Quarterly Report on Form 10-Q for more details on concentration of revenue for the periods presented.

Cost of Revenue, Gross Profit and Gross Margin

The following table sets forth our cost of revenue (dollars in thousands):

	Three Months Ended			
	March 31, 2018	April 1, 2017	Variance in Dollars	Variance in Percent
Cost of revenue:				
Systems	$ 51,633	$ 57,373	$ (5,740)	(10)%
Services	5,711	25,768	(20,057)	(78)%
	$ 57,344	$ 83,141	$ (25,797)	(31)%

Our cost of revenue decrease d by $25.8 million during the three months ended March 31, 2018 , as compared with the corresponding period in 2017 . This was primarily attributable to a decrease in cost of service revenue by $20.1 million , as we experienced higher levels of service activities in 2017, as well as higher costs attributed to rework, delays, unanticipated costs and overruns (including third party costs) for our turnkey network improvement projects in the year ago quarter. Our cost of systems revenue also decrease d by $5.7 million for the three months ended March 31, 2018 as compared with the corresponding period in 2017 mainly due to improved regional and new product mix.

The following table sets forth our gross profit and gross margin (dollars in thousands):

	Three Months Ended			
	March 31, 2018	April 1, 2017	Variance in Dollars	Variance in Percent
Gross profit:				
Systems	$ 41,658	$ 34,232	$ 7,426	22%
Services	401	145	256	177%
	$ 42,059	$ 34,377	$ 7,682	22%
Gross margin:				
Systems	45%	37%		
Services	7%	1%		
Overall	42%	29%		

Gross profit increase d to $42.1 million during the three months ended March 31, 2018 , from $34.4 million during the corresponding period in 2017 . Gross margin increase d to 42% during the three months ended March 31, 2018 , from 29% during the corresponding period in 2017 . The increase in gross profit and gross margin during the three months ended March 31, 2018 was primarily due to a shift in customer mix as well as a decrease in our services revenue, which carries a lower than corporate average gross margin, as a mix of total revenue. Specifically, systems gross margin increased due to strength in sales to our smaller regional customers and to an increasing mix of new products that have higher margins than some of our older traditional products. Services gross margin improved due to strong execution despite an uncertain demand environment as well as process improvements implemented over the past year.

Operating Expenses

Research and Development Expenses

The following table sets forth our research and development expenses (dollars in thousands):

	Three Months Ended			
	March 31, 2018	April 1, 2017	Variance in Dollars	Variance in Percent
Research and development	$ 25,536	$ 33,808	$ (8,272)	(24)%
Percent of total revenue	26%	29%		

The decrease in research and development expenses by $8.3 million during the three months ended March 31, 2018 as compared with the corresponding period in 2017 was primarily due to the leverage of our software platforms enabling us to

lower our level of investment and introduce new products faster. In addition, during 2017 and the first quarter of 2018, we restructured our business to increase our focus towards investments in software platforms and to reduce the expense structure in our traditional systems business. As a result, our personnel for research and development decreased for the three months ended March 31, 2018 as compared with the corresponding period in 2017, which resulted in lower compensation and employee benefits of $5.6 million. The decrease was also due to lower expenses for outside services of $0.8 million and expenditures relating to prototype and expendable equipment of $1.8 million. We expect our investments in research and development will be flat to down in absolute dollars from our current levels in the near term.

Sales and Marketing Expenses

The following table sets forth our sales and marketing expenses (dollars in thousands):

	Three Months Ended			
	March 31, 2018	April 1, 2017	Variance in Dollars	Variance in Percent
Sales and marketing	$ 19,901	$ 22,429	$ (2,528)	(11)%
Percent of total revenue	20%	19%		

The decrease in sales and marketing expenses by $2.5 million during the three months ended March 31, 2018 as compared with the corresponding period in 2017 was primarily due to lower sales commissions of $2.1 million and lower travel and marketing expenses of $0.4 million. However, we expect to make incremental investments in sales and marketing in the near-term in order to extend our market reach and grow our business in support of our key strategic initiatives.

General and Administrative Expenses

The following table sets forth our general and administrative expenses (dollars in thousands):

	Three Months Ended			
	March 31, 2018	April 1, 2017	Variance in Dollars	Variance in Percent
General and administrative	$ 9,095	$ 10,257	$ (1,162)	(11)%
Percent of total revenue	9%	9%		

The decrease in general and administrative expenses by $1.2 million for the three months ended March 31, 2018 as compared with the corresponding period in 2017 was due to decreases in compensation and employee benefits of $0.8 million and severance expense of $0.5 million associated with the departure of our former chief financial officer in the prior year period. These decreases were partially offset by higher professional services expense of $0.4 million primarily related to outside consulting services for the migration to a new SaaS-based enterprise resource planning infrastructure.

Gain on Sale of Product Line

During the three months ended March 31, 2018, we recognized a gain of $6.7 million relating to the sale of our outdoor cabinet product line to Clearfield, Inc. for $10.4 million. See Note 10, *"Product Line Divestiture"* of the Notes to Condensed Consolidated Financial Statements in this Quarterly Report on Form 10-Q for further details.

Restructuring Charges

The following table sets forth our restructuring charges (dollars in thousands):

	Three Months Ended			
	March 31, 2018	April 1, 2017	Variance in Dollars	Variance in Percent
Restructuring charges	$ 5,340	$ 699	$ 4,641	664%
Percent of total revenue	5%	1%		

We adopted a restructuring plan in March 2017. This restructuring plan realigned our business, increasing our focus towards investments in software platforms and cloud products, while reducing our expense structure in the traditional systems business. We began to take actions under this plan beginning in March 2017 and recognized $0.7 million of restructuring charges for the first quarter of 2017, consisting of severance and other one-time termination benefits. Actions pursuant to this restructuring plan were complete as of December 31, 2017.

We also established a new restructuring plan in February 2018 to further realign our business resources based on the production releases of our platform offerings. The Company incurred restructuring charges of $5.3 million, consisting primarily of severance and other termination related benefits, in the first quarter of 2018. See “Accrued Restructuring Charges” in Note 5, “Balance Sheet Details” of the Notes to Condensed Consolidated Financial Statements in this Quarterly Report on Form 10-Q for further details.

Provision for Income Taxes

The following table sets forth our provision for income taxes (dollars in thousands):

	Three Months Ended			
	March 31, 2018	April 1, 2017	Variance in Dollars	Variance in Percent
Provision for income taxes	$ 110	$ 673	$ (563)	(84)%
Effective tax rate	(0.9)%	(2.1)%		

The income tax provision for the three months ended March 31, 2018 and April 1, 2017 consisted primarily of foreign and state income taxes. The effective tax rate for the three months ended March 31, 2018 and April 1, 2017 was determined using an estimated annual effective tax rate adjusted for discrete items, if any, that occurred during the respective periods. Our effective tax rate for the three months ended March 31, 2018 and April 1, 2017 is impacted by the change in foreign income tax expense.

Deferred tax assets are recognized if realization of such assets is more likely than not. We have established and continue to maintain a full valuation allowance against our net deferred tax assets, with the exception of certain foreign deferred tax assets, as we do not believe that realization of those assets is more likely than not.

Our effective tax rate may be subject to fluctuation during the year as new information is obtained, which may affect the assumptions used to estimate the annual effective tax rate, including factors such as the mix of forecasted pre-tax earnings in the various jurisdictions in which we operate, valuation allowances against deferred tax assets, the recognition or de-recognition of tax benefits related to uncertain tax positions, and changes in or the interpretation of tax laws in jurisdictions where we conduct business.

Liquidity and Capital Resources

We have funded our operations and investing activities primarily through cash generated from operations, borrowing on our line of credit and sales of our common stock. As of March 31, 2018 , we had cash and cash equivalents of $42.6 million , which consisted of deposits held at banks and money market mutual funds held at major financial institutions.

Operating Activities

Net cash used in operating activities was $5.8 million for the three months ended March 31, 2018 and consisted of a net loss of $11.1 million , partially offset by $7.0 million of cash flow increases reflected in the net change in assets and liabilities and $1.1 million of non-cash charges. Cash flow increases resulting from the net change in assets and liabilities primarily consisted of a decrease in accounts receivable of $25.1 million mainly due to collection from one of our key customers that delayed payment from year end to early January 2018 and a decrease in inventory of $2.5 million primarily due to the timing of inventory receipts from our manufacturers. This was partially offset by a decrease in accounts payable of $17.9 million primarily due to a commensurate decline in cost of revenue and an increase in prepaid expenses and other assets of $2.5 million mainly due to prepayment for software as a service tools and deposits with vendors. Non-cash charges primarily consisted of stock-based compensation of $2.8 million , depreciation and amortization of $2.6 million and gain on sale of product line of $6.7 million.

During the three months ended April 1, 2017, cash used in operating activities increased as we continued to invest in research and development to pursue broader market and customer opportunities. Furthermore, in 2017 we continued to grow our professional services business for turnkey network improvement projects (including Connect America Fund ("CAF") projects) which, as described below, generally involve greater working capital needs at the outset as services and systems are supplied, while revenue and cash collections occur after projects are accepted. Net cash used in operations of $23.5 million in the three months ended April 1, 2017 consisted of a net loss of $33.3 million, partially offset by cash flow increases of $3.0 million reflected in the net change in assets and liabilities and non-cash charges of $6.9 million. Cash flow increases resulting from the net change in assets and liabilities primarily consisted of a net increase in deferred revenue and deferred cost of revenue of $11.5 million as a result of additional deferral of revenue and associated costs related to turnkey network improvement projects, an increase in accrued expenses and other liabilities of $7.0 million primarily due to customer advance payments for turnkey services projects for one of our customers and due to the timing of our payroll, sales commissions and other expenses accruals and payout, and an increase in accounts payable of $0.3 million primarily due to the timing of inventory receipts and payments

to our manufacturers. This was partially offset by an increase in accounts receivable of $12.9 million mainly due to higher revenue billings for turnkey network improvement projects as we completed work for a number of project sites at the end of the first fiscal quarter, an increase in inventory of $2.0 million primarily due to timing of inventory receipts, and an increase in prepaid expenses and other assets of $1.0 million. Non-cash charges primarily consisted of stock-based compensation of $3.5 million, depreciation and amortization of $2.5 million and amortization of intangible assets of $0.8 million.

Investing Activities

Net cash provided by investing activities of $8.5 million for the three months ended March 31, 2018 consisted of cash proceeds of $10.4 million from the sale of our outdoor cabinet product line partially offset by capital expenditures of $1.9 million for purchases of test equipment, computer equipment and software.

Net cash provided by investing activities of $0.4 million for the three months ended April 1, 2017 consisted of net maturities of marketable securities of $2.5 million partially offset by capital expenditures for purchases of test equipment, computer equipment and software of $2.1 million.

Financing Activities

Net cash provided by financing activities was de minimis for the three months ended March 31, 2018 .

Net cash used in financing activities of $1.1 million for the three months ended April 1, 2017 primarily consisted in payment of payroll taxes for the vesting of awards under equity incentive plans of $1.1 million.

Working Capital and Capital Expenditure Needs

Our material cash commitments include contractual obligations under our Loan Agreement, normal recurring trade payables, expense accruals, operating leases and non-cancelable firm purchase commitments. Our working capital needs related to turnkey network improvement arrangements have been substantial, as under such arrangements we generally purchase substantial equipment, components and materials and pay our subcontractors at the outset and through the course of a project, but we may not receive payment from our customers until completion and acceptance of the associated services, which may be one or more quarters later. We expect our working capital needs related to turnkey network improvement projects, including CAF projects, to decrease significantly as we have completed the vast majority of such projects as of December 31, 2017 and expect the volume of such projects to be lower in 2018 relative to 2017. We believe that our outsourced approach to manufacturing provides us significant flexibility in both managing inventory levels and financing our inventory. In the event that our revenue plan does not meet our expectations, we may be required to eliminate or curtail expenditures to mitigate the impact on our working capital.

In August 2017, we entered into the Loan Agreement for a senior secured revolving credit facility with SVB, which provides for a revolving credit facility of up to $30.0 million based on a customary accounts receivable borrowing base, subject to certain exceptions for accounts originating outside the United States and certain specific accounts, which could reduce the amount available to us under the credit facility. The Loan Agreement includes affirmative and negative covenants and requires us to maintain a liquidity ratio at minimum levels specified in the Loan Agreement. The credit facility matures, and all outstanding amounts become due and payable, on August 7, 2019. For the month ended November 30, 2017, we were not able to maintain the minimum Adjusted Quick Ratio (as defined in the Loan Agreement) at the level required in the Loan Agreement, which constituted an event of default. Although SVB waived this event of default effective as of November 30, 2017 and, therefore, this default did not change our ability to borrow under the Loan Agreement, we were required to amend certain covenants under the Loan Agreement and, in February 2018, we entered into an amendment to the Loan Agreement that, among other things, amended certain affirmative financial covenants, including reductions to the required minimum level of the Adjusted Quick Ratio and the inclusion of an additional financial covenant related to the maintenance of Adjusted EBITDA. As of March 31, 2018 , our Adjusted Quick Ratio was 1.05 as compared to the requirement of 0.925. As of March 31, 2018 , our Adjusted EBITDA was negative $2.9 million compared to the requirement of negative $6.0 million. As of March 31, 2018 , we borrowed $30.0 million under this line of credit. Please refer to Note 6, “ *Credit Facility* ” of the Notes to Condensed Consolidated Financial Statements included in Part I, Item 1 of this Quarterly Report on Form 10-Q for more details on this credit facility.

We established a new restructuring plan in early 2018 to further realign our business resources based on the production releases of our platform offerings. We incurred restructuring charges of $5.3 million, consisting of primarily of severance and other termination related benefits, in the first quarter of 2018. These actions are expected to result in annualized savings of over $16.4 million.

In February 2018, we sold our outdoor cabinet product line to Clearfield, Inc. for $10.4 million in cash as wells as the assumption by Clearfield of the related product warranty liabilities and open purchase order commitments with our contract manufacturer. We believe the divestiture of this non-strategic product line reflects our strategic focus on our software and cloud

platforms. We expect the proceeds from this sale will be used to continue our execution on our business strategy. See Note 10, “Product Line Divestiture” of Notes to Condensed Consolidated Financial Statements included in Part I, Item 1 of this Quarterly Report on Form 10-Q.

We believe, based on our current operating plan and expected operating cash flows, that our existing cash and cash equivalents, along with available borrowings under our SVB line of credit, will be sufficient to meet our anticipated cash needs for at least the next twelve months. We expect to draw on the SVB line of credit from time to time to support our working capital needs. Our future capital requirements will depend on many factors including our rate of revenue growth, timing of customer payments and payment terms, particularly of larger customers, the timing and extent of spending to support development efforts, particularly research and development related to growth initiatives such as our software defined access portfolio, our ability to partner with third parties to outsource our research and development projects, our ability to manage product cost efficiencies and maintain product margin levels, the timing, extent and size of turnkey professional services projects and our ability to develop operational efficiencies and successfully scale that business, the expansion of sales and marketing activities, the timing of introductions and customer adoption of new products and enhancements to existing products, the acquisition of new capabilities or technologies and the continued market acceptance of our products. If we are unable to execute to our current operating plan or generate positive operating income and positive cash flows, our liquidity, results of operations and financial condition will be adversely affected. We may need to seek other sources of liquidity, including the sale of equity or incremental borrowings, to support our working capital needs. In addition, we may choose to seek other sources of liquidity even if we believe we have generated sufficient cash flows to support our operational needs. There is no assurance that any other sources of liquidity may be available to us on acceptable terms or at all. If we are unable to generate sufficient cash flows or obtain other sources of liquidity, we will be forced to limit our development activities, reduce our investment in growth initiatives and institute cost-cutting measures, all of which may adversely impact our business and growth.

Contractual Obligations and Commitments

Our principal commitments as of March 31, 2018 consist of our contractual obligations under the Loan Agreement, operating leases for office space and non-cancelable outstanding purchase obligations. The following table summarizes our contractual obligations at March 31, 2018 (in thousands):

	Payments Due by Period				
	Total	**Less Than 1 Year**	**1-3 Years**	**3-5 Years**	**More than 5 Years**
Line of credit, including interest [1]	$ 32,538	$ 1,875	$ 30,663	$ —	$ —
Operating lease obligations [2]	20,367	3,418	5,833	4,781	6,335
Non-cancelable purchase commitments [3]	74,902	57,358	17,544	—	—
	$ 127,807	$ 62,651	$ 54,040	$ 4,781	$ 6,335

(1) Line of credit contractual obligations include projected interest payments over the term of the Loan Agreement, assuming interest rate in effect for the outstanding borrowings as of March 31, 2018 and payment of the borrowings on August 7, 2019, the contractual maturity date of the credit facility. See Note 6, “Credit Facility” of the Notes to Condensed Consolidated Financial Statements included in Part I, Item 1 of this Quarterly Report on Form 10-Q for further discussions regarding our contractual obligations relating to our line of credit.

(2) Future minimum operating lease obligations in the table above include primarily payments for our office space in Petaluma, California, and for our facilities in Minneapolis, Minnesota; Nanjing, China; Richardson, Texas; and San Jose and Santa Barbara, California, which expire at various dates through 2025. See Note 7, “ *Commitments and Contingencies* ” of the Notes to Condensed Consolidated Financial Statements included in Part I, Item 1 of this Quarterly Report on Form 10-Q for further discussion regarding our operating leases.

(3) Represents outstanding purchase commitments for inventory and services to be delivered by our suppliers, including contract manufacturers and engineering service providers. See Note 7, “ *Commitments and Contingencies* ” of the Notes to Condensed Consolidated Financial Statements included in Part I, Item 1 of this Quarterly Report on Form 10-Q for further discussion regarding our outstanding purchase commitments.

Off-Balance Sheet Arrangements

As of March 31, 2018 and December 31, 2017 , we did not have any off-balance sheet arrangements.

ITEM 3. Quantitative and Qualitative Disclosures About Market Risk

Interest Rate Risk

The primary objectives of our investment activity are to preserve principal, provide liquidity and maximize income without significantly increasing risk. By policy, we do not enter into investments for trading or speculative purposes. At March 31, 2018 , we had cash and cash equivalents of $42.6 million , which were held primarily in cash and money market funds. Due to the nature of these money market funds, we believe that we do not have any material exposure to changes in the fair value of our cash equivalents as a result of changes in interest rates.

Our exposure to interest rate risk also relates to the amount of interest we must pay on our borrowings under our revolving credit facility pursuant to our Loan Agreement with SVB. Borrowings under the Loan Agreement will bear interest through maturity at a variable annual rate based upon an annual rate of either a prime rate or a LIBOR rate, plus an applicable margin between 0.50% to 1.50% for prime rate advances and between 2.00% and 3.00% for LIBOR advances based on the Company's maintenance of an applicable liquidity ratio. As of March 31, 2018 , we had $30.0 million outstanding in borrowings under the Loan Agreement.

Foreign Currency Exchange Risk

Our primary foreign currency exposures are described below.

Economic Exposure

The direct effect of foreign currency fluctuations on our sales and expenses has not been material because our sales and expenses are primarily denominated in U.S. dollars ("USD"). However, we are indirectly exposed to changes in foreign currency exchange rates to the extent of our use of foreign contract manufacturers whom we pay in USD. Increases in the local currency rates of these vendors in relation to USD could cause an increase in the price of products that we purchase. Additionally, if the USD strengthens relative to other currencies, such strengthening could have an indirect effect on our sales to the extent it raises the cost of our products to non-U.S. customers and thereby reduces demand. A weaker USD could have the opposite effect. The precise indirect effect of currency fluctuations is difficult to measure or predict because our sales are influenced by many factors in addition to the impact of such currency fluctuations.

Translation Exposure

Our sales contracts are primarily denominated in USD and, therefore, the majority of our revenue is not subject to foreign currency risk. We are directly exposed to changes in foreign exchange rates to the extent such changes affect our expenses related to our foreign assets and liabilities with our subsidiaries in Brazil, China and the United Kingdom, whose functional currencies are the Brazilian Real ("BRL"), Chinese Renminbi ("RMB") and British Pounds Sterling ("GBP"), respectively.

Our operating expenses are incurred primarily in the United States, with a small portion of expenses incurred in Brazil associated with the administration of the entity, in China associated with our research and development operations that are maintained there, and in the United Kingdom for our international sales and marketing activities. Our operating expenses are generally denominated in the functional currencies of our subsidiaries in which the operations are located. The percentages of our operating expenses denominated in the following currencies for the indicated periods were as follows:

	Three Months Ended	
	March 31, 2018	April 1, 2017
USD	89%	90%
RMB	8%	6%
GBP	3%	3%
BRL	—%	1%
	100%	100%

If USD had appreciated or depreciated by 10%, relative to RMB, GBP and BRL, our operating expenses for the first three months of 2018 would have decreased or increased by approximately $0.7 million , or approximately 1% . We do not currently enter into forward exchange contracts to hedge exposure denominated in foreign currencies or any derivative financial instruments. In the future, we may consider entering into hedging transactions to help mitigate our foreign currency exchange risk.

Foreign exchange rate fluctuations may also adversely impact our financial position as the assets and liabilities of our foreign operations are translated into USD in preparing our Condensed Consolidated Balance Sheets. The effect of foreign exchange rate fluctuations on our consolidated financial position for the three months ended March 31, 2018 was a net translation gain of

approximately $ 0.3 million . This gain is recognized as an adjustment to stockholders' equity through accumulated other comprehensive loss.

Transaction Exposure

We have certain assets and liabilities, primarily receivables and accounts payable (including inter-company transactions) that are denominated in currencies other than the relevant entity's functional currency. In certain circumstances, changes in the functional currency value of these assets and liabilities create fluctuations in our reported consolidated financial position, cash flows and results of operations. Transaction gains and losses on these foreign currency denominated assets and liabilities are recognized each period within other income (expense), net in our Condensed Consolidated Statements of Comprehensive Loss. During the three months ended March 31, 2018 , the net loss we recognized related to these foreign exchange assets and liabilities was approximately $0.3 million.

ITEM 4. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

Based on their evaluation as of March 31, 2018 , our Chief Executive Officer and Chief Financial Officer, with the participation of our management, have concluded that our disclosure controls and procedures (as defined in Rules 13a–15(e) and 15d–15(e) under the Exchange Act) were effective at the reasonable assurance level.

Limitations on the Effectiveness of Controls

Our disclosure controls and procedures provide our Chief Executive Officer and Chief Financial Officer reasonable assurance that our disclosure controls and procedures will achieve their objectives. The term "disclosure controls and procedures," as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act, means controls and other procedures of a company that are designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the company's management, including its principal executive and principal financial officers, as appropriate, to allow timely decisions regarding required disclosure. Our management, including our Chief Executive Officer and Chief Financial Officer, does not expect that our disclosure controls and procedures or our internal control over financial reporting can or will prevent all human error. Our management recognizes that a control system, no matter how well designed and implemented, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. Furthermore, the design of a control system must reflect the fact that there are internal resource constraints, and the benefit of controls must be weighed relative to their corresponding costs. Because of the limitations in all control systems, no evaluation of controls can provide complete assurance that all control issues and instances of error, if any, within our company are detected. These inherent limitations include the realities that judgments in decision-making can be faulty, and that breakdowns can occur due to human error or mistake. Additionally, controls, no matter how well designed, could be circumvented by the individual acts of specific persons within the organization. The design of any system of controls is also based in part upon certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated objectives under all potential future conditions.

Changes in Internal Control over Financial Reporting

During the first quarter of 2018, we implemented internal controls for the new revenue standard, Topic 606, adopted during the period, but there was no change in our internal control over financial reporting identified in connection with the evaluation required by Rule 13a-15(d) and 15d-15(d) of the Exchange Act that occurred during the period covered by this report that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

PART II. OTHER INFORMATION

ITEM 1. Legal Proceedings

For a description of our material pending legal proceedings, please refer to Note 7 "Commitments and Contingencies – Litigation" of the Notes to Condensed Consolidated Financial Statements included in Part I, Item 1 of this Quarterly Report on Form 10-Q, which is incorporated by reference.

ITEM 1A. Risk Factors

We have identified the following additional risks and uncertainties that may affect our business, financial condition and/or results of operations. The risks described below include any material changes to and supersede the description of the risk factors disclosed in Part I, Item 1A of our Annual Report on Form 10-K for the year ended December 31, 2017 , as filed with the Securities and Exchange Commission on March 14, 2018 . Investors should carefully consider the risks described below, together with the other information set forth in this Quarterly Report on Form 10-Q, before making any investment decision. The risks described below are not the only ones we face. Additional risks not currently known to us or that we currently believe are immaterial may also significantly impair our business operations. Our business could be harmed by any of these risks. The trading price of our common stock could decline due to any of these risks, and investors may lose all or part of their investment.

Risks Related to Our Business and Industry

Our markets are rapidly changing, which makes it difficult to predict our future revenue and plan our expenses appropriately.

We compete in markets characterized by rapid technological change, changing needs of CSPs, evolving industry standards and frequent introductions of new products and services. We invest significant amounts to pursue innovative technologies that we believe would be adopted by CSPs. In addition, on an ongoing basis we expect to reposition our product and service offerings and introduce new products and services as we encounter rapidly changing CSP requirements and increasing competitive pressures. If we cannot keep pace with rapid technological developments to meet our customers' needs and compete with evolving industry standards or if the technologies we choose to invest in fail to meet customer needs or are not adopted by customers, the use of our products and our revenue could decline, making it difficult to forecast our future revenue and plan our operating expenses appropriately.

We have a history of losses, and we may not be able to generate positive operating income and positive cash flows in the future.

We have experienced net losses in each year of our existence. We incurred net losses of $83.0 million in 2017 , $27.4 million in 2016 , and $26.3 million in 2015 . For the first three months of 2018 , we incurred a net loss of $11.7 million . As of March 31, 2018 , we had an accumulated deficit of $677.3 million .

We expect to continue to incur significant expenses and cash outlays for research and development associated with the platforms and systems that make up our product portfolio, growth of our cloud and services operations, investments in innovative technologies, expansion of our product portfolio, sales and marketing, customer support and general and administrative functions as we expand our business and operations and target new customer segments, primarily larger CSPs including cable MSOs. Given our growth rate and the intense competitive pressures we face, we may be unable to control our operating costs.

We cannot guarantee that we will achieve profitability in the future. We will have to generate and sustain significant and consistent increased revenue, while continuing to control our expenses, in order to achieve and then maintain profitability. We may also incur significant losses in the future for a number of reasons, including the risks discussed in this "Risk Factors" section and other factors that we cannot anticipate. We have incurred higher than expected costs associated with the growth of our professional services business and, if we are unable to scale that business and attain operational efficiencies, we will continue to incur losses. If we are unable to generate positive operating income and positive cash flows from operations, our liquidity, results of operations and financial condition will be adversely affected. If we are unable to generate cash flows to support our operational needs, we may need to seek other sources of liquidity, including additional borrowings, to support our working capital needs. In addition, we may choose to seek other sources of liquidity even if we believe we have generated sufficient cash flows to support our operational needs. There is no assurance that any other sources of liquidity may be available to us on acceptable terms or at all. If we are unable to generate sufficient cash flows or obtain other sources of liquidity, we will be forced to limit our development activities, reduce our investment in growth initiatives and institute cost-cutting measures, all of which would adversely impact our business and growth.

Our quarterly and annual operating results may fluctuate significantly, which may make it difficult to predict our future performance and could cause the market price of our stock to decline.

A number of factors, many of which are outside of our control, may cause or contribute to significant fluctuations in our quarterly and annual operating results. These fluctuations may make financial planning and forecasting difficult. Comparing our operating results on a period-to-period basis may not be meaningful, and you should not rely on our past results as an indication of our future performance. If our revenue or operating results fall below the expectations of investors or securities analysts, or below any guidance we may provide to the market, the market price of our stock would likely decline. Moreover, we may experience delays in recognizing revenue under applicable revenue recognition rules. For example, revenue associated with large turnkey network improvement projects, which include projects that are funded by the CAF program, is generally deferred until customer acceptance is received and may be subject to delays, rework requirements and unexpected costs, among other uncertainties. Certain government-funded contracts, such as those funded by U.S. Department of Agriculture's Rural Utility Service, or RUS, also include acceptance and administrative requirements that delay revenue recognition. The extent of these delays and their impact on our revenue can fluctuate considerably depending on the number and size of purchase orders under these contracts for a given time period. In addition, unanticipated decreases in our available liquidity due to fluctuating operating results could limit our growth and delay implementation of our expansion plans.

In addition to the other risk factors listed in this "Risk Factors" section, factors that have in the past and may continue to contribute to the variability of our operating results include:

- our ability to predict our revenue and reduce and control product costs, including larger scale turnkey network improvement projects that may span several quarters;
- our ability to increase our sales to larger CSPs globally;
- the capital spending patterns of CSPs and any decrease or delay in capital spending by CSPs due to macro-economic conditions, regulatory uncertainties or other reasons;
- the impact of government-sponsored programs on our customers;
- intense competition;
- our ability to develop new products or enhancements that support technological advances and meet changing CSP requirements;
- our ability to achieve market acceptance of our products and CSPs' willingness to deploy our new products;
- the concentration of our customer base as well as our dependence on a limited number of key customers;
- the length and unpredictability of our sales cycles and timing of orders;
- our lack of long-term, committed-volume purchase contracts with our customers;
- our exposure to the credit risks of our customers;
- fluctuations in our gross margin;
- the interoperability of our products with CSP networks;
- our dependence on sole-, single- and limited-source suppliers;
- our ability to manage our relationships with our third-party vendors, including contract manufacturers, ODMs, logistics providers, component suppliers and development partners;
- our ability to forecast our manufacturing requirements and manage our inventory;
- our products' compliance with industry standards;
- our ability to expand our international operations;
- our ability to protect our intellectual property and the cost of doing so;
- the quality of our products, including any undetected hardware defects or bugs in our software;
- our ability to estimate future warranty obligations due to product failure rates;
- our ability to obtain necessary third-party technology licenses at reasonable costs;
- the regulatory and physical impacts of climate change and other natural events;
- the attraction and retention of qualified employees and key management personnel;
- our ability to build and sustain an adequate and secure information technology infrastructure; and
- our ability to maintain proper and effective internal controls.

Our gross margin may fluctuate over time, and our current level of gross margin may not be sustainable.

Our current level of gross margin may not be sustainable and may be adversely affected by numerous factors, including:

- changes in customer, geographic or product mix, including the mix of configurations within each product group;
- the pursuit or addition of new large customers;
- increased price competition, including the impact of customer discounts and rebates;
- our ability to reduce and control product costs;
- an increase in revenue mix toward services, which typically have lower margins;
- changes in component pricing;
- changes in contract manufacturer rates;

- charges incurred due to inventory holding periods if parts ordering does not correctly anticipate product demand;
- introduction of new products and new technologies, which may involve higher component costs;
- our ability to scale our services business in order to gain desired efficiencies;
- changes in shipment volume;
- changes in or increased reliance on distribution channels;
- potential liabilities associated with increased reliance on third-party vendors;
- increased expansion efforts into new or emerging markets;
- increased warranty costs;
- excess and obsolete inventory and inventory holding charges;
- expediting costs incurred to meet customer delivery requirements; and
- potential costs associated with contractual liquidated damages obligations.

An increase in revenue mix towards services will adversely affect our gross margin.

In recent years, there has been greater customer demand for certain professional and support services for our products, which usually have a lower gross margin than product purchases. In particular, we have experienced increased demand for professional services associated with network improvement projects, which typically are turnkey projects whereby we supply products and related professional services such as network planning, product installation, testing and network turn up. Revenue recognized from such professional services may be delayed because of the timing of completion and acceptance of a project or milestone, including third-party delays that may be outside our control. Additionally, if we are unable to meet project deadlines for professional and support services due to our suppliers' inability to meet our demands for components or for any other reasons, we will incur additional costs, including higher premiums to source necessary components, additional costs and expedited fees to meet project deadlines, all of which would negatively impact our gross margin. We also rely upon third-party subcontractors to assist with some of our services projects, which generally result in higher costs and increased risk of cost overruns, including expenditures for costly rework, which would also negatively impact our gross margin. Increases in professional services as a proportion of our revenue mix have resulted in lower overall gross margin and may continue to result in lower overall gross margin in future periods. This negative impact on gross margin is exacerbated in periods where we experience accelerated levels of activity and incur ramp up costs to meet project requirements and customer deadlines. Furthermore, we may not achieve the desired efficiencies and scale in our professional services business, which will have an adverse impact on our gross margin.

Our business is dependent on the capital spending patterns of CSPs, and any decrease or delay in capital spending by CSPs in response to economic conditions, seasonality, uncertainties associated with the implementation of regulatory reform or otherwise would reduce our revenue and harm our business.

Demand for our products depends on the magnitude and timing of capital spending by CSPs as they construct, expand, upgrade and maintain their access networks. Any future economic downturn may cause a slowdown in telecommunications industry spending, including in the specific geographies and markets in which we operate. In response to reduced consumer spending, challenging capital markets or declining liquidity trends, capital spending for network infrastructure projects of CSPs could be delayed or canceled. In addition, capital spending is cyclical in our industry, sporadic among individual CSPs and can change on short notice. As a result, we may not have visibility into changes in spending behavior until nearly the end of a given quarter.

CSP spending on network construction, maintenance, expansion and upgrades is also affected by reductions in their budgets, delays in their purchasing cycles, access to external capital (such as government grants and loan programs or the capital markets) and seasonality and delays in capital allocation decisions. For example, our CSP customers tend to spend less in the first quarter as they are still finalizing their annual budgets and in certain regions customers are also challenged by winter weather conditions that inhibit outside fiber deployment, resulting in weaker demand for our products in the first quarter of our fiscal year. Also, softness in demand across any of our customer markets, including due to macro-economic conditions beyond our control or uncertainties associated with the implementation of regulatory reform, has in the past and could in the future lead to unexpected slowdown in capital expenditures by service providers.

Many factors affecting our results of operations are beyond our control, particularly in the case of large CSP orders and network infrastructure deployments involving multiple vendors and technologies where the achievement of certain thresholds for acceptance is subject to the readiness and performance of the CSP or other providers and changes in CSP requirements or installation plans. Further, CSPs may not pursue infrastructure upgrades that require our access systems and software. Infrastructure improvements may be delayed or prevented by a variety of factors including cost, regulatory obstacles (including uncertainties associated with the implementation of regulatory reforms), mergers, lack of consumer demand for advanced communications services and alternative approaches to service delivery. Reductions in capital expenditures by CSPs, particularly CSPs that are significant customers, may have a material negative impact on our revenue and results of operations

and slow our rate of revenue growth. As a consequence, our results for a particular period may be difficult to predict, and our prior results are not necessarily indicative of results in future periods.

Government-sponsored programs could impact the timing and buying patterns of CSPs, which may cause fluctuations in our operating results.

We sell to CSPs, which include U.S.-based IOCs, which have revenue that is particularly dependent upon interstate and intrastate access charges and federal and state subsidies. The Federal Communications Commission, or FCC, and some states may consider changes to such payments and subsidies, and these changes could reduce IOC revenue. Furthermore, many IOCs use or expect to use government-supported loan programs or grants, such as RUS loans and grants, to finance capital spending. Changes to these programs, including uncertainty from government and administrative change, could reduce the ability of IOCs to access capital and thus reduce our revenue opportunities.

Many of our customers were awarded grants or loans under government stimulus programs such as the Broadband Stimulus programs under the American Recovery and Reinvestment Act of 2009, or ARRA, and the funds distributed under the FCC's CAF program, and have purchased and will continue to purchase products from us or other suppliers while such programs and funding are available. However, customers may substantially curtail purchases as funding winds down or as planned purchases are completed.

In addition, any changes in government regulations and subsidies could cause our customers to change their purchasing decisions, which could have an adverse effect on our operating results and financial condition.

We face intense competition that could reduce our revenue and adversely affect our financial results.

The market for our products is highly competitive, and we expect competition from both established and new companies to increase. Our competitors include companies such as ADTRAN, Arris Group, Inc., Ciena Corporation, Cisco Systems Inc., Huawei Technologies Co. Ltd., Juniper Networks Inc., Nokia Corporation, ZTE Corporation and DASAN Zhone Solutions, Inc., among others.

Our ability to compete successfully depends on a number of factors, including:

- the successful development of new products;
- our ability to anticipate CSP and market requirements and changes in technology and industry standards;
- our ability to differentiate our products from our competitors' offerings based on performance, cost-effectiveness or other factors;
- our ongoing ability to successfully integrate acquired product lines and customer bases into our business;
- our ability to meet increased customer demand for professional services associated with network improvement projects;
- our ability to gain customer acceptance of our products; and
- our ability to market and sell our products.

The broadband access equipment market has undergone and continues to undergo consolidation, as participants have merged, made acquisitions or entered into partnerships or other strategic relationships with one another to offer more comprehensive solutions than they individually had offered. Recent examples include Arris' acquisition of Pace plc in January 2016; Nokia's acquisition of Alcatel-Lucent in January 2016; and the merger of DASAN Zhone Solutions with DASAN Network Solutions in September 2016. We expect this trend to continue as companies attempt to strengthen or maintain their market positions in an evolving industry.

Many of our current or potential competitors have longer operating histories, greater name recognition, larger customer bases and significantly greater financial, technical, sales, marketing and other resources than we do and are better positioned to acquire and offer complementary products and services. Many of our competitors have broader product lines and can offer bundled solutions, which may appeal to certain customers. Our competitors may also invest additional resources in developing more compelling product offerings. Potential customers may also prefer to purchase from their existing suppliers rather than a new supplier, regardless of product performance or features, because the products that we and our competitors offer require a substantial investment of time and funds to qualify and install.

Some of our competitors may offer substantial discounts or rebates to win new customers or to retain existing customers. If we are forced to reduce prices in order to secure customers, we may be unable to sustain gross margin at desired levels or achieve profitability. Competitive pressures could result in increased pricing pressure, reduced profit margin, increased sales and marketing expenses and failure to increase, or the loss of, market share, any of which could reduce our revenue and adversely affect our financial results.

Product development is costly, and if we fail to develop new products or enhancements that meet changing CSP requirements, we could experience lower sales.

Our industry is characterized by rapid technological advances, frequent new product introductions, evolving industry standards and unanticipated changes in subscriber requirements. Our future success will depend significantly on our ability to anticipate and adapt to such changes, and to offer, on a timely and cost-effective basis, products and features that meet changing CSP demands and industry standards. We intend to continue making significant investments in developing new products and enhancing the functionality of our existing products. Developing our products is expensive and complex and involves uncertainties. We may not have sufficient resources to successfully manage lengthy product development cycles. Our research and development expenses were $127.5 million, or 25% of our revenue, in 2017 , $106.9 million , or 23% of our revenue, in 2016 and $89.7 million , or 22% of our revenue, in 2015 . For the first three months of 2018 , our research and development expenses were $25.5 million , or 26% of our revenue. We believe that we must continue to dedicate a significant amount of resources to our research and development efforts, including increased reliance on third-party development partners, to maintain our competitive position. These investments may take several years to generate positive returns, if ever. In addition, we may experience design, manufacturing, marketing and other difficulties that could delay or prevent the development, introduction or marketing of new products and enhancements. If we fail to meet our development targets, demand for our products will decline.

In addition, the introduction of new or enhanced products also requires that we manage the transition from older products to these new or enhanced products in order to minimize disruption in customer ordering patterns, fulfill ongoing customer commitments and ensure that adequate supplies of new products are available for delivery to meet anticipated customer demand. If we fail to maintain compatibility with other software or equipment found in our customers' existing and planned networks, we may face substantially reduced demand for our products, which would reduce our revenue opportunities and market share. Moreover, as customers complete infrastructure deployments, they may require greater levels of service and support than we have provided in the past. We may not be able to provide products, services and support to compete effectively for these market opportunities. If we are unable to anticipate and develop new products or enhancements to our existing products on a timely and cost-effective basis, we could experience lower sales, which would harm our business.

Our new products are early in their life cycles and subject to uncertain market demand. If our customers are unwilling to install our new products or deploy our new services, or we are unable to achieve market acceptance of our new products, our business and financial results will be harmed.

Our new products are early in their life cycles and subject to uncertain market demand. They also may face obstacles in manufacturing, deployment and competitive response. Potential customers may choose not to invest the additional capital required for initial system deployment of new products. In addition, demand for new products is dependent on the success of our customers in deploying and selling advanced services to their subscribers. Our products support a variety of advanced broadband services, such as high-speed Internet, Internet protocol television, mobile broadband, high-definition video and online gaming. If subscriber demand for such services does not grow as expected or declines or our customers are unable or unwilling to deploy and market these services, demand for our products may decrease or fail to grow at rates we anticipate.

Our customer base is concentrated, and there are a limited number of potential customers for our products. The loss of any of our key customers, a decrease in purchases by our key customers or our inability to grow our customer base would adversely impact our revenue and results of operations and any delays in payment by a key customer could negatively impact our cash flows and working capital.

Historically, a large portion of our sales has been to a limited number of customers. For example, one customer accounted for 31% of our revenue in 2017, 21% of our revenue in 2016 and 22% of our revenue in 2015, and another customer accounted for 15% of our revenue in 2016. However, we cannot anticipate the level of purchases in the future by these customers. Customer purchases may be delayed or impacted due to financial difficulties, spending cuts or corporate consolidations. For example, one of our key customers recently completed a large acquisition, which continues to disrupt its normal expenditure plans, including continued delays and reduction in purchases of our products and services as it finalizes its transition activities and corporate strategies. We have experienced and expect to continue to experience delays or declines in purchases by certain CSPs due to deterioration and weakness in their financial condition. Any decrease or delay in purchases and/or capital expenditure plans of any of our key customers, or our inability to grow our sales with existing customers, may have a material negative impact on our revenue and results of operations.

We anticipate that a large portion of our revenue will continue to depend on sales to a limited number of customers. In addition, some larger customers may demand discounts and rebates or desire to purchase their access systems and software from multiple providers. As a result of these factors, our future revenue opportunities may be limited, our margins could be reduced and our profitability may be adversely impacted. The loss of, or reduction in, orders from any key customer would significantly reduce our revenue and harm our business. Furthermore, delays in payment and/or extended payment terms from any of our key or

larger customers could have a material negative impact on our cash flows and working capital to support our business operations.

Furthermore, in recent years, the CSP market has undergone substantial consolidation. Industry consolidation generally has negative implications for equipment suppliers, including a reduction in the number of potential customers, a decrease in aggregate capital spending and greater pricing leverage on the part of CSPs over equipment suppliers. Continued consolidation of the CSP industry and among ILEC and IOC customers, who represent a large part of our business, could make it more difficult for us to grow our customer base, increase sales of our products and maintain adequate gross margin.

Our sales cycles can be long and unpredictable, and our sales efforts require considerable time and expense. As a result, our sales are difficult to predict and may vary substantially from quarter to quarter, which may cause our operating results to fluctuate significantly.

The timing of our revenue is difficult to predict. Our sales efforts often involve educating CSPs about the use and benefits of our products. CSPs typically undertake a significant evaluation process, which frequently involves not only our products but also those of our competitors and results in a lengthy sales cycle. Sales cycles for larger customers are relatively longer and require considerably more time and expense. We spend substantial time, effort and money in our sales efforts without any assurance that our efforts will produce sales. In addition, product purchases are frequently subject to budget constraints, multiple approvals and unplanned administrative, processing and other delays. The timing of revenue related to sales of products and services that have installation requirements may be difficult to predict due to interdependencies that may be beyond our control, such as CSP testing and turn-up protocols or other vendors' products, services or installations of equipment upon which our products and services rely. In addition, larger projects may have longer periods between project commencement and completion and recognition of revenue. Such delays may result in fluctuations in our quarterly revenue. If sales expected from a specific customer for a particular quarter are not realized in that quarter or at all, we may not achieve our revenue forecasts and our financial results would be adversely affected.

Our focus on CSPs with relatively small networks limits our revenue from sales to any one customer and makes our future operating results difficult to predict.

A large portion of our sales efforts continue to be focused on CSPs with relatively small networks, cable MSOs and selected international CSPs. Our current and potential customers generally operate small networks with limited capital expenditure budgets. Accordingly, we believe the potential revenue from the sale of our products to any one of these customers is limited. As a result, we must identify and sell products to new customers each quarter to continue to increase our sales. In addition, the spending patterns of many of our customers are characterized by small and sporadic purchases. As a consequence, we have limited backlog and will likely continue to have limited visibility into future operating results.

We do not have long-term, committed-volume purchase contracts with our customers, and therefore have no guarantee of future revenue from any customer.

We typically have not entered into long-term, committed-volume purchase contracts with our customers, including our key customers which account for a material portion of our revenue. As a result, any of our customers may cease to purchase our products at any time. In addition, our customers may attempt to renegotiate terms of sale, including price and quantity. If any of our key customers stop purchasing our access platforms, systems and software for any reason, our business and results of operations would be harmed.

Our efforts to increase our sales to CSPs globally, including cable MSOs, may be unsuccessful.

Our sales and marketing efforts have been focused on CSPs in North America. Part of our long-term strategy is to increase sales to CSPs globally, including cable MSOs. We have devoted and continue to devote substantial technical, marketing and sales resources to the pursuit of these larger CSPs, who have lengthy equipment qualification and sales cycles, without any assurance of generating sales. In particular, sales to these larger CSPs may require us to upgrade our products to meet more stringent performance criteria and interoperability requirements, develop new customer-specific features or adapt our product to meet international standards. For example, we have been engaged by a large CSP in testing and laboratory trials for our NG-PON2 technology along with our partner Ericsson. We have invested and expect to continue to invest considerable time, effort and expenditures, including investment in product research and development, related to this opportunity without any assurance that our efforts will produce orders or revenue. If we are unable to successfully increase our sales to larger CSPs, our operating results, financial condition, cash flows and long-term growth may be negatively impacted.

We are exposed to the credit risks of our customers; if we have inadequately assessed their creditworthiness, we may have more exposure to accounts receivable risk than we anticipate. Failure to collect our accounts receivable in amounts that we anticipate could adversely affect our operating results and financial condition.

In the course of our sales to customers, we may encounter difficulty collecting accounts receivable and could be exposed to risks associated with uncollectible accounts receivable. We maintain an allowance for doubtful accounts for estimated losses resulting from the inability or unwillingness of our customers to make required payments. However, these allowances are based on our judgment and a variety of factors and assumptions.

We perform credit evaluations of our customers' financial condition. However, our evaluation of the creditworthiness of customers may not be accurate if they do not provide us with timely and accurate financial information, or if their situations change after we evaluate their credit. While we attempt to monitor these situations carefully, adjust our allowances for doubtful accounts as appropriate and take measures to collect accounts receivable balances, we have written down accounts receivable and written off doubtful accounts in prior periods and may be unable to avoid additional write-downs or write-offs of doubtful accounts in the future. Such write-downs or write-offs could negatively affect our operating results for the period in which they occur, and could harm our financial condition.

Our products must interoperate with many software applications and hardware products found in our customers' networks. If we are unable to ensure that our products interoperate properly, our business will be harmed.

Our products must interoperate with our customers' existing and planned networks, which often have varied and complex specifications, utilize multiple protocol standards, include software applications and products from multiple vendors and contain multiple generations of products that have been added over time. As a result, we must continually ensure that our products interoperate properly with these existing and planned networks. To meet these requirements, we must undertake development efforts that require substantial capital investment and employee resources. We may not accomplish these development goals quickly or cost-effectively, if at all. If we fail to maintain compatibility with other software or equipment found in our customers' existing and planned networks, we may face substantially reduced demand for our products, which would reduce our revenue opportunities and market share.

We have entered into interoperability arrangements with a number of equipment and software vendors for the use or integration of their technology with our products. These arrangements give us access to and enable interoperability with various products that we do not otherwise offer. If these relationships fail, we may have to devote substantially more resources to the development of alternative products and processes and our efforts may not be as effective as the combined solutions under our current arrangements. In some cases, these other vendors are either companies that we compete with directly or companies that have extensive relationships with our existing and potential customers and may have influence over the purchasing decisions of those customers. Some of our competitors have stronger relationships with some of our existing and other potential interoperability partners, and as a result, our ability to have successful interoperability arrangements with these companies may be harmed. Our failure to establish or maintain key relationships with third-party equipment and software vendors may harm our ability to successfully sell and market our products.

The quality of our support and services offerings is important to our customers, and if we fail to continue to offer high quality support and services, we could lose customers, which would harm our business.

Once our products are deployed within our customers' networks, they depend on our support organization to resolve any issues relating to those products. A high level of support is critical for the successful marketing and sale of our products. Furthermore, our services to customers have increasingly broadened to include network design and services to deploy our products within our customers' networks, such as our professional services associated with turnkey network improvement projects for our customers. If we do not effectively assist our customers in deploying our products, succeed in helping them quickly resolve post-deployment issues or provide effective ongoing support, it could adversely affect our ability to sell our products to existing customers and harm our reputation with potential new customers. As a result, our failure to maintain high quality support and services could result in the loss of customers, which would harm our business.

Our products are highly technical and may contain undetected hardware defects or software bugs, which could harm our reputation and adversely affect our business.

Our products are highly technical and, when deployed, are critical to the operation of many networks. Our products have contained and may contain undetected defects, bugs or security vulnerabilities. Some defects in our products may only be discovered after a product has been installed and used by customers and may in some cases only be detected under certain circumstances or after extended use. Any errors, bugs, defects or security vulnerabilities discovered in our products after commercial release could result in loss of revenue or delay in revenue recognition, loss of customers and increased service and warranty and retrofit costs, any of which could adversely affect our business, operating results and financial condition. In

addition, we could face claims for product liability, tort or breach of warranty. Our contracts with customers contain provisions relating to warranty disclaimers and liability limitations, which may not be upheld. Defending a lawsuit, regardless of its merit, is costly and may divert management's attention and adversely affect the market's perception of us and our products. In addition, if our business liability insurance coverage proves inadequate or future coverage is unavailable on acceptable terms or at all, our business, operating results and financial condition could be adversely impacted.

Our estimates regarding future warranty or product obligations may change due to product failure rates, shipment volumes, field service obligations and rework costs incurred in correcting product failures. If our estimates change, the liability for warranty or product obligations may be increased, impacting future cost of revenue.

Our products are highly complex, and our product development, manufacturing and integration testing may not be adequate to detect all defects, errors, failures and quality issues. Quality or performance problems for products covered under warranty could adversely impact our reputation and negatively affect our operating results and financial position. The development and production of new products with high complexity often involves problems with software, components and manufacturing methods. If significant warranty or other product obligations arise due to reliability or quality issues arising from defects in software, faulty components or improper manufacturing methods, our operating results and financial position could be negatively impacted by:

- cost associated with fixing software or hardware defects;
- high service and warranty expenses;
- high inventory obsolescence expense;
- delays in collecting accounts receivable;
- payment of liquidated damages for performance failures; and
- declining sales to existing customers.

We do not have manufacturing capabilities, and therefore we depend upon a small number of outside contract manufacturers and original design manufacturers ("ODMs"). We do not have supply contracts with all of these contract manufacturers and ODMs. Consequently, our operations could be disrupted if we encounter problems with any of these contract manufacturers or ODMs.

We do not have internal manufacturing capabilities and rely upon a small number of contract manufacturers and ODMs to build our products. In particular, we rely on Flex for the manufacture of most of our products. Our reliance on a small number of contract manufacturers and ODMs makes us vulnerable to possible capacity constraints and reduced control over component availability, delivery schedules, manufacturing yields and costs.

We do not have supply contracts with some of our contract manufacturers and ODMs. Consequently, these contract manufacturers are not obligated to supply products to us for any specific period, in any specific quantity or at any certain price. In addition, we are dependent upon our contract manufacturers' and ODMs' quality systems and controls and the adherence of such systems and controls to applicable standards. If our contract manufacturers and ODMs fail to maintain levels of quality manufacture suitable for us or our customers, we may incur higher costs and our relationships with our customers may be harmed.

The revenue that Flex and other contract manufacturers generate from our orders represent a relatively small percentage of those manufacturers' overall revenue. As a result, fulfilling our orders may not be considered a priority if such manufacturers are constrained in their ability to fulfill all of their customer obligations in a timely manner. In addition, a substantial part of our manufacturing is done in our contract manufacturer and ODM facilities that are located outside of the United States, including Flex's facilities. We believe that the location of these facilities outside of the United States increases supply risk, including the risk of supply interruptions or reductions in manufacturing quality or controls. Moreover, regulatory changes or government actions relating to export or import regulations, economic sanctions or related legislation, or the possibility of such changes or actions, may create uncertainty or result in changes to or disruption in our operations with our contract manufacturers.

If Flex or any of our other contract manufacturers or ODMs were unable or unwilling to continue manufacturing our products in required volumes and at high quality levels, we would have to identify, qualify and select acceptable alternative contract manufacturers. An alternative contract manufacturer may not be available to us when needed or may not be in a position to satisfy our production requirements at commercially reasonable prices and quality. Any significant interruption in manufacturing would require us to reduce our supply of products to our customers, which in turn would reduce our revenue and harm our relationships with our customers.

We and our business partners, including our contract manufacturers and suppliers, depend on sole-source, single-source and limited-source suppliers for some key components. If we and our business partners are unable to source these components on a timely basis, we will not be able to deliver our products to our customers.

We and our business partners, including our contract manufacturers and suppliers, depend on sole-source, single-source and limited-source suppliers for some key components of our products. For example, certain of our application-specific integrated circuit processors and resistor networks are purchased from sole-source suppliers.

Any of the sole-source, single-source and limited-source suppliers upon whom we or our business partners rely could stop producing our components, cease operations, or enter into exclusive arrangements with our competitors. We may also experience shortages or delay of critical components as a result of growing demand in the industry or other sectors. For example, growth in electronic and IoT devices, wireless products, automotive electronics and artificial intelligence all drive increased demand for certain components, such as chipsets and memory products, which may result in lower availability and increased prices for such components. The cost of components may also be impacted by regulatory requirements. For example, a pending proposal issued in April 2018 by the Trump administration for additional tariffs on products imported from China, including certain communications technology products, may result in increased prices for components for Calix and our business partners.

In addition, purchase volumes of such components may be too low for Calix to be considered a priority customer by these suppliers, and we may not be able to negotiate commercially reasonable terms for our business needs. As a result, these suppliers could stop selling to us and our business partners at commercially reasonable prices, or at all. Any such interruption or delay may force us and our business partners to seek similar components from alternative sources, which may not be available, or result in higher than anticipated prices for such components. Switching suppliers could also require that we redesign our products to accommodate new components, and could require us to re-qualify our products with our customers, which would be costly and time-consuming. Any interruption in the supply of sole-source, single-source or limited-source components for our products would adversely affect our ability to meet scheduled product deliveries to our customers, could result in lost revenue or higher expenses and would harm our business.

We utilize domestic and international third-party vendors to assist in the design, development and manufacture of certain of our products, and to provide logistics services in the distribution of our products. If these vendors fail to provide these services, we could incur additional costs and delays or lose revenue.

From time to time we enter into ODM, original equipment manufacturer, or OEM, and development agreements for the design, development and/or manufacture of certain of our products in order to enable us to offer products on an accelerated basis. For example, a third party assisted in the design and currently manufactures portions of our E-Series systems and nodes family. We also rely upon limited third party vendors for logistics services to distribute our products. If any of these third-party vendors stop providing their services, for any reason, we would have to obtain similar services from alternative sources, which may not be available on commercially reasonable terms, if at all. We also have limited control over disruptions that may occur at the facilities of these third-party partners, such as supply interruptions or manufacturing quality that may occur at ODM and OEM facilities and strikes or systems failures that may interrupt transportation and logistics services. In addition, switching development firms or manufacturers could require us to extend our development timeline and/or re-qualify our products with our customers, which would also be costly and time-consuming. Any interruption in the development, supply or distribution of our products would adversely affect our ability to meet scheduled product deliveries to our customers and could result in lost revenue or higher costs, which would negatively impact our margins and operating results and harm our business.

If we fail to forecast our manufacturing requirements accurately or fail to properly manage our inventory with our contract manufacturers, we could incur additional costs, experience manufacturing delays and lose revenue.

We bear inventory risk under our contract manufacturing arrangements and our ODM and OEM agreements. Lead times for the materials and components that we order through our manufacturers vary significantly and depend on numerous factors, including the specific supplier, contract terms and market demand for a component at a given time. Lead times for certain key materials and components incorporated into our products are currently lengthy, requiring our manufacturers to order materials and components several months in advance of manufacture.

If we overestimate our production requirements, our manufacturers may purchase excess components and build excess inventory. If our manufacturers, at our request, purchase excess components that are unique to our products or build excess products, we could be required to pay for these excess parts or products and their storage costs. Historically, we have reimbursed our primary contract manufacturers for a portion of inventory purchases when our inventory has been rendered excess or obsolete. Examples of when inventory may be rendered excess or obsolete include manufacturing and engineering change orders resulting from design changes or in cases where inventory levels greatly exceed projected demand. If we incur

payments to our manufacturers associated with excess or obsolete inventory, this may have an adverse effect on our gross margins, financial condition and results of operations.

We have experienced unanticipated increases in demand from customers, which resulted in delayed shipments and variable shipping patterns. If we underestimate our product requirements, our manufacturers may have inadequate component inventory, which could interrupt manufacturing of our products, increase our cost of product revenue associated with expedite fees and air freight and/or result in delays or cancellation of sales.

As the market for our products evolves, changing customer requirements may adversely affect the valuation of our inventory.

Customer demand for our products can change rapidly in response to market and technology developments. Demand can be affected not only by customer- or market-specific issues, but also by broader economic and/or geopolitical factors. We may, from time to time, adjust inventory valuations downward in response to our assessment of demand from our customers for specific products or product lines. The related excess inventory charges may have an adverse effect on our gross margin, financial condition and results of operations.

If we fail to comply with evolving industry standards, sales of our existing and future products would be adversely affected.

The markets for our products are characterized by a significant number of standards, both domestic and international, which are evolving as new technologies are developed and deployed. As we expand into adjacent markets and increase our international footprint, we are likely to encounter additional standards. Our products must comply with these standards in order to be widely marketable. In some cases, we are compelled to obtain certifications or authorizations before our products can be introduced, marketed or sold in new markets or to customers that we have not historically served. For example, our ability to maintain Operations System Modification for Intelligent Network Elements certification for our products will affect our ongoing ability to continue to sell our products to Tier 1 CSPs.

In addition, our ability to expand our international operations and create international market demand for our products may be limited by regulations or standards adopted by other countries that may require us to redesign our existing products or develop new products suitable for sale in those countries. Although we believe our products are currently in compliance with domestic and international standards and regulations in countries in which we currently sell, we may not be able to design our products to comply with evolving standards and regulations in the future. This ongoing evolution of standards may directly affect our ability to market or sell our products. Further, the cost of complying with the evolving standards and regulations or the failure to obtain timely domestic or foreign regulatory approvals or certification could prevent us from selling our products where these standards or regulations apply, which would result in lower revenue and lost market share.

We may be unable to successfully expand our international operations. In addition, we may be subject to a variety of international risks that could harm our business.

We currently generate most of our sales from customers in North America and have more limited experience marketing, selling and supporting our products and services outside North America or managing the administrative aspects of a worldwide operation. Our ability to expand our international operations is dependent on our ability to create or maintain international market demand for our products. In addition, as we expand our operations internationally, our support organization will face additional challenges including those associated with delivering support, training and documentation in languages other than English. If we invest substantial time and resources to expand our international operations and are unable to do so successfully and in a timely manner, our business, financial condition and results of operations may suffer.

In the course of expanding our international operations and operating overseas, we will be subject to a variety of risks, including:

- differing regulatory requirements, including tax laws, trade laws, data privacy laws, labor regulations, tariffs, export quotas, custom duties or other trade restrictions;
- liability or damage to our reputation resulting from corruption or unethical business practices in some countries;
- exposure to effects of fluctuations in currency exchange rates if, over time, international customer contracts are increasingly denominated in local currencies;
- longer collection periods and difficulties in collecting accounts receivable;
- greater difficulty supporting and localizing our products;
- different or unique competitive pressures as a result of, among other things, the presence of local equipment suppliers;
- challenges inherent in efficiently managing an increased number of employees over large geographic distances, including the need to implement appropriate systems, policies and compensation, benefits and compliance programs;
- limited or unfavorable intellectual property protection;

- risk of change in international political or economic conditions, terrorist attacks or acts of war; and
- restrictions on the repatriation of earnings.

We engage resellers to promote, sell, install and support our products to some customers in North America and internationally. Their failure to do so or our inability to recruit or retain appropriate resellers may reduce our sales and thus harm our business.

We engage some value-added resellers, or VARs, who provide sales and support services for our products. In particular, the non-exclusive reseller agreement entered into with Ericsson in 2012 has provided us with an extensive global reseller channel. More recently we have partnered with Ericsson on larger customer opportunities. We compete with other telecommunications systems providers for our VARs' business and many of our VARs, including Ericsson, are free to market competing products. Our use of VARs and other third-party support partners and the associated risks of doing so are likely to increase as we expand sales outside of North America. If Ericsson or any other VAR promotes a competitor's products to the detriment of our products or otherwise fails to market our products and services effectively, we could lose market share. In addition, the loss of a key VAR or the failure of VARs to provide adequate customer service could have a negative effect on customer satisfaction and could cause harm to our business. If we do not properly recruit and train VARs to sell, install and service our products, our business, financial condition and results of operations may suffer.

The results of the United Kingdom's referendum on withdrawal from the European Union may have a negative effect on global economic conditions, financial markets and our business.

In June 2016, a majority of voters in the United Kingdom elected to withdraw from the European Union in a national referendum. The referendum was advisory, and the terms of any withdrawal are subject to a negotiation period that could last at least two years after the government of the United Kingdom formally initiated the withdrawal process in March 2017. Nevertheless, the referendum has created significant uncertainty about the future relationship between the United Kingdom and the European Union, including with respect to the laws and regulations that will apply as the United Kingdom determines which European Union laws to replace or replicate in the event of a withdrawal. The referendum has also given rise to calls for the governments of other European Union member states to consider withdrawal. These developments, or the perception that any of them could occur, have had and may continue to have a material adverse effect on global economic conditions and the stability of global financial markets, and may significantly reduce global market liquidity and restrict the ability of key market participants to operate in certain financial markets. Any of these factors could depress economic activity and restrict our access to capital, or the access to capital of our customers or partners, which could have a material adverse effect on our operations in the United Kingdom, and generally on our business, financial condition and results of operations and reduce the price of our securities.

We may have difficulty evolving and scaling our business and operations to meet customer and market demand, which could result in lower profitability or cause us to fail to execute on our business strategies.

In order to grow our business, we will need to continually evolve and scale our business and operations to meet customer and market demand. Evolving and scaling our business and operations places increased demands on our management as well as our financial and operational resources to effectively:

- manage organizational change;
- manage a larger organization;
- accelerate and/or refocus research and development activities;
- expand our manufacturing, supply chain and distribution capacity;
- increase our sales and marketing efforts;
- broaden our customer-support and services capabilities;
- maintain or increase operational efficiencies;
- scale support operations in a cost-effective manner;
- implement appropriate operational and financial systems; and
- maintain effective financial disclosure controls and procedures.

If we cannot evolve and scale our business and operations effectively, we may not be able to execute our business strategies in a cost-effective manner and our business, financial condition, profitability and results of operations could be adversely affected.

We may not be able to protect our intellectual property, which could impair our ability to compete effectively.

We depend on certain proprietary technology for our success and ability to compete. We rely on intellectual property laws as well as nondisclosure agreements, licensing arrangements and confidentiality provisions to establish and protect our proprietary rights. U.S. patent, copyright and trade secret laws afford us only limited protection, and the laws of some foreign countries do not protect proprietary rights to the same extent. Our pending patent applications may not result in issued patents, and our

issued patents may not be enforceable. Any infringement of our proprietary rights could result in significant litigation costs. Further, any failure by us to adequately protect our proprietary rights could result in our competitors offering similar products, resulting in the loss of our competitive advantage and decreased sales.

Despite our efforts to protect our proprietary rights, attempts may be made to copy or reverse engineer aspects of our products or to obtain and use information that we regard as proprietary. Accordingly, we may be unable to protect our proprietary rights against unauthorized third-party copying or use. Furthermore, policing the unauthorized use of our intellectual property is difficult and costly. Litigation may be necessary in the future to enforce our intellectual property rights, to protect our trade secrets or to determine the validity and scope of the proprietary rights of others. Litigation could result in substantial costs, diversion of resources and harm to our business.

We could become subject to litigation regarding intellectual property rights that could harm our business.

We may be subject to intellectual property infringement claims that are costly to defend and could limit our ability to use some technologies in the future. Third parties may assert patent, copyright, trademark or other intellectual property rights to technologies or rights that are important to our business. Such claims may originate from non-practicing entities, patent holding companies or other adverse patent owners who have no relevant product revenue, and therefore, our own issued and pending patents may provide little or no deterrence to suit from these entities.

We have received in the past and expect that in the future we may receive communications from competitors and other companies alleging that we may be infringing their patents, trade secrets or other intellectual property rights; offering licenses to such intellectual property; threatening litigation or requiring us to act as a third-party witness in litigation. In addition, we have agreed, and may in the future agree, to indemnify our customers for expenses or liabilities resulting from certain claimed infringements of patents, trademarks or copyrights of third parties. Such indemnification may require us to be financially responsible for claims made against our customers, including costs of litigation and damages awarded, which could negatively impact our results of operations. Any claims asserting that our products infringe the proprietary rights of third parties, with or without merit, could be time-consuming, result in costly litigation and divert the efforts of our engineering teams and management. These claims could also result in product shipment delays or require us to modify our products or enter into royalty or licensing agreements. Such royalty or licensing agreements, if required, may not be available to us on acceptable terms, if at all.

Our use of open source software could impose limitations on our ability to commercialize our products.

We incorporate open source software into our products. Although we closely monitor our use of open source software, the terms of many open source software licenses have not been interpreted by the courts, and there is a risk that such licenses could be construed in a manner that could impose unanticipated conditions or restrictions on our ability to sell our products. In such event, we could be required to make our proprietary software generally available to third parties, including competitors, at no cost, to seek licenses from third parties in order to continue offering our products, to re-engineer our products or to discontinue the sale of our products in the event re-engineering cannot be accomplished on a timely basis or at all, any of which could adversely affect our revenue and operating expenses.

If we are unable to obtain necessary third-party technology licenses, our ability to develop new products or product enhancements may be impaired.

While our current licenses of third-party technology generally relate to commercially available off-the-shelf technology, we may from time to time be required to license additional technology from third parties to develop new products or product enhancements. These third-party licenses may be unavailable to us on commercially reasonable terms, if at all. Our inability to obtain necessary third-party licenses may force us to obtain substitute technology of lower quality or performance standards or at greater cost, or may increase the time-to-market of our products or product enhancements, any of which could harm the competitiveness of our products and result in lost revenue.

Our ability to incur debt and the use of our funds could be limited by borrowing base restrictions and restrictive covenants in our loan and security agreement for our revolving credit facility.

The Loan Agreement we entered into in August 2017 with SVB provides for a revolving credit facility based on a customary accounts receivable borrowing base, subject to certain exceptions and exclusions, such that borrowings available to us are limited by eligible accounts receivable (as defined in the Loan Agreement). We are dependent on our existing cash, cash equivalents and borrowings available under our Loan Agreement to provide adequate funds for ongoing operations, planned capital expenditures and working capital requirements for at least the next twelve months. If our financial position deteriorates, our borrowing capacity under the credit facility may be reduced, which would adversely impact our business and growth. In addition, the Loan Agreement includes affirmative and negative covenants and requires that we maintain a specified minimum

liquidity ratio and maintenance of Adjusted EBITDA (as defined in the Loan Agreement). The negative covenants also include, among others, restrictions on our and our subsidiaries' transferring collateral, making changes to the nature of our business or the business of the applicable subsidiary, incurring additional indebtedness, engaging in mergers or acquisitions, paying dividends or making other distributions, making investments, engaging in transactions with affiliates, making payments in respect of subordinated debt, creating liens and selling assets, in each case subject to certain exceptions. Failure to maintain these restrictive covenants and requirements can limit the amount of borrowings that are available to us, increase the cost of borrowings under the facility, and/or require us to make immediate payments to reduce borrowings. For the month ended November 30, 2017, we were not able to maintain the minimum Adjusted Quick Ratio (as defined in the Loan Agreement) at the level required in the Loan Agreement, which constituted an event of default. Although SVB waived this event of default effective as of November 30, 2017 and, therefore, this default did not terminate our ability to borrow under the Loan Agreement, we were required to pay an amendment fee and amend certain covenants under the Loan Agreement and, in February 2018, we entered into an amendment to the Loan Agreement that, among other things, amended certain affirmative financial covenants, including reductions to the required minimum level of the Adjusted Quick Ratio (as defined in the Loan Agreement) and the inclusion of an additional financial covenant related to the maintenance of Adjusted EBITDA (as defined in the Loan Agreement). Events beyond our control could have a material adverse impact on our results of operations, financial condition or liquidity, in which case we may not be able to meet our financial covenants. The Loan Agreement covenants may also affect our ability to obtain future financing and to pursue attractive business opportunities and our flexibility in planning for, and reacting to, changes in business conditions. These covenants could place us at a disadvantage compared to some of our competitors, who may have fewer restrictive covenants and may not be required to operate under these restrictions.

Our failure or the failure of our manufacturers to comply with environmental and other legal regulations could adversely impact our results of operations.

The manufacture, assembly and testing of our products may require the use of hazardous materials that are subject to environmental, health and safety regulations, or materials subject to laws restricting the use of conflict minerals. Our failure or the failure of our contract manufacturers, ODMs and OEMs to comply with any of these requirements could result in regulatory penalties, legal claims or disruption of production. In addition, our failure or the failure of our manufacturers to properly manage the use, transportation, emission, discharge, storage, recycling or disposal of hazardous materials could subject us to increased costs or liabilities. Existing and future environmental regulations and other legal requirements may restrict our use of certain materials to manufacture, assemble and test products. Any of these consequences could adversely impact our results of operations by increasing our expenses and/or requiring us to alter our manufacturing processes.

Regulatory and physical impacts of climate change and other natural events may affect our customers and our contract manufacturers, resulting in adverse effects on our operating results.

As emissions of greenhouse gases continue to alter the composition of the atmosphere, affecting large-scale weather patterns and the global climate, any new regulation of greenhouse gas emissions may result in additional costs to our customers and our contract manufacturers. In addition, the physical impacts of climate change and other natural events, including changes in weather patterns, drought, rising ocean and temperature levels, earthquakes and tsunamis may impact our customers, suppliers and contract manufacturers, and our operations. These potential physical effects may adversely affect our revenue, costs, production and delivery schedules, and cause harm to our results of operations and financial condition.

We have in the past pursued, and may in the future continue to pursue, acquisitions which involve a number of risks and uncertainties. If we are unable to address and resolve these risks and uncertainties successfully, such acquisitions could disrupt our business and result in higher costs than we anticipate.

We acquired Occam in 2011 and Ericsson's fiber access assets in 2012. We may in the future acquire other businesses, products or technologies to expand our product offerings and capabilities, customer base and business. We have evaluated and expect to continue to evaluate a wide array of potential strategic transactions. We have limited experience making such acquisitions or integrating these businesses after such acquisitions. Unanticipated costs to us from these historical transactions as well as both anticipated and unanticipated costs to us related to any future transactions could exceed amounts that are covered by insurance and could have a material adverse impact on our financial condition and results of operations. For example, the Occam acquisition resulted in litigation with defense costs that were in excess of available directors and officers liability insurance coverage, including costs for which coverage was denied by our insurance carriers. In addition, the anticipated benefit of any acquisitions may never materialize or the process of integrating acquired businesses, products or technologies may create unforeseen operating difficulties and expenditures.

Some of the areas where we have experienced and may in the future experience acquisition-related risks include:

- expenses and distractions, including diversion of management time related to litigation;

- expenses and distractions related to potential claims resulting from any possible future acquisitions, whether or not they are completed;
- retaining and integrating employees from acquired businesses;
- issuance of dilutive equity securities or incurrence of debt;
- integrating various accounting, management, information, human resource and other systems to permit effective management;
- incurring possible write-offs, impairment charges, contingent liabilities, amortization expense of intangible assets or impairment of goodwill and intangible assets with finite useful lives;
- difficulties integrating and supporting acquired products or technologies;
- unexpected capital expenditure requirements;
- insufficient revenue to offset increased expenses associated with acquisitions; and
- opportunity costs associated with committing capital to such acquisitions.

If our goodwill becomes impaired, we may be required to record a significant charge to our results of operations. We review our goodwill for impairment annually or when events or changes in circumstances indicate the carrying value may not be recoverable, such as a sustained or significant decline in stock price and market capitalization. If the carrying value of goodwill was deemed to be impaired, an impairment loss equal to the amount by which the carrying amount exceeds the estimated fair value would be recognized. Any such impairment could materially and adversely affect our financial condition and results of operations.

Foreign acquisitions would involve risks in addition to those mentioned above, including those related to integration of operations across different cultures and languages, currency risks and the particular economic, political and regulatory risks associated with specific countries. We may not be able to address these risks and uncertainties successfully, or at all, without incurring significant costs, delays or other operating problems.

Our inability to address or anticipate any of these risks and uncertainties could disrupt our business and could have a material impact on our financial condition and results of operations.

Our use of and reliance upon development resources in China may expose us to unanticipated costs or liabilities.

We operate a wholly foreign owned enterprise in Nanjing, China, where a dedicated team of engineers performs product development, quality assurance, cost reduction and other engineering work. We also outsource a portion of our software development to a team of software engineers based in Shenyang, China. Our reliance upon development resources in China may not enable us to achieve meaningful product cost reductions or greater resource efficiency. Further, our development efforts and other operations in China involve significant risks, including:

- difficulty hiring and retaining appropriate engineering resources due to intense competition for such resources and resulting wage inflation;
- the knowledge transfer related to our technology and exposure to misappropriation of intellectual property or confidential information, including information that is proprietary to us, our customers and third parties;
- heightened exposure to changes in the economic, security and political conditions of China;
- fluctuation in currency exchange rates and tax risks associated with international operations;
- development efforts that do not meet our requirements because of language, cultural or other differences associated with international operations, resulting in errors or delays; and
- uncertainty with regards to tariffs imposed by the Trump administration on products imported from China and future actions the Trump administration may take with respect to international trade agreements and U.S. tax provisions related to international commerce that could adversely affect our international operations.

Difficulties resulting from the factors above and other risks related to our operations in China could expose us to increased expense, impair our development efforts, harm our competitive position and damage our reputation.

Our customers are subject to government regulation, and changes in current or future laws or regulations that negatively impact our customers could harm our business.

The FCC has jurisdiction over all of our U.S. customers. FCC regulatory policies that create disincentives for investment in access network infrastructure or impact the competitive environment in which our customers operate may harm our business. For example, future FCC regulation affecting providers of broadband Internet access services could impede the penetration of our customers into certain markets or affect the prices they may charge in such markets. Similarly, changes to regulatory tariff requirements or other regulations relating to pricing or terms of carriage on communication networks could slow the development or expansion of network infrastructures. Consequently, such changes could adversely affect the sale of our products and services. Furthermore, many of our customers are subject to FCC rate regulation of interstate telecommunications services and are recipients of CAF capital incentive payments, which are intended to subsidize broadband and

telecommunications services in areas that are expensive to serve. Changes to these programs, rules and regulations that could affect the ability of IOCs to access capital, and which could in turn reduce our revenue opportunities, remain possible.

In addition, many of our customers are subject to state regulation of intrastate telecommunications services, including rates for such services, and may also receive funding from state universal service funds. Changes in rate regulations or universal service funding rules, either at the U.S. federal or state level, could adversely affect our customers' revenue and capital spending plans. Moreover, various international regulatory bodies have jurisdiction over certain of our non-U.S. customers. Changes in these domestic and international standards, laws and regulations, or judgments in favor of plaintiffs in lawsuits against CSPs based on changed standards, laws and regulations could adversely affect the development of broadband networks and services. This, in turn, could directly or indirectly adversely impact the communications industry in which our customers operate.

Many jurisdictions, including international governments and regulators, are also evaluating, implementing and enforcing regulations relating to cyber security, privacy and data protection, which can affect the market and requirements for networking and communications equipment. To the extent our customers are adversely affected by laws or regulations regarding their business, products or service offerings, our business, financial condition and results of operations would suffer.

Privacy concerns relating to our products and services could affect our business practices, damage our reputation and deter customers from purchasing our products and services.

Government and regulatory authorities in the United States and around the world have implemented and are continuing to implement laws and regulations concerning data protection. For example, in July 2016, the European Commission adopted the EU-U.S. Privacy Shield to replace Safe Harbor as a compliance mechanism for the transfer of personal data from the European Union to the United States. In addition, the General Data Protection Regulation adopted by the EU Parliament goes into effect in May 2018 to harmonize data privacy laws across Europe. The interpretation and application of these data protection laws and regulations are often uncertain and in flux, and it is possible that they may be interpreted and applied in a manner that is inconsistent with our data practices. Complying with these various laws could cause us to incur substantial costs or require us to change our business practices in a manner adverse to our business.

Concerns about or regulatory actions involving our practices with regard to the collection, use, disclosure, or security of customer information or other privacy related matters, even if unfounded, could damage our reputation and adversely affect operating results. While we strive to comply with all data protection laws and regulations, the failure or perceived failure to comply may result in inquiries and other proceedings or actions against us by government entities or others, or could cause us to lose customers, which could potentially have an adverse effect on our business.

We are subject to cybersecurity and privacy risks.

Our information systems and data centers (including third-party data centers) contain sensitive information that help us operate our business efficiently, interface with and provide software solutions to customers, maintain financial accuracy and accurately produce our financial statements. In addition, we host sensitive data in data centers, including subscriber data, in the course of providing services and solutions to customers. Malicious hackers may attempt to gain access to our network or data centers; steal proprietary information related to our business, products, employees, and customers; or interrupt our systems and services or those of our customers or others. The theft, loss, or misuse of personal data collected, used, stored or transferred by us to run our business could result in significantly increased security and remediation costs or costs related to defending legal claims. If we do not allocate and effectively manage the resources necessary to build and sustain the proper technology infrastructure, we could be subject to cyberattacks, transaction errors, processing inefficiencies, the loss of customers, business disruptions or the loss of or damage to intellectual property through security breaches. If our data management systems, including those of our third-party data centers, do not effectively and securely collect, store, process and report relevant data for the operation of our business, whether due to cyberattacks, equipment malfunction or constraints, software deficiencies or human error, our ability to effectively plan, forecast and execute our business plan and comply with laws and regulations will be impaired, perhaps materially. Any such impairment could materially and adversely affect our financial condition, results of operations, cash flows, the timeliness with which we internally and externally report our operating results and our business and reputation.

While we have applied multiple layers of security to control access to our information technology systems and use encryption and authentication technologies to secure the transmission and storage of data, these security measures may be compromised as a result of third-party security breaches, employee error, malfeasance, faulty password management or other irregularity, and result in persons obtaining unauthorized access to our data or accounts. Third parties may attempt to fraudulently induce employees into disclosing user names, passwords or other sensitive information, which may in turn be used to access our information technology systems.

While we seek to apply best practice policies and devote significant resources to network security, data encryption and other security measures to protect our information technology and communications systems and data, these security measures cannot provide absolute security. We or our third-party hosting providers may experience a system breach and be unable to protect

sensitive data. The costs to us to eliminate or alleviate network security problems, bugs, viruses, worms, malicious software programs and security vulnerabilities could be significant, and our efforts to address these problems may not be successful and could result in unexpected interruptions, delays and cessation of service which may harm our business operations.

Although our systems have been designed around industry-standard architectures to reduce downtime in the event of outages or catastrophic occurrences, they remain vulnerable to damage or interruption from earthquakes, floods, fires, power loss, telecommunication failures, terrorist attacks, cyberattacks, viruses, denial-of-service attacks, human error, hardware or software defects or malfunctions, and similar events or disruptions. Some of our systems are not fully redundant, and our disaster recovery planning is not sufficient for all eventualities. Our systems are also subject to break-ins, sabotage and intentional acts of vandalism. Despite any precautions we may take, the occurrence of a natural disaster, a decision by any of our third-party hosting providers to close a facility we use without adequate notice for financial or other reasons, a data breach or other unanticipated problems at our hosting facilities could cause system interruptions and delays which may result in loss of critical data and lengthy interruptions in our services.

We are subject to governmental export and import controls that could subject us to liability or impair our ability to compete in additional international markets.

Our products are subject to U.S. export and trade controls and restrictions. International shipments of certain of our products may require export licenses or are subject to additional requirements for export. In addition, the import laws of other countries may limit our ability to distribute our products, or our customers' ability to buy and use our products, in those countries. Changes in our products or changes in export and import regulations or duties may create delays in the introduction of our products in international markets, prevent our customers with international operations from deploying our products or, in some cases, prevent the export or import of our products to certain countries altogether. Any change in export or import regulations, duties or related legislation, shift in approach to the enforcement or scope of existing regulations, or change in the countries, persons or technologies targeted by such regulations, could negatively impact our ability to sell, profitably or at all, our products to existing or potential international customers.

If we lose any of our key personnel, or are unable to attract, train and retain qualified personnel, our ability to manage our business and continue our growth would be negatively impacted.

Our success depends, in large part, on the continued contributions of our key management, engineering, sales and marketing personnel, many of whom are highly skilled and would be difficult to replace. None of our senior management or key technical or sales personnel is bound by a written employment contract to remain with us for a specified period. In addition, we do not currently maintain key person life insurance covering our key personnel. If we lose the services of any key personnel, our business, financial condition and results of operations may suffer.

Competition for skilled personnel, particularly those specializing in engineering and sales, is intense. We cannot be certain that we will be successful in attracting and retaining qualified personnel, or that newly hired personnel will function effectively, both individually and as a group. In particular, we must continue to expand our direct sales force, including hiring additional sales managers, to grow our customer base and increase sales. If we are unable to effectively recruit, hire and utilize new employees, execution of our business strategy and our ability to react to changing market conditions may be impeded, and our business, financial condition and results of operations may suffer.

Volatility or lack of performance in our stock price may also affect our ability to attract and retain our key personnel. Our executive officers and employees hold a substantial number of shares of our common stock and vested stock options. Employees may be more likely to leave us if the shares they own or the shares underlying their equity awards decline in value, or if the exercise prices of stock options that they hold are significantly above the market price of our common stock. If we are unable to retain our employees, our business, operating results and financial condition will be harmed.

If we fail to maintain proper and effective internal controls, our ability to produce accurate financial statements on a timely basis could be impaired, which would adversely affect our operating results, our ability to operate our business and our stock price.

Ensuring that we have adequate internal financial and accounting controls and procedures in place to produce accurate financial statements on a timely basis is a costly and time-consuming effort that needs to be re-evaluated frequently. We have in the past discovered, and may in the future discover areas of our internal financial and accounting controls and procedures that need improvement.

Our management is responsible for establishing and maintaining adequate internal control over financial reporting to provide reasonable assurance regarding the reliability of our financial reporting and the preparation of financial statements for external purposes in accordance with U.S. generally accepted accounting principles. Our management does not expect that our internal control over financial reporting will prevent or detect all error and all fraud. A control system, no matter how well designed and

operated, can provide only reasonable, not absolute, assurance that the control system's objectives will be met. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that misstatements due to error or fraud will not occur or that all control issues and instances of fraud, if any, within our company will have been detected.

We are required to comply with Section 404 of the Sarbanes-Oxley Act, or SOX, which requires us to expend significant resources in developing the required documentation and testing procedures. We cannot be certain that the actions we have taken and are taking to improve our internal controls over financial reporting will be sufficient to maintain effective internal controls over financial reporting in subsequent reporting periods or that we will be able to implement our planned processes and procedures in a timely manner. In addition, new and revised accounting standards and financial reporting requirements may occur in the future and implementing changes required by new standards, requirements or laws may require a significant expenditure of our management's time, attention and resources which may adversely affect our reported financial results. If we are unable to produce accurate financial statements on a timely basis, investors could lose confidence in the reliability of our financial statements, which could cause the market price of our common stock to decline and make it more difficult for us to finance our operations and growth.

We incur significant costs as a result of operating as a public company, which may adversely affect our operating results and financial condition.

As a public company, we incur significant accounting, legal and other expenses, including costs associated with our public company reporting requirements. We also anticipate that we will continue to incur costs associated with corporate governance requirements, including requirements and rules under SOX and the Dodd-Frank Wall Street Reform and Consumer Protection Act, or Dodd-Frank, among other rules and regulations implemented by the SEC, as well as listing requirements of the New York Stock Exchange, or NYSE. Furthermore, these laws and regulations could make it difficult or costly for us to obtain certain types of insurance, including director and officer liability insurance, and we may be forced to accept reduced policy limits and coverage or incur substantially higher costs to obtain the same or similar coverage. The impact of these requirements could also make it difficult for us to attract and retain qualified persons to serve on our Board of Directors, our board committees or as executive officers.

New laws and regulations as well as changes to existing laws and regulations affecting public companies, including the provisions of SOX and the Dodd-Frank Act and rules adopted by the SEC and the NYSE, would likely result in increased costs to us as we respond to their requirements. We continue to invest resources to comply with evolving laws and regulations, and this investment may result in increased general and administrative expense.

Risks Related to Ownership of Our Common Stock

Our stock price may continue to be volatile, and the value of an investment in our common stock may decline.

The trading price of our common stock has been, and is likely to continue to be, volatile, which means that it could decline substantially within a short period of time and could fluctuate widely in response to various factors, some of which are beyond our control. These factors include those discussed in the "Risk Factors" section of this Annual Report on Form 10-K and others such as:

- quarterly variations in our results of operations or those of our competitors;
- failure to meet any guidance that we have previously provided regarding our anticipated results;
- changes in earnings estimates or recommendations by securities analysts;
- failure to meet securities analysts' estimates;
- announcements by us or our competitors of new products, significant contracts, commercial relationships, acquisitions or capital commitments;
- developments with respect to intellectual property rights;
- our ability to develop and market new and enhanced products on a timely basis;
- our commencement of, or involvement in, litigation and developments relating to such litigation;
- changes in governmental regulations; and
- a slowdown in the communications industry or the general economy.

In recent years, the stock market in general, and the market for technology companies in particular, has experienced extreme price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of those companies. Broad market and industry factors may seriously affect the market price of our common stock, regardless of our actual operating performance. In addition, in the past, following periods of volatility in the overall market and the market price of a particular company's securities, securities class action litigation has often been instituted against these companies. This litigation, if instituted against us, could result in substantial costs and a diversion of our management's attention and resources.

If securities or industry analysts do not publish research or reports about our business or if they issue an adverse or misleading opinion regarding our stock, our stock price and trading volume could decline.

The trading market for our common stock will be influenced by the research and reports that industry or securities analysts publish about us or our business. If any of the analysts who cover us issue an adverse or misleading opinion regarding our stock, our stock price would likely decline. If several of these analysts cease coverage of our company or fail to publish reports on us regularly, we could lose visibility in the financial markets, which in turn could cause our stock price or trading volume to decline.

Provisions in our charter documents and under Delaware law could discourage a takeover that stockholders may consider favorable and may lead to entrenchment of our management and Board of Directors.

Our amended and restated certificate of incorporation and amended and restated bylaws contain provisions that could have the effect of delaying or preventing changes in control or changes in our management or our Board of Directors. These provisions include:

- a classified Board of Directors with three-year staggered terms, which may delay the ability of stockholders to change the membership of a majority of our Board of Directors;
- no cumulative voting in the election of directors, which limits the ability of minority stockholders to elect director candidates;
- the exclusive right of our Board of Directors to elect a director to fill a vacancy created by the expansion of the Board of Directors or the resignation, death or removal of a director, which prevents stockholders from being able to fill vacancies on our Board of Directors;
- the ability of our Board of Directors to issue shares of preferred stock and to determine the price and other terms of those shares, including preferences and voting rights, without stockholder approval, which could be used to significantly dilute the ownership of a hostile acquirer;
- a prohibition on stockholder action by written consent, which forces stockholder action to be taken at an annual or special meeting of our stockholders;
- the requirement that a special meeting of stockholders may be called only by the chairman of the Board of Directors, the chief executive officer or the Board of Directors, which may delay the ability of our stockholders to force consideration of a proposal or to take action, including the removal of directors; and
- advance notice procedures that stockholders must comply with in order to nominate candidates to our Board of Directors or to propose matters to be acted upon at a stockholders' meeting, which may discourage or deter a potential acquirer from conducting a solicitation of proxies to elect the acquirer's own slate of directors or otherwise attempting to obtain control of us.

We are also subject to certain anti-takeover provisions under Delaware law. Under Delaware law, a corporation may not, in general, engage in a business combination with any holder of 15% or more of its capital stock unless the holder has held the stock for three years or, among other things, the Board of Directors has approved the transaction.

We may need additional capital in the future to finance our business.

We may need to raise additional capital to fund operations in the future. Although we believe that, based on our current level of operations and anticipated growth, our existing cash, cash equivalents and borrowings available under our Loan Agreement will provide adequate funds for ongoing operations, planned capital expenditures and working capital requirements for at least the next twelve months, our working capital needs and cash use have continued to increase to support our growth initiatives, and we may need additional capital if our current plans and assumptions change. Failure to maintain certain restrictive covenants and requirements under the Loan Agreement could result in limiting the amount of borrowings that are available to us, increase the cost of borrowings under the credit facility, and/or cause us to make immediate payments to reduce borrowings or result in an event of default. If future financings involve the issuance of equity securities, our then-existing stockholders would suffer dilution. If we raise additional debt financing, we may be subject to restrictive covenants that limit our ability to conduct our business. If we are unable to generate positive operating income and positive cash flows from operations, our liquidity, results of operations and financial condition will be adversely affected. Furthermore, if we are unable to generate sufficient cash flows to support our operational needs, we may need to seek additional sources of liquidity, including borrowings, to support our working capital needs. In addition, we may choose to seek other sources of liquidity even if we believe we have generated sufficient cash flows to support our operational needs. There is no assurance that any other sources of liquidity may be available to us on acceptable terms or at all. If we are unable to generate sufficient cash flows or obtain other sources of liquidity, we will be forced to limit our development activities, reduce our investment in growth initiatives and institute cost-cutting measures, all of which would adversely impact our business and growth.

We do not currently intend to pay dividends on our common stock and, consequently, our stockholders' ability to achieve a return on their investment will depend on appreciation in the price of our common stock.

We do not currently intend to pay any cash dividends on our common stock for the foreseeable future. We currently intend to invest our future earnings, if any, to fund our growth. Additionally, the terms of our credit facility restrict our ability to pay dividends under certain circumstances. Therefore, our stockholders are not likely to receive any dividends on our common stock for the foreseeable future.

ITEM 2. Unregistered Sales of Equity Securities and Use of Proceeds

None.

ITEM 3. Defaults Upon Senior Securities

None.

ITEM 4. Mine Safety Disclosures

Not applicable.

ITEM 5. Other Information

None.

ITEM 6. Exhibits

Exhibit Number	Description
10.1	First Amendment to Loan and Security Agreement dated February 13, 2018 between Silicon Valley Bank and Calix, Inc. (filed as Exhibit 10.24 to Calix's Annual Report on Form 10-K/A filed with the SEC on May 10, 2018 (File No. 001-34674) and incorporated by reference).
10.2	Net Lease Agreement by and between Calix, Inc. and Orchard Parkway San Jose, LLC dated March 9, 2018.
31.1	Certification of Chief Executive Officer of Calix, Inc. Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2	Certification of Chief Financial Officer of Calix, Inc. Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1	Certification of Chief Executive Officer and Chief Financial Officer of Calix, Inc. Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101.INS	XBRL Instance Document
101.SCH	XBRL Taxonomy Extension Schema Document
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB	XBRL Taxonomy Extension Label Linkbase Document
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

CALIX, INC.
(Registrant)

Date: May 10, 2018

By: /s/ Carl Russo

Carl Russo

Chief Executive Officer
(Principal Executive Officer)

Date: May 10, 2018

By: /s/ Cory Sindelar

Cory Sindelar

Chief Financial Officer
(Principal Financial Officer)

Exhibit 10.2

NET LEASE AGREEMENT
(2777 Orchard Parkway, San Jose, California)

For and in consideration of the rentals, covenants, and conditions hereinafter set forth, Landlord hereby leases to Tenant, and Tenant hereby leases from Landlord, the following described Premises for the term, at the rental and subject to and upon all of the terms, covenants and agreements set forth in this Net Lease Agreement (" **Lease** "):

1. Summary of Lease Provisions .

1.1 Tenant: Calix, Inc., a Delaware corporation (" **Tenant** ").

1.2 Landlord: Orchard Parkway San Jose, LLC, a California limited liability company (" **Landlord** ").

1.3 Effective Date: March 9, 2018.

1.4 Premises/Building: That certain space shown cross-hatched (or otherwise identified) on the floor plan attached hereto as **Exhibit A** , consisting of approximately sixty-four thousand nine hundred ninety-one (64,991) rentable square feet, comprising all of the rentable area of that certain building commonly known as 2777 Orchard Parkway, San Jose, California (" **Building** "), the location of which Building is shown (or otherwise identified) on the site plan attached hereto as **Exhibit B** . The Building constitutes a portion of the "Project" described in Paragraph 2.1. (Paragraph 2.1)

1.5 Lease Term: Eighty-seven (87) months (plus the partial month following the Commencement Date if such date is not the first day of a month), unless sooner terminated pursuant to the terms of this Lease. If the Commencement Date is other than the first day of a calendar month, the first month of the Lease Term shall include the remainder of the calendar month in which the Commencement Date occurs plus the first full calendar month thereafter, provided, however, that the inclusion of any partial month in the first full calendar month shall not entitle Tenant to any additional free base Rent. Any free base Rent shall be applied on a daily basis so that Tenant does not receive additional free rent if the first month includes a full calendar month plus any partial month. Subject to the terms and conditions of Paragraph 1.8 below, the base Rent payable by Tenant for the first three (3) full calendar months (and not including any partial month included as part of the first month) of the Lease Term shall be conditionally abated. (Paragraph 3)

1.6 Commencement Date: August 1, 2018, subject to the provisions of Paragraph 3 below. (Paragraph 3)

1.7 Ending Date: The last day of the eighty-seventh (87 th) full calendar month following the Commencement Date, unless sooner terminated pursuant to the terms of this Lease. (Paragraph 3)

1.8 Rent: During the Lease Term, Tenant shall pay Rent for the Premises to Landlord in accordance with the schedule set forth immediately below:

Lease Months During Term	Monthly Rent	Monthly Rental Rates Per Rentable Square Foot (NNN)
01- 03	$0.00*	$0.00*
04-15	$175,475.70	$2.70/RSF
16-27	$180,674.98	$2.78/RSF
28-39	$185,874.26	$2.86/RSF
40-51	$191,723.45	$2.95/RSF
52-63	$197,572.64	$3.04/RSF
64-75	$203,421.83	$3.13/RSF
76-87	$209,271.02	$3.22/RSF

*The Rent payable during each of the first three (3) full calendar months of the Lease Term is actually One Hundred Seventy-five Thousand Four Hundred Seventy-five and 70/100 Dollars ($175,475.70) per month; however, Landlord agrees that such monthly Rent during the first three (3) full months (not including any partial month included in the first month of the Lease Term if the Commencement Date is not the first day of a month) of the Lease Term shall be abated so long as there is no Default by Tenant beyond any applicable notice and cure period for which Landlord terminates this Lease in accordance with its terms as a result thereof. In the event there is a Default by Tenant beyond any applicable notice and cure period for which Landlord terminates this Lease in accordance with its terms as a result thereof, then the un-amortized portion of the abated Rent, and, if applicable, Converted Amount (as defined in the following grammatical paragraph) (which abated Rent and Converted Amount shall be amortized over a period of eighty-seven (87) months) shall become immediately due and payable following written demand of Landlord and Landlord shall be entitled to include such un-amortized portion of the abated Rent and Converted Amount in the amount of rentals that it is otherwise entitled to recover from Tenant under Paragraph 14.2.1; provided, however, that Landlord shall not be entitled to recover such unamortized abated Rent and Converted Amount to the extent that such recovery would be duplicative of amounts that Landlord is otherwise entitled to recover pursuant to California Civil Code §1951.2 and/or §1951.4, as applicable. Tenant's obligation under this Lease to pay Tenant's percentage share of Operating Expenses shall commence as of the Commencement Date of this Lease (or, if applicable, the commencement of the Beneficial Occupancy Period described in Paragraph 3.4 below) and shall not be conditionally abated as provided above.

Tenant shall have the one-time right, upon written notice (" **Conversion Notice** ") given to Landlord on or before the Commencement Date (time being of the essence), to "convert," as contemplated in this grammatical paragraph below, a portion of the abated Rent described in the immediately-preceding grammatical paragraph, in an amount not

to exceed One Hundred Eighty Thousand Dollars ($180,000.00) (such amount being the " **Converted Amount Maximum** "), to defray any Change Order Costs and/or the cost of performing any Extra Work (both as defined in the Improvement Agreement attached hereto as **Exhibit C** (the " **Improvement Agreement** ")). The amount that Tenant elects to convert, if any, shall be set forth in the Conversion Notice (any such amount, subject to the Converted Amount Maximum, being the " **Converted Amount** "). If Tenant timely delivers a Conversion Notice in accordance with the terms and conditions of this grammatical paragraph above, then: (A) the Converted Amount shall be made available by Landlord to defray any Change Order Costs and/or the costs associated with any Extra Work; and (B) the last occurring installment(s) of abated base Rent shall be reduced, subject to any applicable proration, by the amount equal to the Converted Amount. Solely for purposes of illustration, if Tenant elects to use the Converted Amount Maximum, then: (x) Tenant shall be deemed to have converted the entire third installment of abated base Rent (i.e., One Hundred Seventy-five Thousand Four Hundred Seventy-five and 70/100 Dollars ($175,475.70)), and a portion of the second installment of abated base Rent, in an amount equal to Four Thousand Five Hundred Twenty-four and 30/100 Dollars ($4,524.30); (y) the abated base Rent shall be reduced by such Converted Amount; and (z) Tenant shall pay, on the first (1st) day of the third full calendar month of the Lease Term, (i) the monthly installment of Rent due and owing for the third full calendar month of the Lease Term (i.e., One Hundred Seventy-five Thousand Four Hundred Seventy-five and 70/100 Dollars ($175,475.70)), plus (ii) the amount of Four Thousand Five Hundred Twenty-four and 30/100 Dollars ($4,524.30), with the result that the monthly installments of base Rent shall be abated for only the first full calendar month, and a portion of the second full calendar month (but no portion of the third full calendar month) of the Lease Term.
Concurrently with the execution of this Lease, Tenant shall pay to Landlord the sum of $175,475.70 which shall be credited against the first full month's Rent payable hereunder.

1.9 Use of Premises: General office, research and development and any other legally permitted uses so long as the Premises are used in each case in compliance with zoning ordinances and other applicable Laws (Paragraph 6)

1.10 Tenant's percentage share of Operating Expenses: One hundred percent (100.00%) with respect to the Building and sixty-four and eleven one hundredths percent (64.11%) with respect to the Project (Paragraph 12)

1.11 Letter of Credit: Six Hundred Twenty-seven Thousand Eight Hundred Thirteen Dollars and 06/100 Dollars ($627,813.06) (Paragraph 5)

1.12 Addresses for Notices:

To Landlord: Orchard Parkway San Jose, LLC,
c/o South Bay Development Company
1690 Dell Avenue
Campbell, CA 95008
Attn: Scott Trobbe

With a courtesy copy to: Berliner Cohen, LLP

Ten Almaden Boulevard, Eleventh Floor
San Jose, CA 95113
Attn: Harry A. Lopez

To Tenant: Calix, Inc.
1035 N. McDowell Boulevard,
Petaluma, CA 94954
Attn: Jim Sanfillippo /Facilities Department

With a courtesy copy to:

Calix, Inc.
2777 Orchard Parkway
San Jose, CA 95131
Attn: General Counsel
CalixLegal@calix.com

1.13 Right to Use Parking Spaces: All of the parking spaces (i.e., one hundred ninety-seven (197) spaces) within the portion of the Common Area delineated as the "Tenant Parking Area" on the site plan attached hereto as Exhibit B (" **Tenant Parking Area** "). (Paragraph 11.2).

1.14 Summary Provisions in General . Parenthetical references in this Paragraph 1 to other paragraphs in this Lease are for convenience of reference, and designate some of the other Lease paragraphs where applicable provisions are set forth. All of the terms and conditions of each such referenced paragraph shall be construed to be incorporated within and made a part of each of the above referring Summary of Lease Provisions. In the event of any conflict between any Summary of Lease Provision as set forth above and the balance of the Lease, the latter shall control.

2. Property Leased .

2.1 Premises . Landlord hereby leases to Tenant and Tenant hereby leases from Landlord upon the terms and conditions herein set forth, those certain premises (" **Premises** ") referred to in Paragraph 1.4 above, consisting of the entire rentable area of the Building, and shown cross-hatched on the floor plan attached hereto as **Exhibit A** . In addition, Tenant shall have such rights in and to the Common Area (defined in Paragraph 11.1 below) as are more fully described in Paragraph 11.1 below.

The Building (i.e., the building in which the Premises are located) is commonly known as 2777 Orchard Parkway, San Jose, California. The " **Land** " shall mean and refer to all of the real property described on Exhibit F attached hereto. Any reference in this Lease to the " **Parcel** " shall be deemed a reference to the Land. The Land, Building, the adjacent building, consisting of approximately thirty-six thousand three hundred eighty-three (36,383) rentable square feet, commonly known as 2755 Orchard Parkway (the " **2755 Building** "), and any other building(s) or improvement(s) now or hereafter located on the Land are referred to herein collectively as the " **Project** ." Landlord and Tenant agree that all measurements of area contained in this Lease, including, without limitation, the size of the Premises, Building and Project, are an approximation which Landlord and Tenant agree are reasonable. All such approximate measurements of area contained in this Lease also are conclusively agreed to be correct and

binding upon the parties, and any subsequent determination that the area is more or less than shown in this Lease shall not result in a change in any way in the computations of Rentals.

Subject to Tenant's exclusive right to use the Tenant Parking Area in accordance with the terms and conditions of Paragraph 11.2 below, Landlord reserves the right to grant to tenants of the Project, and to the agents, employees, servants, invitees, contractors, guests, customers and representatives of such tenants or to any other user authorized by Landlord, the nonexclusive right to use the Land for pedestrian and vehicular ingress and egress and vehicular parking.

2.2 Improvements . The leasehold improvements to be constructed by Landlord for Tenant's use in the Premises are set forth in detail in the Improvement Agreement and such leasehold improvements are collectively referred to therein as the " **Tenant Improvement Work** ". The Improvement Agreement is incorporated herein by reference. Landlord and Tenant each agree that it is bound by the terms and conditions of the Improvement Agreement and that it shall timely perform its respective obligations thereunder. If a transfer of Landlord's interest in this Lease (other than as a result of a foreclosure) occurs prior to the substantial completion of the Tenant Improvement Work, Landlord shall cause the transferee thereunder to expressly assume Landlord's obligation to complete such Tenant Improvement Work pursuant to its express obligations under the Improvement Agreement accruing after the date of such transfer. Except as otherwise expressly provided in this Lease or in the Improvement Agreement, Landlord shall not be obligated to construct or install any leasehold improvements in, on or around the Premises, Building or Project or to provide any tenant improvement allowance to Tenant.

Landlord represents and warrants the following to Tenant, as of the Effective Date:

(i) Landlord has full power, authority and legal right to (1) execute and deliver this Lease and (2) perform and observe the express provisions of this Lease on the part of the "Landlord" to be performed or observed;

(ii) There are no conditions or circumstances, financial or otherwise, that will materially impair Landlord's ability to perform its obligations under this Lease, including the Improvement Agreement;

(iii) Landlord's execution, delivery, performance and observance of the provisions of this Lease will not result in a breach or violation of (1) any applicable law, (2) any provision of Landlord's organizational documents, (3) any court order, judgement or decree, or (4) any material agreement or instrument to which Landlord is a party; and

(iv) No additional consent, approval or authorization is required for Landlord to enter into, deliver or perform its obligations under this Lease.

2.3 Acceptance of Premises; Existing Violations; Warranty Period . By taking possession of the Premises, Tenant shall be deemed to have accepted the Premises as being in good and sanitary order, condition and repair and to have accepted the Premises in their condition existing as of the date Tenant takes possession of the Premises, subject to all applicable laws, covenants, conditions, restrictions, easements and other matters of public record and the reasonable rules and regulations from time to time promulgated by Landlord governing the use of any portion of the Project and further, to have accepted tenant improvements to be constructed by Landlord pursuant to the terms of the Improvement Agreement as being completed in accordance with the plans and specifications for such improvements subject only to completion of items on Landlord's punch list, if applicable.

Landlord will use commercially reasonable efforts to complete all punch list items within thirty (30) days of the date of the punch list. Tenant acknowledges that, except as otherwise expressly provided in this Lease, neither Landlord nor any of Landlord's agents, employees, affiliates, or property manager have made any representation or warranty (express or implied) as to the suitability of the Premises for the conduct of Tenant's business, the condition of the Building or Premises, the compliance of the Premises with any codes, laws, ordinances, rules or regulations, or the use or occupancy which may be made thereof and Tenant has independently investigated and is satisfied that the Premises are suitable for Tenant's intended use and that the Building and Premises meet all governmental requirements for such intended use.

Notwithstanding the foregoing, Tenant shall in no event be obligated to correct (and/or incur any cost in connection with the correction of) any Existing Violations (as defined below), to the extent such correction of Existing Violations was required to be performed with respect to the Base Building (as defined below), and/or with respect to the Tenant Improvement Work, in connection with the performance of the Tenant Improvement Work (i.e., at the time such Tenant Improvement Work was performed) pursuant to the terms and conditions of the Improvement Agreement. To the extent the (a) Building Systems and/or Building Structure (both as defined in the following grammatical paragraph) (for purposes hereof, collectively, the " **Base Building** ") and/or (b) the Tenant Improvement Work, fail(s) to comply with any applicable Laws (as defined in Paragraph 6.1 below) (including the Americans with Disabilities Act of 1990, as amended (" **ADA** ")) that were in effect with respect to the Base Building, and/or with respect to the Tenant Improvement Work, at the time the Tenant Improvement Work was performed, in all cases as then locally enforced and interpreted, and in all cases without regard to Tenant's specific use of the Premises, then, solely to the extent any work (including any ADA work) relating to such non-compliance was required to be performed (or would have then been required to be performed had the violation been known by the applicable governmental authority) at the time the Tenant Improvement Work was performed (if applicable, any such required work being " **Existing Violations** "), then Landlord shall perform such work as may be necessary (in Landlord's reasonable discretion) to correct any such Existing Violations. Notwithstanding the foregoing, (i) Landlord shall have the right, in Landlord's reasonable discretion, and at Landlord's sole cost, to contest the need to perform any work relating to such Existing Violations, including, without limitation, the right to apply for and obtain a waiver or deferment of compliance, the right to assert any and all defenses allowed by law and the right to appeal any decisions, judgments or rulings to the fullest extent permitted by law and (ii) Tenant's right to enforce Landlord's obligation to perform (or cause to be performed) any such work relating to Existing Violations shall be limited to circumstances in which non-compliance would (a) materially impair the safety of Tenant's employees or create a health hazard for Tenant's employees, (b) materially impair Tenant's use and occupancy of, or access to, the Premises (or any material portion thereof) for typical and customary general office purposes, and/or (c) impose liability upon Tenant under applicable Laws.

In addition, Landlord hereby agrees, represents and warrants that, as of the Commencement Date (as defined in Paragraph 3.1 below) (" **Warranty Commencement Date** ") all of the following shall be in good working order and condition (" **good working order and condition** " shall mean that (i) with respect to sub-clause (y) below, the items in question are operating in accordance with the specifications therefor for normal and customary general office use (and without regard to Tenant's particular use of the Premises) and (ii) with respect to sub-clauses (x) and (z) below, the items in question comply with the plans and specifications therefor, a copy of which has been provided to Tenant): (x) the structural elements of the Building, including the roof structure (and, for purposes hereof, the roof membrane), foundation, slabs, load-bearing walls, columns, shafts, windows, window frames and all exterior and common area glass and cladding (collectively, " **Building Structure** "); (y) the mechanical, electrical, plumbing, sanitary sewer, heating, ventilation and air conditioning, fire, life-safety and other systems in and serving the Building (collectively, " **Building Systems** "); and (z) the Common Area (as defined in Paragraph 11.1 below) (including the redwood trees located along the front of the Project (collectively, the " **Redwood Trees** ") and other landscaped

areas, and the Tenant Parking Area constituting a portion of such Common Area). Commencing upon the Warranty Commencement Date and continuing for a period of three hundred sixty (360) days after such Warranty Commencement Date (such period being the " **Warranty Period** "), except to the extent caused by or resulting from Tenant's fault, neglect or misuse, Landlord shall, as Tenant's sole and exclusive remedy, as soon as reasonably practicable following Landlord's receipt of Tenant's reasonably-detailed written notice during the Warranty Period (time being of the essence), perform (or cause to be performed) the repair, replacement, maintenance, adjustment, and/or other work reasonably necessary to address and/or correct, at Landlord's sole cost and expense, any failure(s) of any of the items described in sub-clauses (x), (y) and (z) of the immediately preceding sentence to be in good working order and condition as of the Warranty Commencement Date (including, to the extent necessary (in the reasonable discretion of Landlord and Tenant), the removal and/or replacement of the Redwood Trees).

2.4 Certified Access Specialist . For purposes of California Civil Code Section 1938, Landlord hereby discloses to Tenant that, as of the Effective Date, to Landlord's actual knowledge, the Premises have not undergone inspection by a Certified Access Specialist (" **CASp** "). Pursuant to California Civil Code Section 1938(e), Landlord hereby further discloses to Tenant the following: "A Certified Access Specialist (CASp) can inspect the subject premises and determine whether the subject premises comply with all of the applicable construction-related accessibility standards under state law. Although state law does not require a CASp inspection of the subject premises, the commercial property owner or lessor may not prohibit the lessee or tenant from obtaining a CASp inspection of the subject premises for the occupancy or potential occupancy of the lessee or tenant, if requested by the lessee or tenant. The parties shall mutually agree on the arrangements for the time and manner of the CASp inspection, the payment of the fee for the CASp inspection, and the cost of making any repairs necessary to correct violations of construction-related accessibility standards within the premises." Notwithstanding the foregoing and/or anything to the contrary contained in this Lease, Landlord and Tenant hereby agree and acknowledge that, in the event Tenant desires to obtain a CASp inspection, then:

(x) Tenant shall provide Landlord with no less than five (5) business days' prior written notice and, upon receipt of such notice, Landlord shall have the right to, among other things, have one (1) or more representatives present during such inspection.

(y) Tenant hereby agrees and acknowledges that it shall (x) provide Landlord with a copy of any and all findings, reports and/or other materials (collectively, the " **CASp Report** ") provided by the CASp immediately following Tenant's receipt thereof, (y) at all times maintain (and cause to be maintained) the CASp Report and its findings (and any and all other materials related thereto) confidential and (z) pay for the CASp inspection and CASp Report at Tenant's sole cost and expense. If Tenant receives a disability access inspection certificate, as described in subdivision (e) of California Civil Code Section 55.53, in connection with or following any CASp inspection undertaken on behalf, or for the benefit, of Tenant, then Tenant shall cause such certificate to be provided immediately to Landlord.

(z) If the CASp Report identifies any violation(s) of applicable construction-related accessibility standards (" **CASp Violation(s**)"), Tenant shall immediately provide written notice to Landlord of any and all such CASp Violation(s) (any repairs, modifications and/or other work necessary to correct such CASp Violation(s) being collectively referred to herein as the " **CASp Work** "). If any CASp Violation(s) are identified in such CASp Report, then (i) to the extent such CASp Violation(s) constitute work that Landlord was required to perform in connection with the Tenant Improvement Work in order to comply with applicable Laws (including, but not limited to, the Americans with Disabilities Act of 1990, as amended and locally enforced) in effect as of the date that the Tenant Improvement Work was substantially completed (in all cases without regard to Tenant's particular use of the Premises, and/or any alterations, additions and/or improvements installed by or on behalf of Tenant),

then Landlord shall, at Landlord's sole cost and expense, perform, or cause to be performed any such CASp Work relating to the Tenant Improvement Work or (ii) with respect to any and all other CASp Violation(s) identified in such CASp Report, including, without limitation, any and all such CASp Violations relating to any alterations, additions and/or improvements installed by or on behalf of Tenant, Tenant shall, at Tenant's sole cost and expense, perform, or cause to be performed, the CASp Work relating thereto. The party that is required to perform the CASp Work in question (the " **Performing Party** ") shall commence (or cause the commencement of) such CASp Work no later than fifteen (15) business days after Landlord's receipt of the CASp Report in accordance with the terms and conditions of this Lease (including, without limitation, Paragraph 13 below). The Performing Party shall diligently prosecute (or cause to be diligently prosecuted) to completion all CASp Work which is the obligation of such Performing Party in a lien free, good and workmanlike manner, and, upon completion, obtain an updated CASp Report showing that the Premises then comply with all applicable construction-related accessibility standards. Any and all cost and expense associated with the CASp Work and/or the updated CASp Report (which the Performing Party shall provide to the other party immediately upon the Performing Party's receipt thereof) shall be at the Performing Party's sole cost and expense.

Without limiting the generality of the foregoing, Tenant hereby agrees and acknowledges that: (i) Tenant assumes all risk of, and agrees that Landlord shall not be liable for, any and all loss, cost, damage, expense and liability (including, without limitation, court costs and reasonable attorneys' fees) sustained as a result of the Premises not having been inspected by a Certified Access Specialist (CASp); and (ii) Landlord may require, as a condition to its consent to any alterations, additions or improvements, that the same be inspected and certified by a Certified Access Specialist (CASp) (following completion) as meeting all applicable construction-related accessibility standards pursuant to California Civil Code Section 55.53.

3. Term .

3.1 Commencement Date . The term of this Lease (" **Lease Term** ") shall be for the period specified in Paragraph 1.5 above, commencing on the later of (such later date being the " **Commencement Date** "): (A) August 1, 2018; or (B) the earlier of (i) the date that the Tenant Improvement Work is substantially completed or (ii) the date Tenant occupies the Premises (or any portion thereof) for the conduct of its business operations therein. Such improvements shall be deemed to be substantially completed upon the occurrence of the earlier of the following:

(a) The date on which all improvements to be constructed by Landlord have been substantially completed except for punch list items which do not prevent Tenant from using the Premises for its intended use, and either the appropriate governmental approvals for occupancy of the Premises (which shall include, without limitation, a temporary certificate of occupancy or its equivalent) have been issued or all building permits issued with respect to such improvements have been signed off by the applicable building inspectors; or

(b) The date on which all improvements to be constructed by Landlord would have been substantially completed except for such work as Landlord is required to perform but which is delayed because of any of the following (each, a " **Tenant Delay** "): (i) fault or neglect of Tenant, its agents, contractors and/or subcontractors (including, without limitation, delays caused by work done on the Premises by Tenant, its agents, contractors and/or subcontractors); (ii) delays caused by change orders requested by Tenant or required because of any errors or omissions in plans submitted by Tenant (except to the extent due to the fault or neglect of Landlord); (iii) such work as Landlord is required to perform but cannot complete until Tenant performs necessary portions of construction work it has expressly elected or is expressly required to do, in each case within the timeframe that Tenant has been expressly provided to complete such construction work; and (iv) any event constituting a Tenant

Delay as described in the Improvement Agreement attached hereto as **Exhibit C** . Notwithstanding the foregoing, no Tenant Delay shall be deemed to have occurred unless and until Landlord shall have sent Tenant a reasonably-detailed notice of the action, inaction or event that constitutes a Tenant Delay and Tenant shall not have cured the same within two (2) business days after Tenant receives such reasonably-detailed notice.

If, pursuant to the express terms and conditions of Paragraph 3.1(b) above, the improvements to be constructed by Landlord are deemed to be substantially completed before such improvements are actually substantially completed, then Tenant acknowledges that: (x) the Commencement Date shall be deemed to have occurred, and therefore Tenant's obligation to pay Rentals (subject to the conditional abatement of base Rent referred to in Paragraph 1.8 above) shall be deemed to have commenced on such earlier date, and not the date of actual completion of such improvements (but in no event prior to August 1, 2018); (y) the improvements to be constructed by Landlord shall be deemed to be substantially completed one (1) day earlier than the date of actual substantial completion for each day that actual completion is delayed by reason of a Tenant Delay; and (z) as soon as possible following the actual Commencement Date, Landlord shall provide to Tenant a reasonably-detailed statement of the number of days of Tenant Delays, and the conditional abatement of base Rent referred to in Paragraph 1.8 above shall be shortened by the same number of days.

When the Commencement Date and Ending Date become ascertainable, Landlord and Tenant shall specify the same in writing, in the form of the attached **Exhibit D** , which writing shall be deemed incorporated herein. Tenant's failure to execute and deliver the letter attached hereto as **Exhibit D** within ten (10) business days after Tenant receives written request from Landlord to do so (subject to any legitimate disagreement by Tenant with the terms thereof, which both parties shall use reasonable efforts to resolve) shall be a Default by Tenant hereunder. The expiration of the Lease Term or sooner termination of this Lease is referred to herein as the " **Lease Termination** ."

3.2 Delay of Commencement Date . Landlord shall not be liable for any damage or loss incurred by Tenant for Landlord's failure for whatever cause to deliver possession of the Premises by any particular date (including the scheduled Commencement Date (i.e., August 1, 2018)), nor shall this Lease be void or voidable on account of such failure to deliver possession of the Premises to Tenant, on or before August 1, 2018, or any other date, with the Tenant Improvement Work substantially completed. Notwithstanding the foregoing, if the Commencement Date has not occurred on or before the later of (i) August 1, 2018 or (ii) the date that is one hundred twelve (112) days after the date that Landlord's contractor shall have obtained any and all building permit(s) and/or approval(s) deemed necessary or desirable by Landlord to commence the performance of the Tenant Improvement Work (the expiration of such one hundred twelve (112) day period being the " **One-For-One Rent Credit Trigger Date** ") for any reason other than Tenant Delay and/or any Force Majeure Delay (as defined in Paragraph 7.1 of the Improvement Agreement) (it being the intent of the parties that such One-For-One Rent Credit Trigger Date shall be extended one (1) day for each day of any such Tenant Delay and/or Force Majeure Delay), then, as Tenant's sole and exclusive remedy as a result thereof, Tenant shall receive a credit against the Rent due with respect to the Premises (any such amount being the " **One-for-One Rent Credit** "), which One-for-One Rent Credit shall be in the form of an extension of the conditional abatement of base Rent referred to in Paragraph 1.8 above, equal to one (1) day for each day that shall have elapsed between the One-For-One Rent Credit Trigger Date and the Commencement Date.

3.3 FF&E Installation Period . Prior to the Commencement Date of the Lease, Tenant and its approved contractors shall have the right to enter the Premises solely to (i) install Tenant's furniture and furnishings and Tenant's telephone and telecommunication wiring and cabling in the Premises, and (ii) subject to the provisions of Paragraph 13 below, construct or install in the Premises (a) the equipment, and related wiring and cabling, necessary to provide an uninterrupted power supply (also known as a "UPS" equipment) to all server room circuits

located in the Premises and/or (b) a Tenant Security System (as defined in Paragraph 13 below); provided that such entry or performance of work shall not delay or interfere in any manner with the construction of any remaining improvements required to be constructed by Landlord in the Premises pursuant to **Exhibit C** attached hereto. Any entry into the Premises by Tenant, its agents, contractors, and employees, prior to the Commencement Date of the Lease shall be at the sole risk of Tenant, and Tenant hereby releases Landlord, its agents, contractors, subcontractors and employees, from any and all liability, cost, damage, lien, action, cause of action, judgment, expense, and claim for injury (including bodily injury, death, or property damage) incurred or suffered by Tenant in or about the Premises during the construction of any improvements in the Premises by Landlord or its contractors or subcontractors prior to the Commencement Date of this Lease. If Tenant or any of its agents, employees or contractors enter the Premises prior to the Commencement Date solely for the purposes specifically described in this Paragraph 3.3 above, then such entry shall be upon all the terms and conditions of this Lease (including, without limitation, Tenant's obligations regarding indemnity and insurance), except that Tenant shall not be obligated to pay monthly Rent or Tenant's percentage share of Operating Expenses prior to the Commencement Date. The preceding to the contrary notwithstanding, if any work or other activities in the Premises by Tenant or any of its agents, employees, contractors or other representatives prior to the Commencement Date would actually and materially interfere with or delay the completion of the work to be performed by Landlord pursuant to **Exhibit C** attached hereto, Tenant shall, upon Landlord's request, cease, or cause to be ceased, such work or activities, as the case may be, until such time that Tenant may resume its work or activities without so interfering with Landlord's or its contractors' or subcontractors' completion of the work required to be performed by Landlord pursuant to such **Exhibit C** .

3.4 Beneficial Occupancy Period . If the Tenant Improvement Work is substantially complete before August 1, 2018, then (A) during the period elapsing between such date that the Tenant Improvement Work is substantially completed and July 31, 2018 (such period, if applicable, being the " **Beneficial Occupancy Period** "), Tenant shall be entitled, in Tenant's sole and absolute discretion, to conduct business operations from the Premises and (B) the Commencement Date shall be conclusively deemed to be August 1, 2018. If Tenant elects to conduct business operations prior to August 1, 2018 in accordance with the immediately-preceding sentence, other than the obligation to pay Rent with respect to the Premises pursuant to Paragraph 1.8 of this Lease, during such Beneficial Occupancy Period, all of Tenant's obligations hereunder with respect to the Premises (including, without limitation, Tenant's obligation to pay (x) Tenant's percentage share of Operating Expenses, (y) the cost and expense of any Services (as defined in Paragraph 9 below) and (z) any and all other Additional Rent) shall apply during such Beneficial Occupancy Period.

4. Rent .

4.1 Rent . Tenant shall pay to Landlord as rent for the Premises (" **Rent** "), in advance, on the first day of each calendar month, commencing on the Commencement Date (subject to the conditional Rent abatement referred to in Paragraph 1.8 above) and continuing throughout the Lease Term the Rent set forth in Paragraph 1.8 above. Rent shall be prorated, based on thirty (30) days per month, for any partial month during the Lease Term. Rent shall be payable without deduction, offset, prior notice or demand in lawful money of the United States to Landlord at the address herein specified for purposes of notice or to such other persons or such other places as Landlord may designate in writing.

4.2 Late Charge . Tenant hereby acknowledges that late payment by Tenant to Landlord of Rent will cause Landlord to incur costs not contemplated by this Lease, the exact amount of which will be extremely difficult to ascertain. Such costs include, but are not limited to, processing and accounting charges and late charges which may be imposed on Landlord by the terms of any mortgage or deed of trust covering the Premises. Accordingly,

Tenant shall pay to Landlord, as Additional Rent (as defined in Paragraph 4.3 below), without the necessity of prior notice or demand, a late charge equal to five percent (5%) of any installment of Rent or other amount payable by Tenant under this Lease which is not received by Landlord within five (5) business days after the due date for such installment or payment. Notwithstanding the foregoing, Landlord will not assess a late charge until Landlord has given written notice of such late payment for the first late payment in any twelve (12) month period and after Tenant has not cured such late payment within five (5) business days from receipt of such notice. No other notices will be required during the following twelve (12) months for a late charge to be imposed or incurred. The parties hereby agree that such late charge represents a fair and reasonable estimate of the costs Landlord will incur by reason of late payment by Tenant. In no event shall this provision for a late charge be deemed to grant to Tenant a grace period or extension of time within which to pay any installment of Rent or other sum payable by Tenant to Landlord under this Lease or prevent Landlord from exercising any right or remedy available to Landlord upon Tenant's failure to pay such installment of Rent or other sum when due, including without limitation the right to terminate this Lease. In the event any installment of Rent or other sum payable by Tenant to Landlord under this Lease is not received by Landlord by the due date for such installment, such installment shall bear interest at the annual rate set forth in Paragraph 34 below, commencing on the date such Rent installment or other sum payable under this Lease is due and continuing until such installment or other sum payable under this Lease is paid in full.

4.3 Additional Rent . All taxes, charges, costs and expenses and other sums which Tenant is required to pay hereunder (together with all interest and charges that may accrue thereon in the event of Tenant's failure to pay the same), and all damages, costs and reasonable expenses which Landlord may incur by reason of any Default by Tenant shall be deemed to be additional rent hereunder (" **Additional Rent** "). Additional Rent shall accrue commencing on the Commencement Date. Unless otherwise expressly stated herein, all Additional Rent shall be due and payable by Tenant within thirty (30) days after the date of Landlord's invoice for the same. In the event of nonpayment by Tenant of any Additional Rent, Landlord shall have all the rights and remedies with respect thereto as Landlord has for the nonpayment of Rent. The term " **Rentals** " as used in this Lease shall mean Rent and Additional Rent.

5. Letter of Credit . Within five (5) business days after Tenant's execution of this Lease, Tenant shall deliver to Landlord an irrevocable, unconditional, transferable, standby letter of credit running in favor of Landlord issued by a bank satisfactory to Landlord in its sole and absolute discretion in the amount of Six Hundred Twenty-seven Thousand Eight Hundred Thirteen Dollars and 06/100 Dollars ($627,813.06) (" **Letter of Credit Amount** "). Tenant's failure to deliver a letter of credit, in the Letter of Credit Amount, in accordance with the terms and conditions of this Paragraph 5, within such five (5) business day period shall be deemed an automatic "Default by Tenant" (as contemplated in Paragraph 14.1 below). The letter of credit shall be irrevocable for one (1) year and shall provide that it is automatically renewable for one (1) year periods ending not earlier than one hundred twenty (120) days after the expiration of the Lease Term (including, to the extent one or both Option(s) is/are exercised, the applicable Option Term(s) (both as defined in Paragraph 44 below)) without any action whatsoever on the part of Landlord; provided that the issuing bank shall have the right not to renew said letter of credit on written notice to Landlord received by Landlord not less than sixty (60) days prior to the expiration of the then current term thereof (it being understood, however, that the privilege of the issuing bank not to renew said letter of credit shall not, in any event, diminish the obligation of Tenant to maintain such irrevocable letter of credit with Landlord through the date which is sixty (60) days after the date of Landlord's receipt of such notice). In the event the issuing bank elects not to renew the letter of credit, Tenant shall provide Landlord with a substitute letter of credit which meets all of the criteria contained herein. No fees applicable to the letter of credit shall be charged to Landlord.

The form and terms of the letter of credit shall be acceptable to Landlord in all respects in Landlord's sole and absolute discretion and shall provide, among other things, in effect that:

1. Landlord, or its agent, member, manager, partner or other authorized party shall have the right to draw down an amount up to the face amount of the letter of credit upon the presentation to the issuing bank of a sight draft only in the form attached hereto as **Exhibit G** and incorporated herein by reference, which sight draft shall include a statement that such amount is due to Landlord or its then lender under the terms and conditions of this Lease.

2. The letter of credit shall permit partial draws, and provide that draws thereunder will be honored upon presentation by Landlord without conditions at a location in Santa Clara County.

3. The letter of credit will be honored by the issuing bank without inquiry as to the accuracy thereof and regardless of whether Tenant disputes the content of such statement.

4. In the event of a transfer of Landlord's interest in the Lease, Landlord shall have the right to transfer the letter of credit to the transferee and thereupon Landlord shall, without any further agreement between the parties, be released by Tenant from all liability therefor, and it is agreed that the provisions hereof shall apply to every transfer or assignment of said letter of credit to a new Landlord.

If, as a result of any draw on the letter of credit the letter of credit shall be reduced, Tenant shall, within ten (10) business days thereafter, provide Landlord with additional letter(s) of credit in the form required hereunder and issued by a bank acceptable to Landlord in its sole and absolute discretion in an amount equal to the deficiency so that the letter(s) of credit shall be in the aggregate Letter of Credit Amount (i.e., Six Hundred Twenty-seven Thousand Eight Hundred Thirteen Dollars and 06/100 Dollars ($627,813.06)). Tenant's failure to timely deliver such new letter(s) of credit shall be a Default by Tenant (or default) under this Lease and shall entitle Landlord to draw upon the balance of the letter of credit in full and retain the cash proceeds thereof in accordance with this Paragraph 5. Landlord shall not be required to keep any such amount separate from its general funds and Tenant shall not be entitled to interest on such funds.

If Tenant breaches or fails to perform any obligation or covenant under or of this Lease, including, but not limited to, the payment of monthly Rent or Additional Rent, or if Tenant has filed a voluntary petition (or an involuntary petition has been filed against Tenant) under any chapter of the U.S. Bankruptcy Code, or any similar state law, Landlord may (but shall not be required to) draw upon all or any part of the Letter of Credit and use, apply, or retain all or any part of the cash proceeds thereof for the payment of any sums in default, or to compensate Landlord for any other loss or damage which Landlord may suffer (or that Landlord reasonably estimates it may suffer) by reason of Tenant's default, Landlord may (but shall not be required to) draw upon all or any part of the letter of credit and use, apply, or retain all or any part of the cash proceeds thereof for the payment of any sums in default, or to compensate Landlord for any other loss or damage which Landlord may suffer by reason of Tenant's default. So long as Tenant is not in default at the expiration or termination of this Lease, the letter of credit, and/or any cash proceeds thereof, then held by Landlord shall be returned to Tenant (or any assignee of Tenant), not later than thirty (30) days after Tenant (and all persons and entities claiming an interest in the Premises by, under or through Tenant) have vacated the Premises, provided that subsequent to the expiration or earlier termination of this Lease, Landlord may draw upon the letter of credit and retain therefrom sums in default or breach by Tenant under this Lease, and/or amounts to compensate Landlord for any other loss or damage which Landlord may suffer by reason of Tenant's default or breach, including, without limitation, (a) any and all amounts permitted by California Civil Code Section 1950.7, and (b) such sums as Landlord reasonably estimates will thereafter become due by reason of Tenant's default or breach, if any, under this Lease. Landlord and Tenant hereby agree that Landlord may, in addition, claim those sums necessary to compensate Landlord for any other foreseeable or unforeseeable loss or damage caused by the act or omission of Tenant or Tenant's officers, members, partners, agents, employees,

independent contractors or invitees or the default of Tenant under this Lease. Without limiting the generality of the preceding sentence, Landlord and Tenant hereby agree that Landlord may, in addition, claim and retain from the cash proceeds of the Letter of Credit those sums necessary to compensate Landlord for any other foreseeable or unforeseeable loss or damage caused by the act or omission of Tenant or Tenant's officers, agents, employees, independent contractors or invitees or the default of Tenant under this Lease, including, without limitation, the unamortized portion of any leasing commissions and tenant improvement costs (which commissions and tenant improvement costs shall be amortized over the Lease Term) incurred by Landlord in connection with this Lease and any damages to which Landlord is entitled under applicable law (including, without limitation, §1951.2 of the California Civil Code) as a result of Tenant's default under this Lease. Tenant hereby waives the provisions of California Civil Code § 1950.7, and all other provisions of law now or hereafter in force, that provide that Landlord may claim from a security deposit only those sums reasonably necessary to remedy defaults in the payment of rent, to repair damage caused by Tenant, or to clean the Premises.

Without limiting the generality of the foregoing, if the letter of credit expires earlier than one hundred twenty (120) days after the expiration of the Lease Term (including, to the extent one or both Option(s) is/are exercised, the applicable Option Term(s)), or the issuing bank notifies Landlord that it shall not renew the letter of credit, Landlord will accept a renewal thereof or substitute letter of credit (such renewal or substitute letter of credit to be in effect and delivered to Landlord not later than thirty (30) days prior to the expiration of the letter of credit then held by Landlord), irrevocable and automatically renewable as above provided to one hundred twenty (120) days after expiration of the Lease Term (including, to the extent one or both Option(s) is/are exercised, the applicable Option Term(s)) upon the same terms as the expiring letter of credit or such other terms as may be acceptable to Landlord. Such replacement or substitute letter of credit shall be in a form and issued by a bank meeting the requirements above. However, (a) if the letter of credit is not timely renewed or a substitute letter of credit is not timely received, (b) or if Tenant fails to maintain the letter of credit in the amount and terms set forth in this Paragraph 5, Tenant, at least thirty (30) days prior to the expiration of the letter of credit, or immediately upon its failure to comply with each and every term of this Paragraph 5 must deposit with Landlord a substitute letter of credit in a form and from a bank or other financial institution acceptable to Landlord in its sole and absolute discretion in the Letter of Credit Amount. The letter of credit shall be held subject to and in accordance with, all of the terms and conditions set forth in this Paragraph 5. In the event Tenant does not timely deposit with Landlord the substitute letter of credit, Landlord, or its agent, member, manager, partner or other authorized party may present the current letter of credit to the issuing bank, in accordance with the terms of this Paragraph 5 and the entire sum secured thereby shall be paid to Landlord.

If the bank that issued the letter of credit then held by Landlord enters into any form of regulatory or governmental receivership or other similar regulatory or governmental proceeding, including any receivership instituted or commenced by the Federal Deposit Insurance Corporation (" **FDIC** "), or is otherwise declared insolvent or downgraded by the FDIC, then Tenant shall deliver to Landlord a substitute letter of credit in the same form and amount of the initial letter of credit and from a banking institution acceptable to Landlord in its sole and absolute discretion within five (5) business days following the date the bank that issued the letter of credit then held by Landlord enters into any form of regulatory or governmental receivership or other similar regulatory or governmental proceeding, including any receivership instituted or commenced by the FDIC, or is otherwise declared insolvent or downgraded by the FDIC. In the event Tenant does not timely deposit with Landlord the substitute letter of credit referred to in the immediately preceding sentence, Landlord, or its agent, member, manager, partner or other authorized party may present the current letter of credit to the issuing bank, in accordance with the terms of this Paragraph 5 and the entire sum secured thereby shall be paid to Landlord.

Tenant agrees that Landlord shall have the right to pledge any letter of credit received by it hereunder or otherwise grant a security interest therein to Landlord's lender, and shall have the right to deliver the letter of credit or all or any portion of the proceeds of such letter of credit to Landlord's lender in connection therewith, provided such letter of credit (or proceeds thereof) shall only be used in accordance with, and shall continue to be governed by, the terms and provisions of this Paragraph 5. At Landlord's election, the letter of credit may name Landlord's lender as a beneficiary, or as a co-beneficiary with Landlord and/or may require that Landlord's lender sign the certification required to be presented for any draw against the letter of credit and shall contain such other provisions reasonably requested by Landlord or Landlord's lender. In addition, upon termination or transfer of Landlord's interest in this Lease, within ten (10) business days after request by Landlord or Landlord's successor, Tenant shall, as Landlord or Landlord's successor shall request, either cause the letter of credit to be amended to name Landlord's successor as the party entitled to draw down on the letter of credit subject to the terms and conditions of this Paragraph 5 and deliver such amendment to the requesting party, or shall obtain and deliver to the requesting party a new letter of credit meeting the requirements of this Paragraph 5, naming Landlord's successor as the party entitled to draw down on the letter of credit subject to the terms and conditions of this Paragraph 5. At Landlord's election, within ten (10) business days after request by Landlord, Tenant shall either cause the letter of credit to be amended to name Landlord's lender as the beneficiary, or as a co-beneficiary with Landlord, and/or as a cosigner of any certification presented for a draws down of the letter of credit, and to incorporate other changes to the letter of credit reasonably requested by Landlord's lender which do not alter or increase in any material respect Tenant's obligations under this Paragraph 5 or in connection with the letter of credit, or shall obtain a new letter of credit to effectuate such changes and otherwise meeting the requirements of this Paragraph 5 above. Any reasonable fee due in connection with the transfer of Landlord's rights as beneficiary under the letter of credit to a successor Landlord or to Landlord's lender, or in connection with an amendment to, or substitution of, a letter of credit, shall be paid by Tenant to the financial institution owed such fee upon demand. If Tenant fails to execute any documents necessary to transfer the letter of credit to Landlord's successor-in-interest or Landlord's lender within ten (10) business days after Landlord's written request therefor, Landlord may draw upon the letter of credit and transfer the cash proceeds thereof to Landlord's successor-in-interest or lender to be held as collateral for Tenant's performance hereunder and applied, if applicable, in accordance with and subject to the terms and conditions of this Paragraph 5. Tenant agrees that Landlord shall be released from liability for the return of the letter of credit or the unapplied cash proceeds thereof or any accounting of such proceeds upon a transfer of the letter of credit or unapplied cash proceeds thereof to Landlord's successor-in-interest or lender in accordance with the foregoing procedure.

Notwithstanding the foregoing, so long as no default by Tenant shall have occurred under this Lease, if Tenant shall have achieved three (3) consecutive quarters of net profit after taxes (but before non-cash items) (for purposes hereof, " **Sustained Profitability** ") (provided that Tenant shall have first provided written evidence reasonably satisfactory to Landlord (including, without limitation, audited financial statements) establishing that such Sustained Profitability has been achieved during the three (3) consecutive quarters in question), then, in such event, the Letter of Credit Amount required hereunder shall be reduced to the amount of Two Hundred Nine Thousand Two Hundred Seventy-one and 02/100 Dollars ($209,271.02) as of the first (1 st) day of the calendar month following the date that Landlord shall have affirmatively and unequivocally confirmed in writing that Tenant has provided reasonably satisfactory evidence of such Sustained Profitability. Following such reduction (if applicable) in the Letter of Credit Amount, Tenant shall be entitled (in Tenant's reasonable discretion) to deliver to Landlord either (i) an amendment to the then-existing Letter of Credit or (ii) a replacement Letter Credit, which amendment to, or replacement of, the Letter of Credit shall otherwise satisfy the terms and conditions of this Paragraph 5.

Landlord and Tenant acknowledge and agree that in no event or circumstance shall the Letter of Credit or any renewal thereof or any proceeds thereof be (a) deemed to be or treated as a "security deposit" within the meaning of California Civil Code Section 1950.7, (b) subject to the terms of such Section 1950.7, or (c) intended to serve as a "security deposit" within the meaning of such Section 1950.7. The parties acknowledge and agree that the Letter of Credit is not intended to serve as a security deposit, and that said Section 1950.7 and any and all other laws, rules and regulations applicable to security deposits (" **Security Deposit Laws** ") shall have no applicability or relevancy thereto. Each party waives any and all rights, duties and obligations such party may now or, in the future, will have relating to or arising from the Security Deposit Laws and all other provisions of law now or hereafter in force, that provide that Landlord may claim from a security deposit only those sums reasonably necessary to remedy defaults in the payment of rent, to repair damage caused by Tenant, or to clean the Premises. Tenant hereby agrees and acknowledges that (a) the Letter of Credit constitutes a separate and independent contract between Landlord and the issuing bank, (b) Tenant is not a third party beneficiary of such contract, (c) Tenant has no property interest whatsoever in the Letter of Credit or the proceeds thereof, and (d) neither Tenant, any trustee, nor Tenant's bankruptcy estate shall have the right to restrict or limit Landlord's claims or rights to the Letter of Credit or the proceeds thereof by application of Section 502(b)(6) of the U.S. Bankruptcy Code, or otherwise.

6. Use of Premises .

6.1 Permitted Uses . Tenant shall use the Premises and the Common Area only in conformance with applicable governmental or quasi-governmental laws, statutes, orders, regulations, rules, ordinances and other requirements now or hereafter in effect (collectively, " **Laws** ") for the purposes set forth in Paragraph 1.9 above, and for no other purpose without the prior written consent of Landlord, which consent shall not be unreasonably withheld or delayed, provided that such other use is in conformance with applicable Laws. Landlord makes no representation or warranty that Tenant's intended use of the Premises is permitted under zoning and/or other Laws applicable to the Premises and it is Tenant's responsibility to ensure that Tenant's intended use of the Premises is, in fact, permitted under such zoning and other Laws applicable to the Premises. Tenant acknowledges and agrees that Landlord has selected or will be selecting tenants for the Building and Project in order to produce a mix of tenant uses compatible and consistent with the design integrity of the Building and Project and with other uses of the Building and Project; provided, however, the selection of other tenants for the Building and Project shall be in Landlord's sole discretion and Landlord in making such selection shall not be deemed to be warranting that any use of the Building or Project made by any such tenant is compatible or consistent with the design integrity of the Building or Project or other uses of the Building or Project. Any change in use of the Premises or the Common Area by Tenant without the prior written consent of Landlord shall be a Default by Tenant. Tenant and Tenant's agents shall comply with the provisions of any Declaration of Covenants, Conditions, and Restrictions affecting the Premises and the Common Area.

During the Lease Term, Tenant shall be permitted to have access to the Premises 24 hours per day, 7 days per week, 365 days per year, unless such access is prohibited, limited or restricted by any governmental or quasi-governmental law, statute, ordinance, rule or regulation, damage to or destruction or condemnation of the Premises, Building or other portion of the Project or due to an emergency.

6.2 Tenant to Comply with Legal Requirements . To the extent that any of the following are triggered by (i) Tenant's particular use of the Premises, (ii) any improvements to the Premises installed by or for Tenant during the Lease Term, (iii) Tenant's application for any permit or governmental approval, or (iv) the negligence or willful misconduct of Tenant or any of its agents, employees, contractors, subcontractors, affiliates, licensees, invitees, sublessees or other representatives, Tenant shall, at its sole cost, promptly comply with all Laws relating to or affecting Tenant's particular use or occupancy of the Premises or use of the Common Area,

now in force, or which may hereafter be in force, including without limitation those relating to utility usage and load or number of permissible occupants or users of the Premises, whether or not the same are now contemplated by the parties; with the provisions of all recorded documents affecting the Premises or the Common Area insofar as the same relate to or affect Tenant's particular use or occupancy of the Premises or use of the Common Area; and with the requirements of any board of fire underwriters (or similar body now or hereafter constituted) relating to or affecting Tenant's particular use or occupancy of the Premises or use of the Common Area. Tenant's obligations pursuant to this Paragraph 6.2 shall include, without limitation, but only to the extent that any of the following are triggered by (i) Tenant's particular use of the Premises, (ii) any improvements to the Premises installed by or for Tenant during the Lease Term, (iii) Tenant's application for any permit or governmental approval, or (iv) the negligence or willful misconduct of Tenant or any of its agents, employees, contractors, subcontractors, affiliates, licensees, invitees, sublessees or other representatives, maintaining or restoring the Premises and making structural and non-structural alterations and additions in compliance and conformity with all Laws and recorded documents, each relating to Tenant's particular use or occupancy of the Premises during the Lease Term, Tenant's application for any permit or governmental approval or alterations, additions or improvements made to the Premises by Tenant. Any alterations or additions undertaken by Tenant pursuant to this Paragraph 6.2 shall be subject to the requirements of Paragraph 13.1 below. At Landlord's option, Landlord may make the required alteration, addition or change, and Tenant shall pay the cost thereof as Additional Rent. With respect to any structural alterations or additions as may be hereafter required with respect to the Building, Premises, or Common Area due to a change in laws and unrelated to Tenant's specific use of the Premises or the Common Area, Tenant's application(s) for any permit or governmental approval or Tenant's alterations, additions or improvements to the Premises, the cost thereof shall be amortized at the lesser of (i) the annual rate of interest charged on the loan obtained by Landlord to finance the applicable structural alteration(s), addition(s) or improvement(s) (or if Landlord does not obtain a loan to finance such structural alteration(s), addition(s) or improvement(s), then at three percent (3%) above the prime rate or reference rate published in the Wall Street Journal (or if such rate is not published in the Wall Street Journal, then the prime rate or reference rate established by a national bank selected by Landlord)), or (ii) the maximum rate permitted by law, over the useful life of the alteration or addition, and Tenant shall pay its percentage share (as defined in Paragraph 1.10 above) of such monthly amortized cost on the first day of each month (prorated for any partial month) from the date of installation or repair through Lease Termination.

At Tenant's reasonable request and upon Landlord's approval, which shall not be unreasonably withheld or delayed, Landlord shall without charge sign, but without any obligation to incur any expenses and without liability to Landlord, applications for all permits and other instruments that may be necessary or appropriate for the use of the Premises as contemplated herein and in accordance with Legal Requirements and the terms and conditions of this Lease. Tenant shall obtain prior to taking possession of the Premises any permits, licenses or other authorizations required for the lawful operation of its business at the Premises. The judgment of any court of competent jurisdiction or the admission of Tenant in any action or proceeding against Tenant, regardless of whether Landlord is a party thereto or not, that Tenant has violated such Law or recorded document relating to Tenant's particular use or occupancy of the Premises or use of the Common Area shall be conclusive of the fact of such violation by Tenant.

6.3 Prohibited Uses . Tenant and Tenant's agents shall not commit or suffer to be committed any waste upon the Premises. Tenant and Tenant's agents shall not do or permit anything to be done in or about the Premises, Building, Project or Common Area which will in any way obstruct or interfere with the rights of any other tenants of the Project, other authorized users of the Common Area, or occupants of neighboring property, or injure or annoy them. Tenant shall not conduct or permit any auction or sale open to the public to be held or conducted on or about the Premises, Building, Project or Common Area. Tenant and Tenant's agents shall not use or allow the Premises to be used for any unlawful, immoral or hazardous purpose or any purpose not permitted by

this Lease, nor shall Tenant or Tenant's agents cause, maintain, or permit any nuisance in, on or about the Premises, Building, Project or Common Area. Tenant shall not overload existing electrical systems or other mechanical equipment servicing the Building, impair the efficient operation of the sprinkler system or the heating, ventilation or air conditioning equipment within or servicing the Building or damage, overload or corrode the sanitary sewer system. Tenant and Tenant's agents shall not do or permit anything to be done in or about the Premises nor bring or keep anything in the Premises which will in any way increase the rate of any insurance upon any portion of the Project or any of its contents, or cause a cancellation of any insurance policy covering any portion of the Project or any of its contents, nor shall Tenant or Tenant's agents keep, use or sell or permit to be kept, used or sold in or about the Premises any articles which may be prohibited by a standard form policy of fire insurance. In the event the rate of any insurance upon any portion of the Project or any of its contents is increased because of Tenant's particular use of the Premises or that of Tenant's agents, Tenant shall pay, as Additional Rent, the full cost of such increase; provided, however this provision shall in no event be deemed to constitute a waiver of Landlord's right to declare a default hereunder by reason of the act or conduct of Tenant or Tenant's agents causing such increase or of any other rights or remedies of Landlord in connection therewith. Tenant and Tenant's agents shall not place any loads upon the floor, walls or ceiling of the Premises which would endanger the Building or the structural elements thereof or of the Premises, nor place any harmful liquids in the drainage system of the Building or Common Area. No waste materials or refuse shall be dumped upon or permitted to remain upon any part of the Project except in enclosed trash containers designated for that purpose by Landlord. No materials, supplies, equipment, finished products (or semi-finished products), raw materials, or other articles of any nature shall be stored upon, or be permitted to remain on, any portion of the Project outside the Premises.

6.4 Hazardous Materials . Neither Tenant nor Tenant's agents shall permit the introduction, placement, use, storage, manufacture, transportation, release or disposition (collectively " **Release** ") of any Hazardous Material(s) (defined below) on or about any portion of the Project without the prior written consent of Landlord, which consent may be withheld in the sole and absolute discretion of Landlord without any requirement of reasonableness in the exercise of that discretion. Notwithstanding the immediately preceding sentence to the contrary, Tenant may use de minimis quantities of the types of materials which are technically classified as Hazardous Materials but commonly used in domestic or office use to the extent not in an amount, which, either individually or cumulatively, would be a "reportable quantity" under any applicable Law and such other Hazardous Materials as are commonly used in connection with, and necessary for the operation of, Tenant's business and which Landlord receives notice prior to such Hazardous Materials being brought onto the Premises and which Landlord consents in writing may be brought onto the Premises, provided in each case such use is in compliance with all applicable Laws. Tenant covenants that, at its sole cost and expense, Tenant will comply, and cause its agents, employees, contractors, sublessees, licensees and invitees to comply, with all applicable Laws with respect to the Release by Tenant, its agents, employees, contractors, sublessees, licensees or invitees of such permitted Hazardous Materials. Any Release beyond the scope allowed in this paragraph shall be subject to Landlord's prior consent, which may be withheld in Landlord's sole and absolute discretion, and shall require an amendment to the Lease in the event Landlord does consent which shall set forth the materials, scope of use, indemnification and any other matter required by Landlord in Landlord's sole and absolute discretion. Tenant shall indemnify, defend and hold Landlord and Landlord's agents, members and lenders harmless from and against any and all claims, losses, damages, liabilities, actions, causes of action, clean up and remediation costs, penalties, liens, costs and/or expenses arising in connection with the Release of Hazardous Materials in violation of Hazardous Materials Laws by Tenant, Tenant's agents or any other person using the Premises with Tenant's knowledge and consent or authorization. Tenant's obligation to defend, hold harmless and indemnify pursuant to this Paragraph 6.4 shall survive Lease Termination.

The foregoing indemnity shall not apply to, and Tenant shall not be responsible for, the presence of Hazardous Materials on, under, or about the Premises, Building or Common Area to the extent caused by any third parties (i.e. persons or entities other than Tenant or its agents, employees, affiliates, contractors, subcontractors, sublessees, licensees, invitees, and other representatives) or by Landlord or Landlord's employees, agents or contractors unless and to the extent such Hazardous Materials are exacerbated by the acts of Tenant or any of Tenant's agents, employees, affiliates, contractors, invitees, licensees, sublessees or other representatives.

As used in this Lease, the term " **Hazardous Materials** " means any chemical, substance, waste or material which has been or is hereafter determined by any federal, state or local governmental authority to be capable of posing risk of injury to health or safety, including without limitation, those substances included within the definitions of "hazardous substances," "hazardous materials," "toxic substances," or "solid waste" under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, the Resource Conservation and Recovery Act of 1976, and the Hazardous Materials Transportation Act, as amended, and in the regulations promulgated pursuant to said laws; those substances defined as "hazardous wastes" in section 25117 of the California Health & Safety Code, or as "hazardous substances" in section 25316 of the California Health & Safety Code, as amended, and in the regulations promulgated pursuant to said laws; those substances listed in the United States Department of Transportation Table (49 CFR 172.101 and amendments thereto) or designated by the Environmental Protection Agency (or any successor agency) as hazardous substances (see , e.g. , 40 CFR Part 302 and amendments thereto); such other substances, materials and wastes which are or become regulated or become classified as hazardous or toxic under any Laws, including without limitation the California Health & Safety Code, Division 20, and Title 26 of the California Code of Regulations; and any material, waste or substance which is (i) petroleum, (ii) asbestos, (iii) polychlorinated biphenyls, (iv) designated as a "hazardous substance" pursuant to section 311 of the Clean Water Act of 1977, 33 U.S.C. sections 1251 et seq. (33 U.S.C. § 1321) or listed pursuant to section 307 of the Clean Water Act of 1977 (33 U.S.C. § 1317), as amended; (v) flammable explosives; (vi) radioactive materials; or (vii) radon gas.

Landlord shall have the right, upon reasonable advance notice to Tenant, to inspect, investigate, sample and/or monitor the Premises, the Building and Common Area, including any soil, water, groundwater, or other sampling, to the extent reasonably necessary to determine whether Tenant is complying with the terms of this Lease with respect to Hazardous Materials. In connection therewith, Tenant shall provide Landlord with reasonable access to all portions of the Premises; provided, however, that Landlord shall avoid any unreasonable interference with the operation of Tenant's business on the Premises. In the event Tenant has violated any of its covenants or agreements set forth in this Paragraph 6.4 or it is determined that Tenant has discharged or released Hazardous Materials in, on or under the Premises or any other portion of the Project, then all costs incurred by Landlord in performing such inspections, investigation, sampling and/or monitoring shall be reimbursed by Tenant to Landlord as Additional Rent within ten (10) days after Landlord's demand for payment. Tenant's obligations under the immediately preceding sentence shall survive the expiration or earlier termination of this Lease.

Landlord represents and warrants to Tenant that, except as otherwise disclosed in that certain Phase 1 Environmental Site Assessment report, dated May 6, 2015, prepared by Geoligica, Inc., to Landlord's current actual knowledge, Landlord has not received any written notice from any governmental authority that any use, storage, treatment, or transportation of Hazardous Materials to, from, or on the Premises has been in material violation of any applicable environmental laws, ordinances, rules or regulations. For purposes of the immediately preceding sentence, the phrase " **to Landlord's current actual knowledge** ," shall mean the current actual knowledge of David Andris as of the date of execution of this Lease by Landlord, without any investigation or duty of inquiry, and without any knowledge of any other person being imputed to David Andris. David Andris (i) has been an employee of South Bay Development Co., the entity engaged as the property manager that manages the Real Property, for

approximately twenty-two (22) years, which property management entity is an affiliate of the limited liability company constituting the Landlord under this Lease, (ii) is a member of the limited liability company constituting the Landlord under this Lease and (iii) is the member of such limited liability company who is most familiar with the environmental condition of the Premises. Neither Landlord nor David Andris shall be charged with constructive, inquiry, imputed or deemed knowledge. In the event of any breach of any representation or warranty of Landlord set forth in this paragraph, Tenant agrees that David Andris shall not be personally liable for any damages, losses, liabilities, claims, costs or expenses suffered or incurred by Tenant in connection with such breach of such representation or warranty.

7. Taxes .

7.1 Personal Property Taxes . Tenant shall cause Tenant's trade fixtures, equipment, furnishings, furniture, merchandise, inventory, machinery, appliances and other personal property installed or located on the Premises (collectively the "personal property") to be assessed and billed separately from the Land and the Building. Tenant shall pay before delinquency any and all taxes, assessments and public charges levied, assessed or imposed upon or against Tenant's personal property. If any of Tenant's personal property shall be assessed with the Land or the Building, Tenant shall pay to Landlord, as Additional Rent, the amounts attributable to Tenant's personal property within thirty (30) days after receipt of a written statement from Landlord setting forth the amount of such taxes, assessments and public charges attributable to Tenant's personal property. Tenant shall comply with the provisions of any Law which requires Tenant to file a report of Tenant's personal property located on the Premises.

7.2 Other Taxes Payable Separately by Tenant . Tenant shall pay (or reimburse Landlord, as Additional Rent, if Landlord is assessed), prior to delinquency or within thirty (30) days after receipt of Landlord's statement thereof, any and all taxes, levies, assessments or surcharges payable by Landlord or Tenant and relating to this Lease or the Premises (other than Landlord's net income, succession, transfer, gift, franchise, estate or inheritance taxes, and Taxes, as that term is defined in Paragraph 7.3(a) below, payable as an Operating Expense), whether or not now customary or within the contemplation of the parties hereto, whether or not now in force or which may hereafter become effective, including but not limited to taxes:

(a) Upon, allocable to, or measured by the area of the Premises or the Rentals payable hereunder, including without limitation any gross rental receipts, excise, or other tax levied by the state, any political subdivision thereof, city or federal government with respect to the receipt of such Rentals;

(b) Upon or with respect to the use, possession occupancy, leasing, operation and management of the Premises or any portion thereof;

(c) Upon this transaction or any document to which Tenant is a party creating or transferring an interest or an estate in the Premises; or

(d) Imposed as a means of controlling or abating environmental pollution or the use of energy or any natural resource (including without limitation gas, electricity or water), including, without limitation, any parking taxes, levies or charges or vehicular regulations imposed by any governmental agency. Tenant shall also pay, prior to delinquency, all privilege, sales, excise, use, business, occupation, or other taxes, assessments, license fees, or charges levied, assessed or imposed upon Tenant's business operations conducted at the Premises.

In the event any such taxes are payable by Landlord and it shall not be lawful for Tenant to reimburse Landlord for such taxes, then the Rentals payable hereunder shall be increased to net Landlord the same net

Rental after imposition of any such tax upon Landlord as would have been payable to Landlord prior to the imposition of any such tax.

7.3 Common Taxes.

(a) Definition of Taxes. The term "Taxes" as used in this Lease shall collectively mean (to the extent any of the following are not paid by Tenant pursuant to Paragraphs 7.1 and 7.2 above) all real estate taxes and general and special assessments (including, but not limited to, assessments for public improvements or benefit); personal property taxes; taxes based on vehicles utilizing parking areas on the Land; taxes computed or based on rental income or on the square footage of the Premises or the Building (including without limitation any municipal business tax but excluding federal, state and municipal net income taxes); increases in real property taxes arising from a change in ownership of the Project, or applicable portion thereof, or new construction; environmental surcharges; excise taxes; gross rental receipts taxes; sales and/or use taxes; employee taxes; water and sewer taxes, levies, assessments and other charges in the nature of taxes or assessments (including, but not limited to, assessments for public improvements or benefit); and all other governmental, quasi-governmental or special district impositions of any kind and nature whatsoever; regardless of whether any of the foregoing are now customary or within the contemplation of the parties hereto and regardless of whether resulting from increased rate and/or valuation, or whether extraordinary or ordinary, general or special, unforeseen or foreseen, or similar or dissimilar to any of the foregoing and which during the Lease Term are laid, levied, assessed or imposed upon Landlord with respect to the Project, or applicable portion thereof (other than Landlord's net income, succession, transfer, gift, franchise, estate or inheritance taxes) and/or become a lien upon or chargeable against any portion of the Project under or by virtue of any present or future laws, statutes, ordinances, regulations, or other requirements of any governmental, quasi-governmental or special district authority whatsoever. The term "environmental surcharges" shall include any and all expenses, taxes, charges or penalties imposed by the Federal Department of Energy, Federal Environmental Protection Agency, the Federal Clean Air Act, or any regulations promulgated thereunder, or imposed by any other local, state or federal governmental agency or entity now or hereafter vested with the power to impose taxes, assessments or other types of surcharges as a means of controlling or abating environmental pollution or the use of energy or any natural resource in regard to the use, operation or occupancy of the Project. The term "Taxes" shall include (to the extent the same are not paid by Tenant pursuant to Paragraphs 7.1 and 7.2 above), without limitation, all taxes, assessments, levies, fees, impositions or charges levied, imposed, assessed, measured, or based in any manner whatsoever upon or with respect to the use, possession, occupancy, leasing, operation or management of the Project or in lieu of or equivalent to any Taxes set forth in this Paragraph 7.3(a). In the event any such Taxes are payable by Landlord and it shall not be lawful for Tenant to reimburse Landlord for such Taxes, then the Rentals payable hereunder shall be increased to net Landlord the same net Rental after imposition of any such Tax upon Landlord as would have been payable to Landlord prior to the imposition of any such Tax.

(b) Operating Expense. All Taxes which are levied or assessed or which become a lien upon any portion of the Project or which become due or accrue during the Lease Term shall be an Operating Expense, and Tenant shall pay as Additional Rent each month during the Lease Term 1/12th of its annual share of such Taxes, based on Landlord's estimate thereof, pursuant to Paragraph 12 below. Tenant's share of Taxes during any partial tax fiscal year(s) within the Lease Term shall be prorated according to the ratio which the number of days during the Lease Term or of actual occupancy of the Premises by Tenant, whichever is greater, during such year bears to 365.

8. Insurance; Indemnity; Waiver.

8.1 Insurance by Landlord. Landlord shall, during the Lease Term, procure and keep in force the following insurance, the cost of which shall be an Operating Expense, payable by Tenant pursuant to Paragraph 12 below:

(a) Property Insurance. "Special Form" (formerly known as "all risk") property insurance, covering the Building and other buildings located within the Project (and improvements located with the Common Area to the extent desired to be insured by Landlord). Such insurance shall be in the full amount of the replacement cost of the foregoing, with reasonable deductible amounts, which deductible amounts shall be an Operating Expense, payable by Tenant pursuant to Paragraph 12. Such insurance may also include rental income insurance, insuring that one hundred percent (100%) of the Rentals (as the same may be adjusted hereunder) will be paid to Landlord for a period of up to twelve (12) months if the Premises are destroyed or damaged, or such longer period as may be determined by Landlord or required by any beneficiary of a deed of trust or any mortgagee of any mortgage affecting the Premises. Landlord may so insure the Project separately, or may insure the Project with other property owned by Landlord which Landlord elects to insure together under the same policy or policies. Landlord shall have the right, but not the obligation, in its sole and absolute discretion, to obtain insurance for such additional perils that Landlord deems appropriate, including, without limitation, coverage for damage by earthquake and/or flood. Such insurance maintained by Landlord as provided herein shall not cover any leasehold improvements installed in the Premises by Tenant at its expense, or Tenant's equipment, trade fixtures, inventory, fixtures, furniture or furnishings or personal property located on or in the Premises;

(b) Liability Insurance. Commercial general liability (lessor's risk) insurance against any and all claims for personal injury, death or property damage occurring in or about the Building or the Land. Such insurance shall be on an occurrence basis and shall be in an amount as determined by Landlord; and

(c) Other. Such other insurance as Landlord deems necessary and prudent.

8.2 Insurance by Tenant. Tenant shall, during the Lease Term, at Tenant's sole cost and expense, procure and keep in force the following insurance:

(a) Personal Property Insurance. "Special Form" or "all risk" property insurance on all leasehold improvements installed in the Premises by Tenant at its expense (if any), and on all equipment, trade fixtures, inventory, fixtures and personal property located on or in the Premises, including improvements or fixtures hereinafter constructed or installed on the Premises by Tenant or Tenant's agents, employees, contractors or subcontractors. Such insurance shall be in an amount equal to the full replacement cost of the aggregate of the foregoing and shall provide coverage comparable to the coverage in the standard ISO all risk form. Such insurance shall also provide coverage for water damage from back up or overflow from sprinkler leakage.

(b) Liability Insurance. Commercial general liability insurance for the mutual benefit of Landlord and Tenant, against claims for personal injury, death or property damage occurring in or about the Premises and Common Area or arising out of Tenant's or Tenant's agents' use of the Common Area, use or occupancy of the Premises or Tenant's operations on the Premises. Such insurance shall be on an occurrence basis and have a limit of not less than Five Million Dollars ($5,000,000) per occurrence (inclusive of umbrella coverage). The minimum limits specified above are the minimum amounts required by Landlord, and may be revised by Landlord from time to time to meet changed circumstances, including without limitation to reflect changes consistent with the standards required by other landlords in the county and/or market in which the Premises are located. Such liability insurance shall be primary and not contributing to any insurance available to Landlord, and Landlord's insurance (if any) shall be in excess thereto. Such insurance shall specifically insure Tenant's

performance of the indemnity, defense and hold harmless agreements contained in Paragraph 8.4, although Tenant's obligations pursuant to Paragraph 8.4 shall not be limited to the amount of any insurance required of or carried by Tenant under this Paragraph 8.2(b). Tenant shall be responsible for insuring that the amount of insurance maintained by Tenant is sufficient for Tenant's purposes.

(c) Business Interruption Insurance. Business interruption insurance with limits of liability of $5,000,000.

(d) Business Auto Liability Insurance. Business auto liability covering owned (if any), non-owned and hired vehicles with a limit of not less than $1,000,000 per accident.

(e) Workers Compensation Insurance. Insurance protecting against liability under worker's compensation laws with limits at least as required by statute.

(f) Other. Such other insurance that is either (i) required by any lender holding a security interest in the Building, or (ii) reasonably required by Landlord and customarily carried by tenants of similar property in similar businesses.

(g) Form of Policies. The policies required to be maintained by Tenant pursuant to Paragraphs 8.2(a), (b), (c) (d), (e) and (f) above shall be with companies having a Best Insurance Guide rating of A- VII or better and be on forms, with deductible amounts (if any), and loss payable clauses (as to the insurance referred to in Paragraph 8.2(a) applicable to leasehold improvements installed by Tenant) reasonably satisfactory to Landlord, shall include Landlord and the beneficiary or mortgagee of any deed of trust or mortgage encumbering the Premises and/or the Land as additional insureds, and shall provide that such parties may, although additional insureds, recover for loss suffered by Tenant's negligence. Certified copies of certificates of insurance shall be delivered to Landlord prior to the Commencement Date; a new certificate shall be delivered to Landlord prior to the expiration date of the old policy. Tenant shall have the right to provide insurance coverage which it is obligated to carry pursuant to the terms hereof in a blanket policy, provided such blanket policy expressly affords coverage to the Premises and Common Area and to Tenant as required by this Lease. Tenant shall notify Landlord in writing (i) of any delinquency in premium payments (within three (3) business days after Tenant receives any notice of non-payment from its insurer(s)) and (ii) at least thirty (30) days prior to any loss of coverage of any policy. Tenant's policies shall provide coverage on an occurrence basis and not on a claims made basis. In no event shall the limits of any policies maintained by Tenant be considered as limiting the liability of Tenant under this Lease.

8.3 Failure by Tenant to Obtain Insurance. If Tenant does not take out the insurance required pursuant to Paragraph 8.2 or keep the same in full force and effect, Landlord may, but shall not be obligated to, take out the necessary insurance and pay the premium therefor, and Tenant shall repay to Landlord, as Additional Rent, the amount so paid promptly upon demand. In addition, Landlord may recover from Tenant and Tenant agrees to pay, as Additional Rent, any and all reasonable expenses (including reasonable attorneys' fees) and damages which Landlord may sustain by reason of the failure of Tenant to obtain and maintain such insurance, it being expressly declared that the expenses and damages of Landlord shall not be limited to the amount of the premiums thereon.

8.4 Indemnification. Tenant shall indemnify, hold harmless, and defend Landlord with competent counsel reasonably satisfactory to Landlord against all claims, liabilities, losses, damages, actions, causes of action, demands, judgments, penalties, costs and expenses arising out of any occurrence in, on or about the Building, Common Area or Land, if caused or contributed to by Tenant or any of Tenant's agents, or arising out

of any occurrence in, upon or at the Premises or on account of the use, condition, or occupancy of the Premises; provided, however, such indemnification, defense and hold harmless obligation shall not be applicable to any claims, losses, damages, expenses or liabilities to the extent arising out of the gross negligence or willful misconduct of Landlord or that of its agents, employees or contractors. Tenant's indemnification, defense and hold harmless obligations under this Lease shall include and apply to reasonable attorneys' fees, investigation costs, and other costs actually incurred by Landlord. Tenant shall further indemnify, defend and hold harmless Landlord from and against any and all claims, losses, damages, liabilities or expenses arising from any breach or default in the performance of any obligation on Tenant's part to be performed under the terms of this Lease; provided, however, such indemnification, defense and hold harmless obligation shall not be applicable to any claims, losses, damages, expenses or liabilities to the extent arising out of the gross negligence or willful misconduct of Landlord or that of its agents, employees or contractors. The provisions of this Paragraph 8.4 shall survive Lease Termination with respect to any damage, injury, liability, claim, death, breach or default occurring prior to such termination. Except as set forth in this Paragraph 8.4, this Lease is made on the express condition that Landlord shall not be liable for, or suffer loss by reason of, injury to person or property, from whatever cause, in any way connected with the condition, use, or occupancy of the Premises specifically including, without limitation, any liability for injury to the person or property of Tenant or Tenant's agents; provided, however, that the foregoing shall not constitute a waiver of claims for liability for death or personal injury to the extent arising out of the gross negligence or willful misconduct of Landlord or that of its agents, employees or contractors.

8.5 Claims by Tenant. Landlord shall not be liable to Tenant, and Tenant waives all claims against Landlord, for injury or death to any person, damage to any property, or loss of use of any property in any portion of the Project by and from all causes, including without limitation, any defect in any portion of the Project and/or any damage or injury resulting from fire, steam, electricity, gas, water or rain, which may leak or flow from or into any part of the Premises, or from breakage, leakage, obstruction or other defects of pipes, sprinklers, wires, appliances, plumbing, air conditioning or lighting fixtures, whether the damage or injury results from conditions arising upon the Premises or upon other portions of the Project or from other sources; provided, however, that the foregoing shall not constitute a waiver of claims for liability for death or personal injury to the extent arising out of the gross negligence or willful misconduct of Landlord or that of its agents, employees or contractors. Landlord shall not be liable for any damages arising from any act or negligence of any other tenant or user of the Project. Tenant or Tenant's agents shall immediately notify Landlord in writing of any known defect in the Project. Tenant's waiver of claims and release of Landlord as provided in this Paragraph 8.5 above shall not apply to claims for liability for death or personal injury to the extent arising out of the gross negligence or willful misconduct of Landlord or that of its agents, employees or contractors. In no event shall Landlord be liable to Tenant for any consequential damages, including without limitation, lost profits, loss of business or lost income.

8.6 Mutual Waiver of Subrogation. Landlord hereby releases Tenant, and Tenant hereby releases Landlord, and their respective officers, agents, employees and servants, from any and all claims or demands of damages, loss, expense or injury to the Project, or to the furnishings, fixtures, equipment, inventory or other property of either Landlord or Tenant in, about or upon the Project, which is caused by or results from perils, events or happenings which are the subject of insurance carried by the respective parties pursuant to this Paragraph 8 and in force at the time of any such loss, whether due to the negligence of the other party or its agents and regardless of cause or origin; provided, however, that such waiver shall be effective only to the extent permitted by the insurance covering such loss, to the extent such insurance is not prejudiced thereby, and to the extent insured against.

9. Utilities. Tenant shall pay during the Lease Term and prior to delinquency all charges for water, gas, light, heat, power, electricity, telephone or other communication service, janitorial service, trash pick-up, sewer

and all other services supplied to Tenant or consumed by Tenant on the Premises (collectively the " **Services** ") and all taxes, levies, fees or surcharges therefor. Prior to the Commencement Date, Tenant shall directly arrange, and directly contract in Tenant's name, for all Services to be supplied to the Premises. The Commencement Date shall not be delayed by reason of any failure by Tenant to so contract for Services. In the event that any of the Services cannot be separately billed or metered to the Premises, or if any of the Services are not separately metered as of the Commencement Date, the cost of such Services shall be an Operating Expense and Tenant shall pay, as Additional Rent, Tenant's proportionate share of such cost to Landlord as provided in Paragraph 12 below, except that if any meter services less than the entire Building, Tenant's proportionate share of the costs measured by such meter shall be based upon the square footage of the gross leasable area in the Premises as a percentage of the total square footage of the gross leasable area of the portion of the Building serviced by such meter. As of the Commencement Date, gas, electricity and water shall be separately metered for the Premises. If Landlord determines that Tenant is using a disproportionate amount of any commonly-metered Services or an amount in excess of the customary amount of any Services ordinarily furnished for use of the Premises in accordance with the uses set forth in Paragraph 6 above, then Landlord may elect to periodically charge Tenant, as Additional Rent, a sum equal to Landlord's reasonable estimate of the cost of Tenant's excess use of any or all such Services.

The lack or shortage of any Services due to any cause whatsoever (except for a lack or shortage proximately caused by the gross negligence or willful misconduct Landlord or that of its agents or employees) shall not affect any obligation of Tenant hereunder, and Tenant shall faithfully keep and observe all the terms, conditions and covenants of this Lease and pay all Rentals due hereunder, all without diminution, credit or deduction. Tenant acknowledges and agrees that in no event shall Landlord be liable to Tenant for any consequential damages, such as lost profits, loss of business or lost income, if there is any lack or shortage of any Services or utilities to the Premises.

10. Repairs and Maintenance .

10.1 Landlord's Responsibilities . Subject to the provisions of Paragraph 15 below, Landlord shall maintain in reasonably good order and repair, and replace if necessary, the structural roof (and roof membrane), structural and exterior walls (including painting thereof), foundations of the Building and subsurface utilities serving the Building. Tenant shall give prompt written notice to Landlord of any known maintenance work required to be made by Landlord pursuant to this Paragraph 10.1. The costs incurred by Landlord pursuant to the provisions of this Paragraph 10.1 shall be paid by Landlord, at Landlord's sole cost and expense, except that the cost of performing any repairs and/or replacements of the roof membrane and/or repainting shall be an Operating Expense and Tenant shall pay, as Additional Rent, Tenant's share of such costs relating to the roof membrane and/or repainting to Landlord as provided in Paragraph 12 below; provided, however, if repair or replacement of the structural roof (or roof membrane), structural or exterior walls or foundations of the Building or subsurface utilities is caused by (i) Tenant's breach of any of Tenant's obligations under this Lease, (ii) any misuse of the Premises or Building by, or negligence or willful misconduct of, Tenant or any of Tenant's agents, employees, contractors, subcontractors, invitees, licensees, sublessees or other representatives, then Tenant shall reimburse or pay to Landlord, within thirty (30) days following receipt of a statement or invoice and reasonable back up documentation of such costs, for one hundred percent (100%) of the costs paid or incurred by Landlord to repair or replace the same.

10.2 Tenant's Responsibilities . Except as expressly provided in Paragraph 10.1 above, Tenant shall, at its sole cost, maintain the entire Premises and every part thereof, including without limitation, windows, window frames, plate glass, freight docks, doors and related hardware, interior walls and partitions, and the electrical, plumbing, lighting, heating, ventilation and air conditioning systems servicing the Premises in good order, condition and repair. Tenant's obligations with respect to the heating and air conditioning systems of the Premises shall

include the replacement of components thereof; however, if an entire HVAC unit(s) shall need to be replaced, then Landlord shall be responsible for replacing such HVAC unit(s) but the cost thereof shall be amortized at the lesser of (i) the annual rate of interest charged on the loan obtained by Landlord to finance the replacement of such HVAC unit(s) (or if Landlord does not obtain a loan to finance such improvement, then at three percent (3%) above the prime rate or reference rate published in the Wall Street Journal (or if such rate is not published in the Wall Street Journal, then the prime rate or reference rate established by a national bank selected by Landlord)), or (ii) the maximum rate permitted by law, over the useful life of the HVAC unit(s) (as reasonably determined by Landlord) of such replacement HVAC unit(s), and shall be paid monthly by Tenant from the date of installation through the first of Lease Termination or the expiration of the useful life of such replacement HVAC unit(s); provided, however, if the replacement is made necessary due to Tenant's breach of this Lease, any misuse of the Premises or Building by, or negligence or willful misconduct of, Tenant or any of Tenant's agents, employees, contractors, subcontractors, invitees, licensees, sublessees or other representatives, then Landlord (or Tenant if Landlord designates Tenant in writing to undertake such replacement of the applicable HVAC unit) shall undertake such replacement but the cost of such replacement shall be borne 100% by Tenant and shall be paid by Tenant to Landlord within thirty (30) days following Tenant's receipt of a written invoice or bill therefor. Tenant shall maintain continuously throughout the Lease Term a service contract for the maintenance of all such HVAC equipment servicing the Premises with a licensed HVAC repair and maintenance contractor approved by Landlord, which contract provides for the periodic inspection and servicing of the HVAC equipment at least once every ninety (90) days during the Lease Term, and Tenant shall provide Landlord with inspection reports no less than quarterly. Tenant shall furnish Landlord with copies of the HVAC service contract(s), which shall provide that they may not be canceled or changed without at least thirty (30) days' prior written notice to Landlord. Notwithstanding the foregoing, Landlord may elect at any time to assume responsibility for the maintenance, repair and replacement of such HVAC equipment, and the cost thereof shall be included in Operating Expenses charged to Tenant.

If Tenant fails to make repairs or perform maintenance work required of Tenant hereunder within fourteen (14) days after Tenant's receipt of written notice from Landlord specifying the need for such repairs or maintenance work, Landlord or Landlord's agents may, in addition to all other rights and remedies available hereunder or by law and without waiving any alternative remedies, enter into the Premises and make such repairs and/or perform such maintenance work. If Landlord makes such repairs and/or performs such maintenance work, Tenant shall reimburse Landlord upon demand and as Additional Rent, for the cost of such repairs and/or maintenance work. Landlord shall use reasonable efforts to avoid causing any inconvenience to Tenant or interference with the use of the Premises by Tenant or Tenant's agents during the performance of any such repairs or maintenance. Landlord shall have no liability to Tenant for any damage, inconvenience or interference with the use of the Premises by Tenant or Tenant's agents as a result of Landlord performing any such repairs or maintenance (except to the extent arising out of the gross negligence or willful misconduct Landlord or that of its agents or employees; provided, however, under no circumstances shall Landlord be liable to Tenant for consequential damages, including, without limitation, lost profits, loss of business or lost income). Tenant shall reimburse Landlord, on demand and as Additional Rent, for the cost of damage to the Project caused by Tenant or Tenant's agents. Tenant expressly waives the benefits of any statute now or hereafter in effect (including without limitation the provisions of subsection 1 of Section 1932, Section 1941 and Section 1942 of the California Civil Code and any similar law, statute or ordinance now or hereafter in effect) which would otherwise afford Tenant the right to make repairs at Landlord's expense (or to deduct the cost of such repairs from Rentals due hereunder) or to terminate this Lease because of Landlord's failure to keep the Premises in good and sanitary order.

11. Common Area .

11.1 In General. Subject to the terms and conditions of this Lease and such rules and regulations as Landlord may from time to time prescribe, Tenant and Tenant's agents shall have, in common with the tenant(s) of other buildings located on the Land and other permitted users, the nonexclusive right to use during the Lease Term the access roads, parking areas (subject to Tenant's exclusive right to use the Tenant Parking Area in accordance with Paragraph 11.2 below), sidewalks, landscaped areas and other facilities on the Land or in the Building designated by Landlord for the general use and convenience of the occupants of the Building and other authorized users, which areas and facilities are referred to herein as the " **Common Area** ." This right to use the Common Area shall terminate upon Lease Termination. Landlord reserves the right to promulgate such reasonable rules and regulations relating to the use of all or any portion of the Common Area and/or the safety of tenants and occupants of the Project and to amend such rules and regulations from time to time with or without advance notice, as Landlord may deem appropriate for the best interests of the occupants of the Building and other authorized users. Any amendments to the rules and regulations shall be effective as to Tenant, and binding on Tenant, upon delivery of a copy of such rules and regulations to Tenant. Tenant and Tenant's agents shall observe such rules and regulations, as the same may be amended, and any failure by Tenant or Tenant's agents to observe and comply with the rules and regulations, as the same may be amended, shall be a Default by Tenant. Landlord shall not be responsible for the nonperformance of the rules and regulations by any tenants or occupants of the Building or other authorized users, nor shall Landlord be liable to Tenant by reason of the noncompliance with or violation of the rules and regulations by any other tenant or user.

Subject to Tenant's exclusive parking rights with respect to the Tenant Parking Area, Landlord shall at all times have exclusive control of the Common Area. Landlord shall have the right, without the same constituting an actual or constructive eviction and without entitling Tenant to any abatement of rent, to: (i) close any part of the Common Area to whatever extent required in the opinion of Landlord's counsel to prevent a dedication thereof or the accrual of any prescriptive rights therein; (ii) temporarily close the Common Area to perform maintenance or for any other reason deemed sufficient by Landlord; (iii) subject to Tenant's exclusive parking rights with respect to the Tenant Parking Area, change the shape, size, location and extent of the Common Area; (iv) subject to Tenant's exclusive parking rights with respect to the Tenant Parking Area, eliminate from or add to the Project any land or improvement, including multi-deck parking structures; (v) subject to Tenant's exclusive parking rights with respect to the Tenant Parking Area, make changes to the Common Area including, without limitation, changes in the location of driveways, entrances passageways, doors and doorways, elevators, stairs, restrooms, exits, parking spaces, parking areas, sidewalks or the direction of the flow of traffic and the site of the Common Area; (vi) remove unauthorized persons from the Project; and/or (vii) change the name or address of the Building or Project. Landlord agrees not to make any change in the Common Areas that will materially and adversely interfere with Tenant's use of the Premises as permitted under this Lease. Tenant shall keep the Common Area clear of all obstructions created or permitted by Tenant. If in the opinion of Landlord unauthorized persons are using any of the Common Area by reason of the presence of Tenant in the Building, Tenant, upon demand of Landlord, shall restrain such unauthorized use by appropriate proceedings. In exercising any such rights regarding the Common Area, Landlord shall make a reasonable effort to minimize any disruption to Tenant's business. Landlord shall have no obligation to provide guard services or other security measures for the benefit of the Project. Tenant assumes all responsibility for the protection of Tenant and Tenant's agents from acts of third parties; provided, however, that nothing contained herein shall prevent Landlord, at its sole option, from providing security measures for the Project.

11.2 Tenant Parking Area. Tenant is allocated and Tenant and Tenant's employees and invitees shall have the exclusive right to use all of the parking spaces located within the portion of the Common Area designated as the "Tenant Parking Area," as set forth in Paragraph 1.13, and delineated on the site plan attached hereto as Exhibit B, the configuration of which parking spaces may be designated from time to time by Landlord. Neither Tenant nor Tenant's agents shall at any time use parking spaces in the Project other than those

allocated to Tenant within the Tenant Parking Area, or park or permit the parking of their vehicles in any portion of the Land other than the Tenant Parking Area. Notwithstanding the number of parking spaces within the Tenant Parking Area designated for Tenant's exclusive use, in the event by reason of any Law relating to or affecting parking on the Land, or any other cause beyond Landlord's reasonable control, Landlord is required to reduce the number of parking spaces on the Land, Landlord shall have the right to proportionately and equitably reduce the number of Tenant's parking spaces in the Tenant Parking Area and the parking spaces of other tenants of the Project. Landlord reserves the right to promulgate such reasonable rules and regulations relating to the use of such parking areas on the Land as Landlord may deem appropriate. Landlord furthermore reserves the right, after having given Tenant reasonable notice, to have any vehicles owned by Tenant or Tenant's agents which are parked in violation of the provisions of this Paragraph 11.2 or in violation of Landlord's rules and regulations relating to parking, to be towed away at the cost of the owner of the towed vehicle. In the event Landlord elects or is required by any law to limit or control parking on the Land, by validation of parking tickets or any other method, Tenant agrees to participate in such validation or other program under such reasonable rules and regulations as are from time to time established by Landlord. Provided that Tenant's use, occupancy and enjoyment of the Premises or access to the Premises is not unreasonably interfered with, Landlord shall have the right to close, at reasonable times, all or any portion of the Tenant Parking Area for any reasonable purpose, including, without limitation, the prevention of a dedication thereof, or the accrual of rights of any person or public therein. Tenant and Tenant's agents shall not at any time park or permit the parking of (i) trucks or other vehicles (whether owned by Tenant or other persons) adjacent to any loading areas so as to interfere in any manner with the use of such areas, (ii) Tenant's or Tenant's agents' vehicles or trucks, or the vehicles or trucks of Tenant's suppliers or others, in any portion of the Tenant Parking Area not designated by Landlord for such use by Tenant, (iii) any inoperative vehicles or equipment on any portion of the Tenant Parking Area or (iv) Tenant's or Tenant's agents' vehicles or trucks, or the vehicles or trucks of Tenant's suppliers or others, in any portion of the Common Area not constituting the Tenant Parking Area.

11.3 Maintenance by Landlord . Landlord shall maintain the Common Area in good repair and condition as determined by Landlord and shall manage the Common Area in accordance with Landlord's reasonable and customary standards. The expenditures for such maintenance shall be at the reasonable discretion of Landlord. The cost of such maintenance, operation and management shall be an "Operating Expense," and Tenant shall pay to Landlord, as Additional Rent, Tenant's share of such costs as provided in Paragraph 12 below.

12. Operating Expenses .

12.1 Definition . " **Operating Expense** " or " **Operating Expenses** " as used in this Lease shall mean and include all items identified in other paragraphs of this Lease as an Operating Expense and the total cost paid or incurred by Landlord for the operation, maintenance, repair, security and management of the Project (except to the extent solely allocable to the 2755 Building), which costs shall include, without limitation: the cost of Services and utilities supplied to the Project (to the extent the same are not (i) separately charged or metered solely to the Building and/or (ii) separately charged or metered solely to the 2755 Building); water; sewage; trash removal; fuel; electricity; heat; lighting systems; fire protection systems; storm drainage and sanitary sewer systems; periodic inspection and regular servicing of the heating, ventilation and air conditioning systems of the Premises (if undertaken, or caused to be undertaken, by Landlord); maintaining, repairing and replacing, if reasonably necessary as determined by Landlord, the roof membrane; property and liability insurance covering the Building (and other buildings located on the Land) and the Project, as applicable, and the Land and any other insurance carried by Landlord pursuant to Paragraph 8 above; deductibles under such insurance policies maintained by Landlord (except that if damage or destruction that causes or triggers payment of such deductible by Landlord is caused or triggered by the act(s), negligence or willful misconduct of Tenant or any of its agents, employees, contractors, subcontractors, invitees, licensees, sublessees or other representatives, then Tenant shall reimburse or pay to Landlord, within

thirty (30) days following receipt of a statement or invoice, one hundred percent (100%) of the amount of such deductible payment); window cleaning; cleaning, sweeping, striping, sealing and/or resurfacing of parking and driveway areas; cleaning the Common Area; cleaning and repairing of sidewalks, curbs, stairways; costs related to irrigation systems and Project signs; fees for licenses and permits required for the operation of the Project; the cost of complying with Laws, including, without limitation, maintenance, alterations and repairs required in connection therewith; costs related to landscape maintenance; the cost of contesting the validity or applicability of any governmental enactments which may affect Operating Expenses; all additional costs and expenses incurred by Landlord with respect to the operation, protection, maintenance, repair and replacement of the Project which would be considered a current expense (and not a capital expenditure) pursuant to generally accepted accounting principles; and the costs of the following capital improvements to the Project: (x) capital improvements required to be constructed in order to comply with any Law (excluding hazardous materials Laws) not in effect or applicable to the Project as of the date of this Lease, (y) modification of existing or construction of additional capital improvements or building service equipment for the purpose of reducing the consumption of utility Services or Operating Expenses of the Project, or (z) replacement of capital improvements or building service equipment existing as of the date of this Lease when required because of normal wear and tear. The cost of (i) capital repair items or capital improvements (i.e., items which Landlord is required to capitalize and not expense in the current year for federal income tax purposes), including, without limitation, replacement of the HVAC system serving the Premises and replacement of exterior windows, (ii) replacement of the roof membrane, (iii) resurfacing the parking lot, and (iv) repainting the exterior of the Building, shall be amortized at the lesser of (x) the annual rate of interest charged on the loan obtained by Landlord to finance such improvement (or if Landlord does not obtain a loan to finance such improvement, then at three percent (3%) above the prime rate or reference rate published in the Wall Street Journal (or if such rate is not published in the Wall Street Journal, then the prime rate or reference rate established by a national bank selected by Landlord), or (y) the maximum rate permitted by law, over the useful life of the repair or item, and be paid monthly by Tenant from the date of installation or repair through Lease Termination; provided, however, if the HVAC system serving the Premises, parking areas (including, without limitation, the Tenant Parking Area), exterior windows or roof membrane need to be replaced due to (A) Tenant's breach of any of Tenant's obligations under this Lease, (B) any misuse of the HVAC system, parking areas, exterior windows or roof membrane by, or negligence or willful misconduct of, Tenant or any of Tenant's agents, employees, contractors, subcontractors, invitees, licensees, sublessees or other representatives, then Tenant shall reimburse or pay to Landlord, within thirty (30) days following receipt of a statement or invoice and reasonable back up documentation of such costs, for one hundred percent (100%) of the costs paid or incurred by Landlord to replace such HVAC system, parking areas, exterior windows or roof membrane, as the case may be, less any insurance proceeds received by Landlord allocable to the HVAC system, parking areas, exterior windows or roof membrane.

In addition to Tenant's obligation to pay to Landlord the Tenant's percentage share of Operating Expenses as provided herein, Tenant also shall pay to Landlord a management fee, as Additional Rent, on the first day of each month during the Lease Term, in an amount equal to three percent (3%) of the monthly Rent payable by Tenant to Landlord under this Lease.

The specific examples of Operating Expenses stated in this Paragraph 12.1 are in no way intended to and shall not limit the costs comprising Operating Expenses, nor shall such examples be deemed to obligate Landlord to incur such costs or to provide such services or to take such actions except as Landlord may be expressly required in other portions of this Lease, or except as Landlord, in its reasonable discretion, may elect. All reasonable costs incurred by Landlord in good faith for the operation, maintenance, repair, security and management of the Project shall be deemed conclusively binding on Tenant.

12.2 Payment of Operating Expenses by Tenant . Prior to the Commencement Date, and annually thereafter, Landlord shall deliver to Tenant an estimate of Operating Expenses for the succeeding year. Tenant's payment of Operating Expenses shall be based upon Landlord's estimate of Operating Expenses and shall be payable in equal monthly installments in advance on the first day of each calendar month commencing on the date specified in Paragraph 1.6 and continuing throughout the Lease Term. Tenant shall pay to Landlord, as Additional Rent and without deduction or offset, an amount equal to Tenant's percentage share (stated in Paragraph 1.10 above) of the Operating Expenses. Alternatively, as Landlord may elect at any time or from time to time, Operating Expenses actually incurred or paid by Landlord but not theretofore billed to Tenant, as invoiced by Landlord shall be payable by Tenant within thirty (30) days after receipt of Landlord's invoice, but not more often than once each calendar month.

Landlord shall revise its estimate of Operating Expenses on an annual basis, and Landlord may adjust the amount of Tenant's monthly installment in the event of a material change in Operating Expenses during any year.

Landlord shall furnish Tenant an annual reconciliation statement within one hundred twenty (120) days after each calendar year during the Lease Term (and a statement within one hundred twenty (120) days after Lease Termination) showing the actual Operating Expenses for the period to which Landlord's estimate pertains and shall concurrently either bill Tenant for the balance due (payable upon demand by Landlord) or credit Tenant's account for the excess previously paid. Notwithstanding anything to the contrary contained in this Lease, within ninety (90) days after receipt by Tenant of Landlord's statement of Operating Expenses prepared pursuant to this Paragraph 12.2 for any prior annual period during the Lease Term, any employee of Tenant or a certified public accountant mutually acceptable to Landlord and Tenant (provided such certified public accountant charges for its service on an hourly basis and not based on a percentage of any recovery or similar incentive method) shall have the right to inspect the books of Landlord applicable to Operating Expenses for the immediately preceding year during the business hours of Landlord and upon not less than five (5) business days' advance notice, at Landlord's office or, at Landlord's option, such other location as Landlord reasonably may specify, for the purpose of verifying the information contained in the statement. All expenses of such inspection shall be borne by Tenant. If Tenant's inspection reveals a discrepancy in the comparative annual reconciliation statement, Tenant shall deliver a copy of the inspection report and supporting calculations to Landlord within thirty (30) days after completion of the inspection. If Tenant and Landlord are unable to resolve the discrepancy within thirty (30) days after receipt of the inspection report, either party may upon written notice to the other have the matter decided by an inspection by an independent certified public accounting firm approved by Landlord and Tenant (the " **CPA Firm** "), which approval shall not be unreasonably withheld or delayed and the costs associated therewith to be borne by Tenant except as otherwise expressly provided below. If the inspection by the CPA Firm shows that the actual amount of Operating Expenses payable by Tenant is greater than the amount previously paid by Tenant for such accounting period, Tenant shall pay Landlord the difference within thirty (30) days following such determination. If the inspection by the CPA firm shows that the actual amount is less than the amount paid by Tenant, then the difference shall be applied in payment of the next estimated monthly installments of Operating Expenses owing by Tenant, or in the event such accounting follows the expiration of the Lease Term, such difference shall be refunded to Tenant within thirty (30) days following such determination. Except as otherwise provided in this Paragraph 12.2, if the inspection by the CPA firm shows that Tenant has been overcharged by more than five percent (5%) of the amount actually payable by Tenant for the calendar year in question or Three Thousand Dollars ($3,000), whichever is greater, then Landlord shall be obligated to reimburse Tenant for all third party, out of pocket costs reasonably incurred by Tenant in connection with the Tenant's inspection and the inspection by the CPA firm; however, in no event shall Landlord be obligated to reimburse Tenant more than the sum of One Thousand Dollars ($1,000.00) for such inspections applicable to a particular calendar year's Operating Expenses (including, Taxes). Tenant may not withhold payment

of any Operating Expenses pending completion of any inspection or audit of Operating Expenses. Unless Tenant asserts specific errors within ninety (90) days after receipt of the annual reconciliation statement, such statement shall be deemed correct as between Landlord and Tenant, except as to individual components subsequently determined to be in error by future audit.

13. Alterations and Improvements .

13.1 In General . Except for minor or decorative alterations to the interior of the Premises which (i) do not impair the structural integrity of the Building, (ii) do not adversely affect any of the building systems serving the Premises or Building, (iii) do not cost in excess of Fifty Thousand Dollars ($50,000.00) in the aggregate in any consecutive twelve (12) month period, and (iv) are not visible from the exterior of the Building (" **Cosmetic Alterations** "), Tenant shall not make, or permit to be made, any alterations, removals, changes, enlargements, improvements or additions (collectively " **Alterations** ") in, on, about or to the Premises, or any part thereof, including Alterations required pursuant to Paragraph 6.2, without the prior written consent of Landlord (which consent shall not be unreasonably withheld or delayed) and without acquiring and complying with the conditions of all permits required for such Alterations by any governmental authority having jurisdiction thereof. Tenant shall not be obligated to obtain Landlord's prior written consent to any Cosmetic Alterations referred to above but such Cosmetic Alterations shall be subject to all the others terms and conditions of this Paragraph 13.1 and 13.2 below. The term "Alterations" as used in this Paragraph 13 shall also include all heating, lighting, electrical (including all wiring, conduit outlets, drops, buss ducts, main and subpanels), air conditioning and partitioning in the Premises made by Tenant regardless of how affixed to the Premises. As a condition to the giving of its consent, Landlord may impose such reasonable requirements as Landlord reasonably may deem necessary, including without limitation, the manner in which the work is done; a right of approval of the contractor by whom the work is to be performed; the times during which the work is to be accomplished; the requirement that Tenant post a completion bond in an amount and form reasonably satisfactory to Landlord; and the requirement that Tenant reimburse Landlord, as Additional Rent, for Landlord's actual costs for outside consultants incurred in reviewing any proposed Alteration, whether or not Landlord's consent is granted. In the event Landlord consents to the making of any Alterations by Tenant, the same shall be made by Tenant at Tenant's sole cost and expense, in accordance with the plans and specifications approved by Landlord and in a manner causing Landlord and Landlord's agents and other tenants of the Project the least interference and inconvenience practicable under the circumstances. Tenant shall give written notice to Landlord five (5) business days prior to employing any laborer or contractor to perform services related to, or receiving materials for use upon the Premises, and prior to the commencement of any work of improvement on the Premises. Any Alterations, including, without limitation, Cosmetic Alterations, to the Premises made by Tenant or any of its agents, employees, contractors, subcontractors or other representatives shall be made in accordance with applicable Laws and in a first-class workmanlike manner. In making any such Alterations, Tenant shall, at Tenant's sole cost and expense, file for and secure and comply with any and all permits or approvals required by any governmental departments or authorities having jurisdiction thereof and any utility company having an interest therein. In no event shall Tenant make any structural changes to the Premises or make any changes to the Premises which would weaken or impair the structural integrity of the Building or adversely affect any of the building systems serving the Building or Premises.

Subject to compliance with applicable law, Landlord's review and approval of plans and specifications therefor, and this Paragraph 13 of this Lease, Tenant may, at Tenant's sole cost and expense, install in the Premises a security system, including access panels, readers and cameras in the Premises (" **Tenant Security System** "), provided such system shall at all times be compatible with the fire/life/safety requirements and facilities of the Building, and provided further that such system shall permit Landlord to have access to the Premises at all times if necessary due to an emergency.

13.2 Removal Upon Lease Termination. At the time Tenant requests Landlord's consent, Tenant shall request a decision from Landlord in writing as to whether Landlord will require Tenant, at Tenant's expense, to remove any such Alterations and restore the Premises to their prior condition at Lease Termination. In the event Tenant fails to earlier obtain Landlord's written decision as to whether Tenant will be required to remove any Alteration (or Landlord's consent to any Alteration(s) is not required pursuant to the terms of this Lease), then no less than ninety (90) nor more than one hundred twenty (120) days prior to the expiration of the Lease Term, Tenant by written notice to Landlord shall request Landlord to inform Tenant whether or not Landlord desires to have any of such Alterations by Tenant removed at Lease Termination. Following receipt of such notice (or if Tenant fails to timely provide such notice), Landlord may elect to have all or a portion of such Alterations removed from the Premises at Lease Termination, and Tenant shall, at its sole cost and expense, remove at Lease Termination such Alterations designated by Landlord for removal and repair all damage to the Project arising from such removal. In the event Tenant fails to so request Landlord's decision or fails to remove any such Alterations designated by Landlord for removal, Landlord, without waiving any or all other rights and remedies available to Landlord, may remove any Alterations made to the Premises by Tenant, restore the Premises to their prior condition and repair all damage to the Premises, Building and Common Area arising from such removal, and may recover from Tenant all costs and expenses actually incurred thereby, together with an amount equal to the fair rental value of the Premises for the period of time after Lease Termination required for Landlord to accomplish such removal and restoration. Tenant's obligation to pay such costs and expenses to Landlord shall survive Lease Termination. Unless Landlord elects to have Tenant remove (or, upon Tenant's failure to obtain Landlord's decision, Landlord removes) any such Alterations, all such Alterations, except for moveable furniture, personal property and moveable equipment, and trade fixtures of Tenant not affixed to the Premises, shall become the property of Landlord upon Lease Termination (without any payment therefor) and remain upon and be surrendered with the Premises at Lease Termination.

Notwithstanding the foregoing, and/or anything else to the contrary contained in this Lease, Tenant shall not be obligated to remove (x) the Tenant Improvement Work shown on the Approved Plans (as defined in the Improvement Agreement), (y) the Tenant Security System and/or (z) the initial Generator (as defined in Paragraph 46 below) installed by or on behalf of Tenant pursuant to the terms and conditions of Paragraph 46 below).

13.3 Landlord's Improvements. All fixtures, improvements or equipment which are installed, constructed on or attached to the Premises, Building or Common Area by Landlord, including the Tenant Improvement Work described in Exhibit C attached hereto, shall be a part of the realty and belong to Landlord. All of the Tenant Improvement Work, fixtures, equipment, alterations, additions, improvements and/or appurtenances attached to or built into the Premises prior to or during the Lease Term, whether by Landlord or Tenant and whether at the expense of Landlord or Tenant, or of both, shall be and remain part of the Premises and shall not be removed by Tenant at the end of the Lease Term unless otherwise expressly provided for in this Lease or unless such removal is required by Landlord pursuant to the provisions of Paragraph 13.1 or 13.2 above. Such Landlord Improvements, fixtures, equipment, alterations, additions, improvements and/or appurtenances shall include but not be limited to: all floor coverings, drapes, paneling, built-in cabinetry, molding, doors, vaults (including vault doors), plumbing systems, electrical systems, lighting systems, all fixtures and outlets for the systems mentioned above and for all telephone, radio, telegraph and television purposes, and any special flooring or ceiling installations.

14. Default and Remedies.

14.1 Events of Default. The term "Default by Tenant" as used in this Lease shall mean the occurrence of any of the following events:

(a) Tenant's failure to pay when due any Rentals and such failure is not cured within five (5) business days after delivery of written notice from Landlord specifying such failure to pay;

(b) Commencement and continuation for at least sixty (60) days of any case, action or proceeding by, against or concerning Tenant under any federal or state bankruptcy, insolvency or other debtor's relief law, including without limitation, (i) a case under Title 11 of the United States Code concerning Tenant, whether under Chapter 7, 11, or 13 of such Title or under any other Chapter, or (ii) a case, action or proceeding seeking Tenant's financial reorganization or an arrangement with any of Tenant's creditors;

(c) Voluntary or involuntary appointment of a receiver, trustee, keeper or other person who takes possession for more than sixty (60) days of substantially all of Tenant's assets or of any asset used in Tenant's business on the Premises, regardless of whether such appointment is as a result of insolvency or any other cause;

(d) Execution of an assignment for the benefit of creditors of substantially all assets of Tenant available by law for the satisfaction of judgment creditors;

(e) Commencement of proceedings for winding up or dissolving (whether voluntary or involuntary) the entity of Tenant, if Tenant is a corporation, limited liability company or a partnership;

(f) Levy of a writ of attachment or execution on Tenant's interest under this Lease, if such writ continues for a period of thirty (30) days;

(g) Transfer or attempted Transfer of this Lease or the Premises by Tenant in violation of the provisions of Paragraph 24 below and such violation is not cured within ten (10) days after written notice of such violation if given by Landlord to Tenant; or

(h) Breach by Tenant of any term, covenant, condition, warranty, or provision contained in this Lease (other than those referred to in any other subsection of this Paragraph 14.1) and such breach is not cured within thirty (30) days after Tenant's receipt of Landlord's written notice of such breach (or if a breach under this subparagraph 14.1(h) cannot be reasonably cured within thirty (30) days, if Tenant does not commence to cure the breach within such thirty (30) day period or does not diligently and in good faith prosecute the cure to completion).

14.2 Remedies. Upon any Default by Tenant, Landlord shall have the following remedies, in addition to all other rights and remedies provided by law, to which Landlord may resort cumulatively, or in the alternative:

14.2.1 Termination. Landlord may terminate this Lease by giving written notice of termination to Tenant, in which event this Lease shall terminate on the date set forth for termination in such notice. In the event Landlord terminates this Lease, Landlord shall have the right to recover from Tenant:

(a) The worth at the time of award of the unpaid Rentals which had been earned at the time of termination;

(b) The worth at the time of award of the amount by which the unpaid Rentals which would have been earned after termination until the time of award exceeds the amount of such rental loss that Tenant proves could have been reasonably avoided;

(c) The worth at the time of award (computed by discounting at the discount rate of the Federal Reserve Bank of San Francisco at the time of award plus one percent) of the amount by which the Rentals for the balance of the Lease Term after the time of award exceed the amount of such rental loss that Tenant proves could be reasonably avoided;

(d) Any other amounts necessary to compensate Landlord for all detriment proximately caused by the Default by Tenant or which in the ordinary course of events would likely result, including without limitation the following:

(i) Expenses in retaking possession of the Premises;

(ii) Expenses for cleaning the Premises, expenses for repairing or restoring the Premises as expressly provided in this Agreement and expenses incurred by Landlord in repairing or restoring the Premises to the condition to which the same is required to be surrendered by Tenant under Paragraph 35 of this Lease;

(iii) Any unamortized real estate brokerage commission paid in connection with this Lease;

(iv) Expenses for removing, transporting, and storing any of Tenant's property left at the Premises (although Landlord shall have no obligation to remove, transport, or store any such property);

(v) Expenses of reletting the Premises, including without limitation, brokerage commissions and reasonable attorneys' fees;

(vi) Reasonable attorneys' fees and court costs; and

(vii) Costs of carrying the Premises such as repairs, maintenance, taxes and insurance premiums, utilities and security precautions (if any).

(e) The "worth at the time of award" of the amounts referred to in subparagraphs (a) and (b) of this Paragraph 14.2.1 is computed by allowing interest at an annual rate equal to the greater of: ten percent (10%); or five percent (5%) plus the rate established by the Federal Reserve Bank of San Francisco, as of the twenty-fifth (25th) day of the month immediately preceding the Default by Tenant, on advances to member banks under Sections 13 and 13(a) of the Federal Reserve Act, as now in effect or hereafter from time to time amended, not to exceed the maximum rate allowable by law.

14.2.2 Continuance of Lease. Upon any Default by Tenant and unless and until Landlord elects to terminate this Lease pursuant to Paragraph 14.2.1 above, this Lease shall continue in effect after the Default by Tenant and Landlord may enforce all its rights and remedies under this Lease, including without limitation, the right to recover payment of Rentals as they become due. Neither efforts by Landlord to mitigate

damages caused by a Default by Tenant nor the acceptance of any Rentals shall constitute a waiver by Landlord of any of Landlord's rights or remedies, including the rights and remedies specified in Paragraph 14.2.1 above.

15. Damage or Destruction.

15.1 Definition of Terms. For the purposes of this Lease, the term: (a) "Insured Casualty" means damage to or destruction of the Premises from a cause actually insured against, or required by this Lease to be insured against, for which the insurance proceeds paid or made available to Landlord are sufficient to rebuild or restore the Premises under then existing building codes to the condition existing immediately prior to the damage or destruction; and (b) "Uninsured Casualty" means damage to or destruction of the Premises from a cause not actually insured against, or not required to be insured against, or from a cause actually insured against but for which the insurance proceeds paid or made available to Landlord are for any reason insufficient to rebuild or restore the Premises under then-existing building codes to the condition existing immediately prior to the damage or destruction, or from a cause actually insured against but for which the insurance proceeds are not paid or made available to Landlord within ninety (90) days of the event of damage or destruction.

15.2 Insured Casualty.

15.2.1 Rebuilding Required. In the event of an Insured Casualty where the extent of damage or destruction is less than twenty-five percent (25%) of the then full replacement cost of the Premises, Landlord shall promptly following receipt of any required building permits and other environmental approvals, if applicable, rebuild or restore the Premises to the condition existing immediately prior to the damage or destruction, provided the damage or destruction was not a result of a willful act of Tenant, and that there exist no governmental codes or regulations that would interfere with Landlord's ability to so rebuild or restore.

15.2.2 Landlord's Election. In the event of an Insured Casualty where the extent of damage or destruction is equal to or greater than twenty-five percent (25%) of the then full replacement cost of the Premises, Landlord may, at its option and at its sole discretion, rebuild or restore the Premises to the condition existing immediately prior to the damage or destruction, or terminate this Lease. Landlord shall notify Tenant in writing within sixty (60) days after the event of damage or destruction of Landlord's election to either rebuild or restore the Premises or terminate this Lease.

15.2.3 Continuance of Lease. If Landlord is required to rebuild or restore the Premises pursuant to Paragraph 15.2.1 or if Landlord elects to rebuild or restore the Premises pursuant to Paragraph 15.2.2, this Lease shall remain in effect and Tenant shall have no claim against Landlord for compensation for inconvenience or loss of business during any period of repair or restoration.

15.3 Uninsured Casualty. In the event of an Uninsured Casualty, Landlord may, at its option and at its sole discretion (i) rebuild or restore the Premises as soon as reasonably possible at Landlord's expense (unless the damage or destruction was caused by a negligent or willful act of Tenant or any of its agents, employees or contractors, in which event Tenant shall pay all costs of rebuilding or restoring), in which event this Lease shall continue in full force and effect or (ii) terminate this Lease, in which event Landlord shall give written notice to Tenant within sixty (60) days after Landlord becomes aware of the event of damage or destruction of Landlord's election to terminate this Lease as of the date of the event of damage or destruction, and if the damage or destruction was caused by a willful act of Tenant, Tenant shall be liable therefor to Landlord.

15.4 Tenant's Election . Notwithstanding anything to the contrary contained in this Paragraph 15, Tenant may elect to terminate this Lease in the event the Premises are damaged or destroyed and, in the reasonable opinion of Landlord's architect or construction consultants, the restoration of the Premises cannot be substantially completed within two hundred ten (210) days after the event of damage or destruction. Tenant's election shall be made by written notice to Landlord within fifteen (15) business days after Tenant receives from Landlord the estimate of the time needed to complete repair or restoration of the Premises. If Tenant does not deliver said notice within said fifteen (15) business day period, Tenant may not later terminate this Lease even if substantial completion of the rebuilding or restoration occurs subsequent to said two hundred ten (210) day period, provided that Landlord is proceeding with diligence to rebuild or restore the Premises. If Tenant delivers said notice within said fifteen (15) business day period, this Lease shall terminate as of the earlier of (i) the date specified in Tenant's termination notice or (ii) the date that is sixty (60) days after Landlord's receipt of such notice.

15.5 Damage or Destruction Near End of Lease Term .. Notwithstanding anything to the contrary contained in this Paragraph 15, in the event the Premises are damaged or destroyed in whole or in part (regardless of the extent of damage) from any cause during the last twelve (12) months of the Lease Term and cannot be restored within sixty (60) days after the occurrence thereof, Landlord (or Tenant provided such damage or destruction was not caused by the acts, omissions, negligence or willful misconduct of Tenant or any of its agents, employees, affiliates, contractors, invitees, licensees or other representatives) may, at its option, terminate this Lease as of the date of the event of damage or destruction by giving written notice to the other of its election to do so within thirty (30) days after the event of such damage or destruction.

15.6 Termination of Lease . If the Lease is terminated pursuant to this Paragraph 15, the current Rent shall be proportionately reduced during the period following the event of damage or destruction until the date on which Tenant surrenders the Premises, based upon the extent to which the damage or destruction renders the Premises untenantable (as reasonably determined by Landlord) and Tenant is unable to occupy the Premises as a result of the same. All other Rentals due hereunder shall continue unaffected during such period. The proceeds of insurance carried by Tenant pursuant to Paragraph 8.2 shall be paid to Landlord and Tenant, as their interests appear.

15.7 Abatement of Rentals . If the Premises are to be rebuilt or restored pursuant to this Paragraph 15, the then current Rentals shall be proportionately reduced during the period of repair or restoration, based upon the extent to which the damage or destruction renders the Premises untenantable (as reasonably determined by Landlord) and Tenant is unable to occupy the Premises as a result of the same.

15.8 Liability for Personal Property . Except to the extent arising out of the gross negligence or willful misconduct Landlord or that of its agents, employees, contractors or invitees (and then subject to the provisions of Paragraph 8.6 above), in no event shall Landlord have any liability for, nor shall it be required to repair or restore, any injury or damage to any Alterations to the Premises made by Tenant, trade fixtures, personal property of Tenant, equipment, merchandise, furniture, or any other property installed by Tenant or at the expense of Tenant. If Landlord or Tenant does not elect to terminate this Lease pursuant to this Paragraph 15, Tenant shall be obligated to promptly rebuild or restore the same to the condition existing immediately prior to the damage or destruction in accordance with the provisions of Paragraph 13.1.

15.9 Waiver of Civil Code Remedies . Landlord and Tenant acknowledge that the rights and obligations of the parties upon damage or destruction of the Premises are as set forth herein; therefore Tenant hereby expressly waives any rights to terminate this Lease upon damage or destruction of the Premises, except as specifically provided by this Lease, and Tenant hereby waives, except as specifically provided in this Lease,

any rights pursuant to the provisions of Subdivision 2 of Section 1932 and Subdivision 4 of Section 1933 of the California Civil Code, as amended from time to time, and the provisions of any similar law hereinafter enacted, which provisions relate to the termination of the hiring of a thing upon its substantial damage or destruction.

15.10 Damage or Destruction to the Building . The foregoing notwithstanding, in the event the Building is damaged or destroyed to the extent of more than thirty-three and one-third percent (33 1/3%) of the then replacement cost thereof, Landlord may elect to terminate this Lease, whether or not the Premises are injured.

16. Condemnation .

16.1 Definition of Terms . For the purposes of this Lease, the term: (a) " **Taking** " means a taking of the Premises, Common Area or Building or damage related to the exercise of the power of eminent domain and includes, without limitation, a voluntary conveyance, in lieu of court proceedings, to any agency, authority, public utility, person or corporate entity empowered to condemn property; (b) " **Total Taking** " means the Taking of the entire Premises or so much of the Premises, Building or Tenant Parking Area as to prevent or substantially impair the use thereof by Tenant for the uses herein specified; provided, however, that in no event shall the Taking of less than twenty percent (20%) of the Premises or fifty percent (50%) of the Building and Tenant Parking Area be considered a Total Taking; (c) " **Partial Taking** " means the Taking of only a portion of the Premises, Building or Tenant Parking Area which does not constitute a Total Taking; (d) "Date of Taking" means the date upon which the title to the Premises, Building or Tenant Parking Area or a portion thereof, passes to and vests in the condemnor or the effective date of any order for possession if issued prior to the date title vests in the condemnor; and (e) "Award" means the amount of any award made, consideration paid, or damages ordered as a result of a Taking.

16.2 Rights . The parties agree that in the event of a Taking all rights between them or in and to an Award shall be as set forth herein.

16.3 Total Taking . In the event of a Total Taking during the Lease Term: (a) the rights of Tenant under this Lease and the leasehold estate of Tenant in and to the Premises shall cease and terminate as of the Date of Taking; (b) Landlord shall refund to Tenant any prepaid Rent; (c) Tenant shall pay Landlord any Rentals due Landlord under the Lease, prorated as of the Date of Taking; (d) to the extent the Award is not payable to the beneficiary or mortgagee of a deed of trust or mortgage affecting the Premises, Tenant shall receive from the Award those portions of the Award attributable to trade fixtures of Tenant; and (e) the remainder of the Award shall be paid to and be the property of Landlord. Nothing contained in this Paragraph 16.3 shall be deemed to deny Tenant its right to recover awards made by the condemning authority for moving costs, relocation costs, and costs attributable to goodwill and leasehold improvements installed by Tenant.

16.4 Partial Taking . In the event of a Partial Taking during the Lease Term: (a) the rights of Tenant under the Lease and the leasehold estate of Tenant in and to the portion of the Premises taken shall cease and terminate as of the Date of Taking; (b) from and after the Date of Taking the Rent shall be an amount equal to the product obtained by multiplying the then current Rent by the quotient obtained by dividing the fair market value of the Premises immediately after the Taking by the fair market value of the Premises immediately prior to the Taking; (c) to the extent the Award is not payable to the beneficiary or mortgagee of a deed of trust or mortgage affecting the Premises, Tenant shall receive from the Award the portions of the Award attributable to trade fixtures of Tenant; and (d) the remainder of the Award shall be paid to and be the property of Landlord. Each party waives the provisions of California Code of Civil Procedure Section 1265.130 allowing either party to petition the Superior Court to terminate this Lease in the event of a Partial Taking. Nothing contained in this Paragraph 16.4 shall be

deemed to deny Tenant its right to recover awards made by the condemning authority for moving costs, relocation costs, and costs attributable to goodwill and leasehold improvements installed by Tenant.

17. Liens .

17.1 Premises to Be Free of Liens . Tenant shall pay for all labor and services performed for, and all materials used by or furnished to Tenant, Tenant's agents, or any contractor employed by Tenant with respect to the Premises. Tenant shall indemnify, defend and hold Landlord harmless from and keep the Project free from any liens, claims, demands, encumbrances, or judgments, including all costs, liabilities and attorneys' fees with respect thereto, created or suffered by reason of any labor or services performed for, or materials used by or furnished to Tenant or Tenant's agents or any contractor employed by Tenant with respect to the Premises, except to the extent the same is caused by Landlord or its agents' gross negligence or willful misconduct. Tenant's obligations under the immediately preceding sentence shall survive Lease Termination. Landlord shall have the right, at all times, to post and keep posted on the Premises any notices permitted or required by law, or which Landlord shall deem proper for the protection of Landlord and the Premises, Building, Common Area and Land, and any other party having an interest therein, from mechanics' and materialmen's liens, including without limitation a notice of non-responsibility. In the event Tenant is required to post an improvement bond with a public agency in connection with any work performed by Tenant on or to the Premises, Tenant shall include Landlord as an additional obligee.

17.2 Notice of Lien; Bond . Should any claims of lien be filed against, or any action be commenced affecting the Premises, Tenant's interest in the Premises or any other portion of the Project, Tenant shall give Landlord notice of such lien or action within five (5) business days after Tenant receives notice of the filing of the lien or the commencement of the action. In the event that Tenant shall not, within twenty (20) days following the date Tenant becomes aware of the imposition of any such lien, cause such lien to be released of record by payment or posting of a proper bond, Landlord shall have, in addition to all other remedies provided herein and by law, the right, but not the obligation, to cause the same to be released by such means as Landlord shall deem proper, including payment of the claim giving rise to such lien or posting of a proper bond. All such sums paid by Landlord and all expenses reasonably incurred by Landlord in connection therewith, including attorneys' fees and costs, shall be payable to Landlord by Tenant as Additional Rent on demand.

18. Landlord's Right of Access to Premises . Landlord reserves and shall have the right and Tenant and Tenant's agents shall permit Landlord and Landlord's agents to enter the Premises at any reasonable time upon reasonable prior notice (except no such prior notice shall be required to be given in the event of an emergency or in connection with the performance of Landlord's routine maintenance and repair responsibilities) and subject to any reasonable security measures of Tenant that are applied to visitors to the Premises on a non-discriminatory basis for the purpose of (i) inspecting the Premises, (ii) performing Landlord's maintenance and repair responsibilities set forth herein, (iii) posting notices of non-responsibility, (iv) placing upon the Premises at any time "For Sale" signs, (v) placing on the Premises ordinary "For Lease" signs at any time within one hundred eighty (180) days prior to Lease Termination, or at any time Tenant is in uncured default hereunder, or at such other times as agreed to by Landlord and Tenant, (vi) protecting the Premises in the event of an emergency and (vii) exhibiting the Premises to prospective purchasers or lenders at any reasonable time or to prospective tenants. Landlord agrees that in exercising any right to enter the Premises and in exercising any other rights reserved pursuant to this Paragraph, Landlord shall use reasonable efforts (to the extent practicable under the circumstances) to minimize any interference with Tenant's use of the Premises. In the event of an emergency, Landlord shall have the right to use any and all means which Landlord reasonably may deem proper to gain access to the Premises. Any entry to the Premises by Landlord or Landlord's agents in accordance with this Paragraph 18 or any other provision of

this Lease shall not under any circumstances be construed or deemed to be a forcible or unlawful entry into, or a detainer of the Premises, or an eviction of Tenant from the Premises or any portion thereof nor give Tenant the right to abate the Rentals payable under this Lease. Tenant hereby waives any claims for damages for any injury or inconvenience to or interference with Tenant's business, any loss of occupancy or quiet enjoyment of the Premises, and, except to the extent caused by the gross negligence or willful misconduct of Landlord, its agents, employees or contractors, any other loss occasioned by Landlord's or Landlord's agents' entry into the Premises as permitted by this Paragraph 18 or any other provision of this Lease.

19. Landlord's Right to Perform Tenant's Covenants . Except as otherwise expressly provided herein, if Tenant shall at any time fail to make any payment or perform any other act required to be made or performed by Tenant under this Lease, Landlord may upon ten (10) days written notice to Tenant, but shall not be obligated to and without waiving or releasing Tenant from any obligation under this Lease, make such payment or perform such other act to the extent that Landlord may deem desirable, and in connection therewith, pay expenses and employ counsel. All reasonable sums so paid by Landlord and all penalties, interest and reasonable costs in connection therewith shall be due and payable by Tenant as Additional Rent upon demand.

20. Lender Requirements .

20.1 Subordination . This Lease, at Landlord's option, shall be subject and subordinate to the lien of any mortgages or deeds of trust (including all advances thereunder, renewals, replacements, modifications, supplements, consolidations, and extensions thereof) in any amount(s) whatsoever now or hereafter placed on or against or affecting the Premises, Building or Land, or Landlord's interest or estate therein without the necessity of the execution and delivery of any further instruments on the part of Tenant to effectuate such subordination. If any mortgagee or beneficiary shall elect to have this Lease prior to the lien of its mortgage or deed of trust, and shall give written notice thereof to Tenant, this Lease shall be deemed prior to such mortgage or deed of trust, whether this Lease is dated prior or subsequent to the date of such mortgage or deed of trust or the date of the recording thereof.

20.2 Subordination Agreements . Tenant shall execute and deliver, without charge therefor, such further instruments evidencing subordination of this Lease to the lien of any mortgages or deeds of trust affecting the Premises, Building or Land as may be required by Landlord within fifteen (15) business days following Tenant's receipt of Landlord's request therefor; provided that such mortgagee or beneficiary under such mortgage or deed of trust agrees in writing that this Lease shall not be terminated or modified in any material way in the event of any foreclosure if Tenant is not in default under this Lease. Failure of Tenant to execute such instruments evidencing subordination of this Lease shall constitute a Default by Tenant hereunder. Landlord shall use commercially reasonable efforts to provide Tenant, within twenty (20) business days after the execution and delivery of this Lease by Tenant to Landlord, a subordination, nondisturbance and attornment agreement (" **SNDA** ") from Orchard Office GAP Lender, LLC (" **Landlord's Current Lender** "), which SNDA, if applicable, shall be in form and content acceptable to Landlord's Current Lender (" **Current Lender SNDA** ").

20.3 Approval by Lenders . Tenant recognizes that the provisions of this Lease may be subject to the approval of any financial institution that may make a loan secured by a new or subsequent deed of trust or mortgage affecting the Premises, Building or Land. If the financial institution should require, as a condition to such financing, any modifications of this Lease in order to protect its security interest in the Premises including without limitation, modification of the provisions relating to damage to and/or condemnation of the Premises, Tenant agrees to negotiate in good faith with Landlord and such financial institution to agree on mutually acceptable modifications and execute the appropriate amendments; provided, however, that no modification shall substantially change the

size, location or dimension of the Premises, or increase the Rentals payable by Tenant hereunder. If Tenant refuses to execute any such amendment, Landlord may, in Landlord's reasonable discretion, terminate this Lease.

20.4 Attornment. In the event of foreclosure or the exercise of the power of sale under any mortgage or deed of trust made by Landlord and covering the Premises, Building or Land, then, upon written request made therefore by the foreclosing lender or purchaser at such foreclosure sale, Tenant shall attorn to such foreclosing lender or such purchaser upon any such foreclosure or sale and recognize such foreclosing lender or purchaser as the Landlord under this Lease.

20.5 Estoppel Certificates and Financial Statements.

(a) Delivery by Tenant. Tenant shall, within ten (10) business days following Tenant's receipt of a request by Landlord therefor and without charge, execute and deliver to Landlord any and all documents, estoppel certificates, and current financial statements of Tenant reasonably requested by Landlord in connection with the sale or financing of the Premises, Building or Land, or requested by any lender making a loan affecting the Premises, Building or Land. Landlord may require that Tenant in any estoppel certificate shall (i) certify that this Lease is unmodified and in full force and effect (or, if modified, state the nature of such modification and certify that this Lease, as so modified, is in full force and effect) and has not been assigned, (ii) certify the date to which Rentals are paid in advance, if any, (iii) acknowledge that there are not, to Tenant's knowledge, any uncured defaults on the part of Landlord hereunder, or specify such defaults if claimed, (iv) evidence the status of this Lease as may be required either by a lender making a loan to Landlord to be secured by a deed of trust or mortgage covering the Premises, Building or Land or a purchaser of the Premises, Building or Land from Landlord, (v) warrant that in the event any beneficiary of any security instrument encumbering the Premises, Building or Land forecloses on the security instrument or sells the Premises, Building or Land pursuant to any power of sale contained in such security instrument, such beneficiary shall not be liable for any security deposit or cash collateral, unless any such security deposit or cash collateral actually has been received by the beneficiary from Landlord, (vi) certify that all improvements to be constructed on the Premises by Landlord have been substantially completed except for punch list items which do not prevent Tenant from using the Premises for its intended use, and (vii) certify such other matters relating to the Lease and/or Premises as may be reasonably requested by a lender making a loan to Landlord or a purchaser of the Premises, Building or Land from Landlord. Any such estoppel certificate may be conclusively relied upon by any prospective purchaser or encumbrancer of the Premises, Building or Land. Any financial statements of Tenant shall include an opinion of a certified public accountant (if available) and a balance sheet and profit and loss statement for the most recent fiscal year, or a reasonable substitute for the form of such financial information, all prepared in accordance with generally accepted accounting principles consistently applied.

(b) Nondelivery by Tenant. Tenant's failure to deliver an estoppel certificate as required pursuant to Paragraph 20.5(a) above shall be conclusive upon Tenant that (i) this Lease is in full force and effect, without modification except as may be represented by Landlord and has not been assigned, (ii) there are now no uncured defaults in Landlord's performance, (iii) no Rentals have been paid in advance except those that are set forth in this Lease, (iv) no beneficiary of any security instrument encumbering the Premises, Building or Land shall be liable for any security deposit in the event of a foreclosure or sale under such security instrument, unless any such security deposit has actually been received by the beneficiary from Landlord, and (v) the improvements to be constructed on the Premises by Landlord have been substantially completed except for punch list items which do not prevent Tenant from using the Premises for its intended use. Tenant's failure to deliver any financial statements, estoppel certificates or other documents as required pursuant to Paragraph 20.5(a) above shall be a Default by Tenant if not delivered to Landlord within five (5) business days following Tenant's receipt of written notice that such financial statements, estoppel certificates or other documents required pursuant to

Paragraph 20.5(a) are past due (and no other cure period shall be available to Tenant with respect to such Default by Tenant).

21. Holding Over. This Lease shall terminate without further notice at the expiration, or earlier termination pursuant to the terms hereof, of the Lease Term. Any holding over by Tenant after Lease Termination shall not constitute a renewal or extension of the Lease Term, nor give Tenant any rights in or to the Premises except as expressly provided in this Lease. Any holding over after Lease Termination with the prior written consent of Landlord shall be construed to be a tenancy from month to month, at one hundred fifty percent (150%) of the monthly Rent for the month immediately preceding Lease Termination, in addition to all Additional Rent payable hereunder (such Rent and Additional rent computed on a monthly basis for each month or ratably for any part thereof during such holding over), and shall otherwise be on the terms and conditions herein specified insofar as applicable. Tenant agrees that the reasonable value of the use of the Premises during any holding over without the written consent of Landlord shall be the greater of (x) one hundred fifty percent (150%) of the monthly Rent for the month immediately preceding Lease Termination or (y) the fair market rental value of the Premises (as reasonably determined by Landlord) (pro rated on a daily basis). Acceptance by Landlord of rent after such termination shall not constitute Landlord's consent to any hold over hereunder or result in a renewal. If Tenant remains in possession of the Premises after Lease Termination without Landlord's consent, Tenant shall indemnify, defend and hold Landlord harmless from and against any loss, damage, expense, claim or liability resulting from Tenant's failure to surrender the Premises, including without limitation, any claims made by any succeeding tenant based on delay in the availability of the Premises. The provisions of this Paragraph 21 shall survive the expiration or earlier termination of this Lease.

Notwithstanding the foregoing, upon written notice to Landlord given no later than six (6) months prior to the expiration of the Initial Term (as defined in Paragraph 44 below), so long as no default on the part of Tenant then exists under this Lease, Tenant shall have the one-time right to hold over in the entire Premises upon each and all of the terms and conditions set forth in this Lease (as may be applicable, but expressly excluding the extension rights set forth in Paragraph 44 below, and without in any way extending the Initial Term for purposes of determining the date by which Tenant must exercise the first Option described in Paragraph 44 below) for a period of ninety (90) days after the expiration of the Initial Term (such ninety (90) day period, if applicable, being the " **Permitted Holdover Period** "). The Permitted Holdover Period (if applicable) shall not constitute an extension of this Lease. In consideration of Tenant's occupancy of the Premises during the Permitted Holdover Period (if applicable), Tenant shall pay in advance, for each thirty (30) day interval encompassed within such ninety (90) day Permitted Holdover Period, the amount equal to one hundred twenty-five percent (125%) of the monthly installment of Rent in effect for the Premises (in its entirety) for the last month of the Initial Term (i.e., $209,271.02/month x 125% = $261,588.78/month) (such monthly amount being the " **Permitted Holdover Period Rent** "), in addition to, and not in lieu of, all other payments required to be made by Tenant under this Lease, including, but not limited to, Tenant's percentage share of Operating Expenses (or any component(s) thereof). If Landlord fails to receive the six (6) months' written notice from Tenant required pursuant to the first sentence of this grammatical above, or Tenant holds over in the Premises beyond the Permitted Holdover Period (if applicable), then, in either such case, the first grammatical paragraph of this Paragraph 21 shall govern.

22. Notices. Any notice required or desired to be given under this Lease shall be in writing, and all notices shall be given by personal delivery, delivery by a nationally-recognized courier service, or U.S. mail. All notices personally given on Tenant may be delivered to any person apparently in charge at the Premises, on any corporate officer or agent of Tenant if Tenant is a corporation, or on any one signatory party if more than one party signs this Lease on behalf of Tenant; any notice so given shall be binding upon all signatory parties as if served upon each such party personally. Any notice given pursuant to this Paragraph 22 shall be deemed to have been

given (i) when personally delivered, (ii) if delivered by nationally-recognized courier, upon the date of delivery and (iii) if mailed, when three (3) business days have elapsed from the time when such notice was deposited in the United States mail, certified or registered mail and postage prepaid, addressed to the party at the last address given for purposes of notice pursuant to the provisions of this Paragraph 22. Any notices sent by Landlord regarding or relating to eviction procedures, including, without limitation, three day notices, may be sent by regular mail. At the date of execution of this Lease, the addresses for notice for Landlord and Tenant are set forth in Paragraph 1.12 above.

23. Attorneys' Fees. In the event either party hereto shall bring any action or legal proceeding for damages for an alleged breach of any provision of this Lease, to recover Rentals, to enforce an indemnity, defense or hold harmless obligation, to terminate the tenancy of the Premises, or to enforce, protect, interpret, or establish any term, condition, or covenant of this Lease or right or remedy of either party, the prevailing party shall be entitled to recover, as a part of such action or proceeding, reasonable attorneys' fees and court costs, including reasonable attorneys' fees and costs for appeal, as may be fixed by the court or jury. Notwithstanding anything to the contrary contained in this Lease, "prevailing party" as used in this paragraph shall include the party who dismisses an action for recovery hereunder in exchange for sums allegedly due, performance of covenants allegedly breached or considerations substantially equal to the relief sought in the action.

24. Assignment, Subletting and Hypothecation.

24.1 In General. Tenant shall not voluntarily sell, assign or transfer all or any part of Tenant's interest in this Lease or in the Premises or any part thereof, sublease all or any part of the Premises, or permit all or any part of the Premises to be used by any person or entity other than Tenant or Tenant's employees, except as specifically provided in this Paragraph 24.

24.2 Voluntary Assignment and Subletting.

(a) Notice to Landlord. Tenant shall, by written notice, advise Landlord of Tenant's desire on a stated date (which date shall not be less than thirty (30) days nor more than ninety (90) days after the date of Tenant's notice) to assign this Lease or to sublet all or any part of the Premises for any part of the Lease Term. Tenant's notice shall state the name, legal composition and address of the proposed assignee or subtenant, and Tenant shall provide the following information to Landlord with said notice: a true and complete copy of the proposed assignment agreement or sublease; a current financial statement of the proposed assignee or subtenant certified as true and correct by an officer, general partner or managing member of Tenant prepared in accordance with generally accepted accounting principles within one year prior to the proposed effective date of the assignment or sublease; the nature of the proposed assignee's or subtenant's business to be carried on in the Premises; the payments to be made or other consideration to be given on account of the assignment or sublease; a current financial statement of Tenant; and such other pertinent information as may be requested by Landlord, all in sufficient detail to enable Landlord to evaluate the proposed assignment or sublease and the prospective assignee or subtenant. Tenant's notice shall not be deemed to have been served or given until such time as Tenant has provided Landlord with all information reasonably requested by Landlord pursuant to this Paragraph 24.2. Tenant shall immediately notify Landlord of any modification to the proposed terms of such assignment or sublease.

(b) Offer to Terminate. Other than with respect to a Permitted Transfer (as defined in Paragraph 24.4 below), if Tenant notifies Landlord of its desire to assign this Lease or Tenant's interest herein or sublet more than fifty percent of the Premises for more than fifty percent of the balance of the Lease Term, Tenant's notice shall constitute an offer to terminate this Lease and Landlord shall have the right, to be exercised

by giving written notice to Tenant within thirty (30) days after receipt of Tenant's notice, to terminate the Lease and, in the event of such termination, this Lease shall terminate on the date stated in the notice given by Tenant pursuant to Paragraph 24.2(a), subject to any obligations which have accrued and are unfulfilled as of such date.

(c) Landlord's Consent . If Landlord does not exercise its right to terminate pursuant to Paragraph 24.2(b) within thirty (30) days after receipt of Tenant's notice, Landlord shall not unreasonably withhold or delay its consent to the proposed assignment or subletting, on the terms and conditions specified in said notice. Without otherwise limiting the criteria upon which Landlord may withhold its consent to any proposed assignment or sublease, if Landlord withholds its consent where Tenant is in default at the time of the giving of Tenant's notice or at any time thereafter, or where the net worth of the proposed assignee (according to generally accepted accounting principles, as applicable) is less than the greater of (i) the net worth of Tenant immediately prior to the assignment (ii) or the net worth of Tenant at the time this Lease is executed, such withholding of consent shall be presumptively reasonable. Fifty percent (50%) of any and all rent paid by an assignee or subtenant in excess of the Rentals to be paid under this Lease (prorated in the event of a sublease of less than the entire Premises), after Tenant's deduction therefrom of (i) tenant improvement costs directly paid, and/or "free rent" actually granted, to the transferee by Tenant in order to obtain the Lease assignment or subletting in question, and (ii) all reasonable brokerage commissions and/or reasonable attorneys' fees paid by Tenant to third parties not affiliated with Tenant in order to obtain the Lease assignment or subletting in question, shall be paid directly to Landlord, as Additional Rent, at the time and place specified in this Lease. For the purposes of this Paragraph 24, the term "rent" shall include any consideration of any kind received, or to be received, by Tenant from an assignee or subtenant, if such sums are related to Tenant's interest in this Lease or in the Premises, including, but not limited to key money, bonus money, and payments (in excess of the fair market value thereof) for Tenant's assets, fixtures, trade fixtures, inventory, accounts, goodwill, equipment, furniture, general intangibles. Any assignment or subletting without Landlord's consent shall be voidable at Landlord's option, and shall constitute a Default by Tenant. Landlord's consent to any one assignment or sublease shall not constitute a waiver of the provisions of this Paragraph 24 as to any subsequent assignment or sublease nor a consent to any subsequent assignment or sublease; further, Landlord's consent to an assignment or sublease shall not release Tenant from Tenant's obligations under this Lease, and Tenant shall remain jointly and severally liable with the assignee or subtenant.

(d) Assumption of Obligations . In the event Landlord consents to any assignment, such consent shall be conditioned upon the assignee expressly assuming and agreeing to be bound by each of Tenant's covenants, agreements and obligations contained in this Lease, pursuant to a written assignment and assumption agreement in a form reasonably approved by Landlord. Landlord's consent to any assignment or sublease shall be evidenced by Landlord's signature on said assignment and assumption agreement or on said sublease or by a separate written consent prepared by Landlord and to be executed by Tenant and the applicable assignee or sublessee. In the event Landlord consents to a proposed assignment or sublease, such assignment or sublease shall be valid and the assignee or subtenant shall have the right to take possession of the Premises only if an executed original of the assignment or sublease is delivered to Landlord, and such document contains the same terms and conditions as stated in Tenant's notice to Landlord given pursuant to Paragraph 24.2(a) above, except for any such modifications to which Landlord has consented in writing.

24.3 Collection of Rent . Tenant hereby irrevocably gives to and confers upon Landlord, as security for Tenant's obligations under this Lease, the right, power and authority to collect all rents from any assignee or subtenant of all or any part of the Premises as permitted by this Paragraph 24, or otherwise, and Landlord, as assignee of Tenant, or a receiver for Tenant appointed on Landlord's application, may collect such rent and apply it toward Tenant's obligations under this Lease; provided, however, that until the occurrence of any Default by Tenant, or except as provided by the provisions of Paragraph 24.2(c) above, Tenant shall have the right to collect

such rent. Upon the occurrence of any Default by Tenant, Landlord may at any time without notice in Landlord's own name sue for or otherwise collect such rent, including rent past due and unpaid, and apply the same, less costs and expenses of operation and collection, including reasonable attorneys' fees, toward Tenant's obligations under this Lease. Landlord's collection of such rents shall not constitute an acceptance by Landlord of attornment by such subtenants. In the event of a Default by Tenant, Landlord shall have all rights provided by this Lease and by law, and Landlord may, upon re-entry and taking possession of the Premises, eject all parties in possession or eject some and not others, or eject none, as Landlord shall determine in Landlord's sole discretion.

24.4 Corporations and Partnerships. If Tenant is a corporation or limited liability company, any dissolution, merger, consolidation or other reorganization of Tenant, any sale or transfer (or cumulative sales or transfers) of the capital stock or membership interests of Tenant in excess of fifty percent (50%), or any sale (or cumulative sales) of all or substantially all of the assets of Tenant shall be deemed an assignment of this Lease requiring the prior written consent of Landlord. If Tenant is a partnership, any withdrawal or substitution (whether voluntary, involuntary, or by operation of law and whether occurring at one time or over a period of time) of any partner(s) owning fifty percent (50%) or more (cumulatively) of the partnership, any assignment(s) of fifty percent (50%) or more (cumulatively) of any interest in the capital or profits of the partnership, or the dissolution of the partnership shall be deemed an assignment of this Lease requiring the prior written consent of Landlord. Any such withdrawal or substitution of partners or assignment of any interest in or dissolution of a partnership tenant, and any such sale of stock, membership interests or assets of a corporate or limited liability company tenant or dissolution, merger, consolidation or other reorganization of a corporate or limited liability company without the prior written consent of Landlord shall be a Default by Tenant hereunder. The foregoing notwithstanding, the sale or transfer of any or all of the capital stock of a corporation, the capital stock of which is now or hereafter becomes publicly traded, shall not be deemed an assignment of this Lease.

Notwithstanding anything to the contrary contained in this Lease, Tenant, without Landlord's prior written consent (but with notice to Landlord), may sublet the Premises or assign this Lease to (i) a subsidiary, affiliate, corporation or other entity controlled by, which controls or is under common control with Tenant; (ii) a successor corporation related to Tenant by merger, consolidation, non-bankruptcy reorganization or government action; or (iii) a purchaser of all or substantially all of Tenant's assets, provided that in either of the latter two instances the successor or purchaser has a net worth not less than the greater of (i) the net worth of Tenant at the time that Tenant executes this Lease, or (ii) the net worth of Tenant as of the effective date of such assignment or subletting (each, a " **Permitted Transferee** "). For purposes of this Lease, a " **Permitted Transfer** " is an assignment or subletting to a Permitted Transferee. Notwithstanding that a Transfer is made to a Permitted Transferee, Tenant shall not be released from any of its obligations under this Lease and such Permitted Transferee shall be required to assume all of Tenant's obligations hereunder as a condition to such transfer being permitted without Landlord's prior written consent.

24.5 Reasonable Provisions. Tenant expressly agrees that the provisions of this Paragraph 24 are not unreasonable standards or conditions for purposes of Section 1951.4(b)(2) of the California Civil Code, as amended from time to time, under bankruptcy laws, or for any other purpose.

24.6 Attorneys' Fees. Tenant shall pay, as Additional Rent, Landlord's reasonable attorneys' fees for reviewing, investigating, processing and/or documenting any requested assignment or sublease, whether or not Landlord's consent is granted (provided that such attorneys' fees shall not exceed, with respect to any assignment and/or sublease constituting a typical and customary direct assignment and/or sublease (as distinct from, for example, a sublease assignment and/or sub-sublease), One Thousand Five Hundred Dollars ($1,500.00) per assignment or sublease).

24.7 Involuntary Transfer. No interest of Tenant in this Lease shall be assignable involuntarily or by operation of law, including, without limitation, the transfer of this Lease by testacy or intestacy. Each of the following acts shall be considered an involuntary assignment:

(a) If Tenant is or becomes bankrupt or insolvent, makes an assignment for the benefit of creditors, or a proceeding under any bankruptcy law is instituted in which Tenant is the bankrupt; or, if Tenant is a partnership or consists of more than one person or entity, if any partner of the partnership or other person or entity is or becomes bankrupt or insolvent, or makes an assignment for the benefit of creditors;

(b) Levy of a writ of attachment or execution on this Lease;

(c) Appointment of a receiver with authority to take possession of the Premises in any proceeding or action to which Tenant is a party; or

(d) Foreclosure of any lien affecting Tenant's interest in the Premises, which lien was not consented to by Landlord pursuant to Paragraph 24.8.

An involuntary assignment shall constitute a Default by Tenant and Landlord shall have the right to terminate this Lease, in which case this Lease shall not be treated as an asset of Tenant. In the event the Lease is not terminated, the provisions of Paragraph 24.2(c) regarding rents paid by an assignee or subtenant shall apply. If a writ of attachment or execution is levied on this Lease, or if any involuntary proceeding in bankruptcy is brought against Tenant or a receiver is appointed, Tenant shall have sixty (60) days in which to cause the attachment or execution to be removed, the involuntary proceeding dismissed, or the receiver removed.

24.8 Hypothecation. Tenant shall not hypothecate, mortgage or encumber Tenant's interest in this Lease or in the Premises or otherwise use this Lease as a security device in any manner without the consent of Landlord, which consent Landlord may withhold in its sole and absolute discretion. Consent by Landlord to any such hypothecation or creation of a lien or mortgage shall not constitute consent to an assignment or other transfer of this Lease following foreclosure of any permitted lien or mortgage.

24.9 Binding on Successors. The provisions of this Paragraph 24 expressly apply to all heirs, successors, sublessees, assignees and transferees of Tenant.

25. Successors. Subject to the provisions of Paragraph 24 above and Paragraph 30.2(a) below, the covenants, conditions, and agreements contained in this Lease shall be binding on the parties hereto and on their respective heirs, successors and assigns.

26. Landlord Default; Mortgagee Protection. Landlord shall not be in default under this Lease unless Tenant shall have given Landlord written notice of the breach and, within thirty (30) days after notice, Landlord has not cured the breach or, if the breach is such that it cannot reasonably be cured under the circumstances within thirty (30) days, has not commenced diligently to prosecute the cure to completion. Any money judgment obtained by Tenant based upon Landlord's breach of this Lease shall be satisfied only out of the proceeds of the sale or disposition of Landlord's interest in the Premises (whether by Landlord or by execution of judgment). In the event of any breach or default of this Lease by Landlord, Tenant shall not have any recourse against any of Landlord's members, officers, directors, shareholders, or partners with respect to such breach and under no circumstances

shall Landlord be liable to Tenant for any claim of consequential damages, including, without limitation, lost profits, loss of income or loss of business. In the event of any default on the part of Landlord under this Lease, Tenant shall give notice by nationally-recognized courier, or registered or certified mail to any beneficiary of a deed of trust or any mortgagee of a mortgage affecting the Premises, Building or Land whose address shall have been furnished to Tenant, and shall offer such beneficiary or mortgagee a reasonable opportunity to cure the default, including time to obtain possession of the Premises by power of sale or judicial foreclosure, if such should prove necessary to effect a cure.

27. Exhibits . All exhibits attached to this Lease shall be deemed to be incorporated herein by the individual reference to each such exhibit, and all such exhibits shall be deemed to be a part of this Lease as though set forth in full in the body of the Lease.

28. Surrender of Lease Not Merger . The voluntary or other surrender of this Lease by Tenant, or a mutual cancellation thereof, shall not work a merger and shall, at the option of Landlord, terminate all or any existing subleases or subtenants, or may, at the option of Landlord, operate as an assignment to Landlord of any or all such subleases or subtenants.

29. Waiver . The waiver by Landlord of any breach of any term, covenant or condition herein contained (or the acceptance by Landlord of any performance by Tenant after the time the same shall become due) shall not be deemed to be a waiver of such term, covenant or condition or any subsequent breach thereof or of any other term, covenant or condition herein contained, unless otherwise expressly agreed to by Landlord in writing. The acceptance by Landlord of any sum less than that which is required to be paid by Tenant shall be deemed to have been received only on account of the obligation for which it is paid (or for which it is allocated by Landlord, in Landlord’s reasonable discretion, if Tenant does not designate the obligation as to which the payment should be credited), and shall not be deemed an accord and satisfaction notwithstanding any provisions to the contrary written on any check or contained in any letter of transmittal. The acceptance by Landlord of any sum tendered by a purported assignee or transferee of Tenant shall not be deemed a consent by Landlord to any assignment or transfer of Tenant’s interest herein. No custom or practice which may arise between the parties hereto in the administration of the terms of this Lease shall be construed as a waiver or diminution of Landlord’s right to demand performance by Tenant in strict accordance with the terms of this Lease.

30. General .

30.1 Captions and Headings . The captions and paragraph headings used in this Lease are for convenience of reference only. They shall not be construed to limit or extend the meaning of any part of this Lease, and shall not be deemed relevant in resolving any question of interpretation or construction of any paragraph of this Lease.

30.2 Definitions .

(a) Landlord . The term Landlord as used in this Lease, so far as the covenants or obligations on the part of Landlord are concerned, shall be limited to mean and include only the owner at the time in question of the fee title to the Premises. In the event of any transfer(s) of such interest by Landlord, so long as Landlord’s transferee expressly assumes the obligations on the part of the Landlord to be performed under this Lease (including the Improvement Agreement) accruing after the effective date of such transfer, the Landlord herein named (and in case of any subsequent transfers or conveyances, the then grantor) shall have no further liability under this Lease to Tenant except as to matters of liability which have accrued and are unsatisfied as of the date

of such transfer, it being intended that, subject to such express assumption on the part of the transferee(s) in question, the covenants and obligations contained in this Lease on the part of Landlord shall be binding on Landlord and its successors and assigns only during and in respect of their respective periods of ownership of the fee; provided that any funds in the possession of Landlord or the then grantor and as to which Tenant has an interest, less any deductions permitted by law or this Lease, shall be turned over to the grantee. The covenants and obligations contained in this Lease on the part of Landlord shall, subject to the provisions of this Paragraph 30.2(a), be binding upon each Landlord and such Landlord's heirs, personal representatives, successors and assigns only during its respective period of ownership.

(b) Agents. For purposes of this Lease and without otherwise affecting the definition of the word "agent" or the meaning of an "agency," the term "agents" shall be deemed to include the agents and employees of Landlord or Tenant, as the case may be, and also with respect to Tenant, its officers, directors, members, partners, invitees, contractors, successors, representatives, subcontractors, guests, customers, suppliers, affiliated companies, and any other person or entity related in any way to Tenant.

(c) Interpretation of Terms. The words "Landlord" and "Tenant" as used herein shall include the plural as well as the singular. Words in the neuter gender include the masculine and feminine and words in the masculine or feminine gender include the neuter.

30.3 Copies. Any executed copy of this Lease shall be deemed an original for all purposes.

30.4 Time of Essence. Time is of the essence as to each and every provision in this Lease requiring performance within a specified time.

30.5 Severability. In case any one or more of the provisions contained herein shall for any reason be held to be invalid, illegal or unenforceable in any respect, such invalidity, illegality or unenforceability shall not affect any other provision of this Lease, but this Lease shall be construed as if such invalid, illegal or unenforceable provision had not been contained herein. However, if Tenant's obligation to pay the Rentals is determined to be invalid or unenforceable, this Lease at the option of Landlord shall terminate.

30.6 Governing Law. This Lease shall be construed and enforced in accordance with the laws of the State of California.

30.7 Joint and Several Liability. If Tenant is more than one person or entity, each such person or entity shall be jointly and severally liable for the obligations of Tenant hereunder. If Tenant is a husband and wife, the obligations hereunder shall extend to their sole and separate property as well as community property.

30.8 Construction of Lease Provisions. Although the provisions of this Lease were prepared by Landlord, the doctrine or rule of construction that ambiguities in this Lease shall be construed against the party drafting the same shall not be employed in connection with this Lease and this Lease shall be construed in accordance with the general tenor of the language to reach a fair and equitable result.

30.9 Tenant's Financial Statements. Tenant hereby warrants that all financial statements delivered by Tenant to Landlord are true, correct, and complete, and, where expressly indicated, prepared in accordance with generally accepted accounting principles. Tenant acknowledges and agrees that Landlord is relying on such financial statements in accepting this Lease, and that a breach of Tenant's warranty as to such financial statements shall constitute a Default by Tenant.

30.10 Withholding of Landlord's Consent . Notwithstanding any other provision of this Lease where Tenant is required to obtain the consent (whether written or oral) of Landlord to do any act, or to refrain from the performance of any act, Tenant agrees that if Tenant is in default with respect to any term, condition, covenant or provision of this Lease, then Landlord shall be deemed to have acted reasonably in withholding its consent if said consent is, in fact, withheld.

31. Signs; Monument Signage and Building Signage . Tenant shall not place or permit to be placed any sign or decoration on the Land or on the exterior of the Building or that would be visible from the exterior of the Building or Premises, without the prior written consent of Landlord, which consent shall not be unreasonably withheld. Tenant may place "for lease" signs in connection with efforts to assign or sublease the Premises, subject to the prior written consent of Landlord, which consent shall not be unreasonably withheld or delayed. Except as otherwise expressly set forth below with respect to the Monument Signage, any and all signs installed by or on behalf of Tenant pursuant to this Paragraph 31 shall be removed by Tenant, at Tenant's cost, on or prior to Lease Termination. In no event shall any such sign revolve, rotate, move or create the illusion of revolving, rotating or moving. Tenant, upon written notice by Landlord, shall immediately remove any of Tenant's signs or decorations that Tenant has placed or permitted to be placed on the Land or the exterior of the Building without the prior written consent of Landlord. If Tenant fails to so remove such sign or decoration within five (5) days after Landlord's written notice, Landlord may enter the Premises and remove such sign or decoration and Tenant shall pay Landlord, as Additional Rent upon demand, the cost of such removal. All signs placed on the Premises, Building or Land by Tenant shall comply with any and all recorded documents affecting the Premises, including but not limited to any Declaration of Conditions, Covenants and Restrictions; and applicable statutes, ordinances, rules and regulations of governmental agencies having jurisdiction thereof. At Landlord's option, Tenant shall at Lease Termination remove any sign which it has placed on the Premises, Land or the Building, and shall, at its sole cost, repair any damage caused by the installation or removal of such sign.

From and after the Effective Date, Tenant shall have the right to install one (1) Project-standard monument sign identifying "Calix" in the portion of the Tenant Parking Area delineated on Exhibit B (" **Monument Signage** "). Tenant shall cause the Monument Signage to be made in accordance with the Project's master signage plan and in compliance with all applicable ordinances and regulations of the City of San Jose. The exact location, size, manner of illumination, color, design, materials and all other aspects of the Monument Signage shall be in Tenant's reasonable discretion (subject to Landlord's prior reasonable approval). The cost of procuring, designing, fabricating and installing the Monument Signage, and any and all costs relating to the maintenance, repair, restoration and removal thereof (provided that Tenant shall only be obligated to remove the actual signage (e.g., lettering, logos and the like), as distinct from the Monument Signage base and/or pedestal itself), shall be at Tenant's sole cost and expense. Tenant's obligation to pay such costs shall survive the expiration or earlier termination of this Lease (as amended). Tenant's right to install the Monument Signage shall be exclusive to Tenant with respect to the Tenant Parking Area (and only such Tenant Parking Area).

So long as Tenant leases and occupies the entire Building (" **Minimum Occupancy Requirement** "), Tenant shall have the right to install and maintain one (1) exterior-mounted sign identifying "Calix" on the Building (" **Building Signage** "), which right shall be exclusive to Tenant with respect to the Building (and only such Building). The Building Signage shall be subject to the prior written approval of the City of San Jose, and, if such approval is obtained, designed by Tenant, at Tenant's sole cost and expense, in compliance with all applicable ordinances and regulations of the City of San Jose, and in accordance with the Building's master signage plan and signage specifications. The exact size, weight, manner of illumination, finishes, colors, design, type, location(s), and method of installation of the Building Signage shall be consistent and compatible with the design of the Building, and subject

to (A) Landlord's prior written approval (which approval shall not be unreasonably withheld) and (B) compliance with the Building's master signage plan and signage specifications. After Tenant receives the appropriate approvals for Building Signage as required herein, Landlord shall cause the Building Signage to be installed, at Tenant's sole cost and expense. Upon the expiration or earlier termination of this Lease, and/or in the event Tenant no longer meets the Minimum Occupancy Requirement, Landlord may remove or require Tenant to remove the Building Signage and restore the Building to its condition prior to the installation of the Building Signage in accordance with all applicable laws in effect on the date of such restoration. If Tenant no longer meets the Minimum Occupancy Requirement, (A) Landlord's election to require removal of the Building Signage shall be in Landlord's sole and absolute discretion and (B) if Landlord elects to require such removal, (i) such election on the part of Landlord shall be without any sums or other consideration being due or payable to Tenant and (ii) Tenant's rights pursuant to this Paragraph 31 shall thereafter be null and void and of no further force or effect with respect to such Building Signage. Any and all costs and expenses of installation, maintenance, repair and/or removal of the Building Signage, and/or restoration of the Building after the removal of the same, shall be paid by Tenant, at Tenant's sole cost and expense. Tenant's obligation to pay such costs shall survive the expiration or earlier termination of this Lease (as amended).

Tenant's rights with respect to the Monument Signage and Building Signage shall be personal to the entity then constituting the "Tenant" under this Lease, and shall not be assignable or transferable to any third party; provided, however, that such Monument Signage and Building Signage rights may be assigned by such entity then constituting the Tenant to (A) any assignee of this Lease to which Landlord shall have expressly consented in writing (pursuant to the terms and conditions of this Lease) and/or (B) a Permitted Transferee to which this Lease has been assigned, in which event, such Building Signage and Monument Signage shall identify, as applicable, such assignee or Permitted Transferee.

32. Landlord as Party Defendant. If, by reason of any act or omission by Tenant or Tenant's agents, Landlord is made a party defendant concerning this Lease, or any portion of the Project, Tenant shall indemnify Landlord against all liability actually incurred (or threatened against) Landlord as a party defendant, including all damages, costs and reasonable attorneys' fees.

33. Landlord Not a Trustee. Landlord shall not be deemed to be a trustee of any funds paid to Landlord by Tenant (or held by Landlord for Tenant) pursuant to this Lease, including without limitation any security deposit. Landlord shall not be required to keep any such funds separate from Landlord's general funds or segregated from any funds paid to Landlord by (or held by Landlord for) other tenants of the Project. Any funds held by Landlord pursuant to this Lease shall not bear interest.

34. Interest. Any payment due from Tenant to Landlord shall bear interest from the date due until paid, at an annual rate equal to the greater of: ten percent (10%); or five percent (5%) plus the rate established by the Federal Reserve Bank of San Francisco, as of the twenty-fifth (25th) day of the month immediately preceding the due date, on advances to member banks under Sections 13 and 13(a) of the Federal Reserve Act, as now in effect or hereafter from time to time amended. In addition, Tenant shall pay all costs and reasonable attorneys' fees incurred by Landlord in the collection of such amounts.

35. Surrender of Premises. Upon the expiration of the Lease Term, or upon any earlier termination of this Lease, Tenant shall quit and surrender possession of the Premises to Landlord in as good order and condition as the same are now and hereafter may be improved by Landlord or Tenant, reasonable wear and tear and repairs which are Landlord's obligation excepted, and shall, without expense to Landlord, remove or cause to be removed from the Premises all debris and rubbish, all furniture, equipment (including, without limitation, any and all computer,

network, telecommunications and/or other systems or equipment installed in or about the Premises by or on behalf of Tenant prior to or during the term of this Lease, and any and all wiring and/or cabling related thereto (irrespective of whether such wiring and cabling is installed or located in the Premises and/or any electrical rooms, pathways, shafts, risers, conduits or plenums located within the Building and/or appurtenant thereto, it being the intent of the parties that Tenant shall remove the same, at Tenant's sole cost and expense)), business and trade fixtures, free-standing cabinet work, moveable partitioning and other articles of personal property owned by Tenant and/or installed or placed in the Premises by or on behalf of Tenant, and all similar articles of any other persons claiming under Tenant unless Landlord exercises its option to have any subleases or subtenancies assigned to it, and Tenant shall repair all damage to the Premises and/or Building resulting from the installation and removal of such items to be removed and restore such areas to the condition that existed prior to the installation thereof in accordance with all applicable laws, statutes, building codes and regulations in effect as of the date of such repair and restoration. In addition, prior to Lease Termination, Tenant shall, at its sole cost, take all actions necessary to close out any Hazardous Material permit(s) issued to Tenant (or any person or entity claiming an interest in the Premises, or any portion thereof, under, by or through Tenant) and obtain environmental closure from the applicable governmental authority with respect to the use of Hazardous Materials on or in the Premises by Tenant (or any person or entity claiming an interest in the Premises, or any portion thereof, under by or through Tenant). If the Premises are not so surrendered at Lease Termination, Tenant shall indemnify, defend and hold Landlord harmless from and against any loss, damage, expense, claim or liability resulting from delay by Tenant in so surrendering the Premises including, without limitation, any claims made by any succeeding tenant or losses to Landlord due to lost opportunities to lease to succeeding tenants.

Any personal property of Tenant not removed by Tenant upon the expiration of the Lease Term (or within five (5) business days after a termination by reason of Tenant's default), as provided in this Lease, shall be considered abandoned and Landlord may remove any or all of such items and dispose of the same in any manner or store the same in a public warehouse or elsewhere for the account and at the expense and risk of Tenant, and if Tenant shall fail to pay the cost of storing any such property after it has been stored for a period of ninety (90) days or more, Landlord may sell any or all of such property at public or private sale, in such manner and at such times and places as Landlord, in its sole discretion, may deem proper, without notice or to demand upon Tenant, for the payment of all or any part of such charges or the removal of any such property, and shall apply the proceeds of such sale: first, to the cost and expense of such sale, including reasonable attorneys' fees for services rendered; second, to the payment of the cost of or charges for storing any such property; third, to the payment of any other sums of money which may then or thereafter be due to Landlord from Tenant under any of the terms hereof; and fourth, the balance, if any, to Tenant.

The provisions of this Paragraph 35 shall survive Lease Termination.

36. Labor Disputes . In the event Tenant shall in any manner be involved in or be the object of a labor dispute which subjects the Premises or any part of the Project to any picketing, work stoppage or other concerted activity which in the reasonable opinion of Landlord is detrimental to the operation of the Project or its tenants, Landlord shall have the right to require Tenant, at Tenant's own expense and within a reasonable period of time, to use Tenant's best efforts to either resolve such labor dispute or terminate or control any such picketing, work stoppage or other concerted activity to the extent necessary to eliminate any interference with the operation of the Project. To the extent such labor dispute interferes with the performance of Landlord's duties hereunder, Landlord shall be excused from the performance of such duties. Failure by Tenant to use its best efforts to so resolve such dispute or terminate or control such picketing, work stoppage or other concerted activity within a reasonable period of time shall constitute a Default by Tenant hereunder. Nothing contained in this Paragraph 36 shall be construed

as placing Landlord in an employer/employee relationship with any of Tenant's employees or with any other employees who may be involved in such labor dispute.

37. No Partnership or Joint Venture. Nothing in this Lease shall be construed as creating a partnership or joint venture between Landlord, Tenant, or any other party, or cause Landlord to be responsible for the debts or obligations of Tenant or any other party.

38. Entire Agreement. Any agreements, warranties, or representations not expressly contained herein shall in no way bind either Landlord or Tenant, and Landlord and Tenant expressly waive all claims for damages by reason of any statement, representation, warranty, promise or agreement, if any, not contained in this Lease. This Lease supersedes and cancels any and all previous negotiations, arrangements, brochures, agreements and understandings, whether written or oral, between Landlord and its agents and Tenant and its agents with respect to the Project or this Lease. This Lease constitutes the entire agreement between the parties hereto and no addition to, or modification of, any term or provision of this Lease shall be effective until and unless set forth in a written instrument signed by both Landlord and Tenant.

39. Submission of Lease. Submission of this instrument for Tenant's examination or execution does not constitute a reservation of space nor an option to lease. This instrument shall not be effective until executed by both Landlord and Tenant. Execution of this Lease by Tenant shall constitute an offer by Tenant to lease the Premises, which offer shall be deemed accepted by Landlord when this Lease is executed by Landlord and delivered to Tenant.

40. Quiet Enjoyment. Landlord covenants and agrees with Tenant that upon Tenant paying Rentals and performing its covenants and conditions under the Lease, Tenant shall and may peaceably and quietly have, hold and enjoy the Premises for the Lease Term, subject, however, to the terms of this Lease and of any mortgages or deeds of trust affecting the Premises, and the rights reserved by Landlord hereunder.

41. Authority. The undersigned parties hereby warrant that they have proper authority and are empowered to execute this Lease on behalf of the Landlord and Tenant, respectively. If Tenant is a corporation, limited liability company or partnership, each individual executing this Lease on behalf of said corporation, limited liability company or partnership represents and warrants that he is duly authorized to execute and deliver this Lease on behalf of said corporation in accordance with a duly adopted resolution of the Board of Directors of said corporation or in accordance with the by-laws of said corporation, or on behalf of said limited liability company in accordance with a duly adopted resolution of the managing member or members of the limited liability company, or on behalf of said partnership in accordance with the partnership agreement of such partnership, and that this Lease is binding upon said corporation, limited liability company or partnership, as the case may be, in accordance with its terms. If Tenant is a corporation, and this Lease is not executed by two corporate officers, Tenant shall upon execution of this Lease, deliver to Landlord evidence of the authority of the individual executing this Lease on behalf of Tenant to execute this Lease on behalf of Tenant. In the event Tenant should fail to deliver such evidence to Landlord upon execution of this Lease, Landlord shall not be deemed to have waived its right to require delivery of such evidence, and at any time during the Lease Term Landlord may request Tenant to deliver the same, and Tenant agrees it shall thereafter promptly deliver such evidence to Landlord. If Tenant is a corporation, Tenant warrants that: (a) Tenant is a valid and existing corporation; (b) Tenant is qualified to do business in California; (c) all franchise and corporate taxes, together with all related fees, are paid to date, and will be paid when due; (d) all required forms and reports will be filed when due; and (e) the signers of this Lease are properly authorized to execute this Lease.

42. Brokerage Commissions . Each party hereto represents and warrants to the other that it has not retained or worked with any broker or finder other than Cushman & Wakefield, representing Landlord, and CBRE, Inc., representing Tenant, in connection with the negotiation of this Lease and/or the consummation of the transaction contemplated hereby. Landlord agrees to pay Cushman & Wakefield a brokerage commission in connection with this Lease pursuant to a separate agreement between Landlord and Cushman & Wakefield, and Cushman & Wakefield shall pay a portion of such leasing commissions to CBRE, Inc. pursuant to a separate agreement between Cushman & Wakefield and CBRE, Inc. Subject to Landlord's obligation to pay Cushman & Wakefield pursuant to the terms and conditions of this Paragraph 42 above, Landlord and Tenant do each hereby agree to indemnify, defend and hold the other harmless from and against liability for compensation or charges which may be claimed by any broker, finder or other similar party by reason of any dealings or actions of the indemnifying party, including any costs, expenses and/or attorneys' fees reasonably incurred with respect thereto. The obligation to indemnify, defend and hold harmless as set forth in the immediately preceding sentence shall survive the termination of this Lease.

43 Transportation and Energy Management . Tenant shall fully comply with all present and future programs intended to manage parking, transportation, traffic, energy or any other programs affecting the Project.

44. Option to Extend . Landlord hereby grants to Tenant two (2) options (each, an " **Option** " and, collectively, the " **Options** ") to extend the initial term of the Lease (" **Initial Term** ") for additional periods of five (5) years each (each, an " **Option Term** ") as to the entire Premises, which extension(s) shall be upon and subject to the terms and conditions set forth in this Lease. Tenant shall have no right to extend the Initial Term except as expressly provided in this Paragraph 44. The first Option Term shall commence upon the expiration of the Initial Term and the second Option Term shall commence upon the expiration of the first Option Term. Tenant may not exercise the second Option if Tenant has not exercised the first Option. Each Option shall be exercised, if at all, by Tenant's delivery of both (i) written notice of exercise to Landlord and (ii) as a condition precedent to Tenant's right to exercise the applicable Option, a renewal or substitute letter of credit, in the Letter of Credit Amount, expiring not earlier than one hundred twenty (120) days after the applicable Option Term, in accordance with, and subject to the terms and conditions of, Paragraph 5 of this Lease, no later than nine (9) months nor earlier than twelve (12) months prior to the expiration date of the Initial Term with respect to the first Option, and no later than nine (9) months nor earlier than twelve (12) months prior to the expiration of the first Option Term with respect to the second Option. The Rent to be paid during each Option Term shall be the Prevailing Market Rent, as hereinafter defined. As used herein, the term " **Prevailing Market Rent** " shall mean the rent (including any additional rent and/or applicable base year) and all other monetary payments and escalations that Landlord could obtain from a third party tenant comparable to Tenant desiring to lease the Premises for the applicable Option Term, taking into account the age of the Project, the size of the Premises, the type and quality of tenant improvements, the location of the Premises, the quality of construction of the Project and the Premises, the services provided under the terms of the Lease, the rent and brokers commissions then being paid for the renewal of leases of space comparable to the Premises in the City of San Jose, and all other factors, including any rent abatement concessions, tenant improvement allowances and all other concessions then prevailing in the market for office/research and development buildings in San Jose, that would be relevant to a third party in determining the rent such party would be willing to pay to lease the Premises for the applicable Option Term; provided, however, in no event shall the Prevailing Market Rent be less than (A) with respect to the first Option Term, the Rent payable by Tenant to Landlord at the expiration of the Initial Term and/or (B) with respect to the second Option Term, the Rent payable by Tenant to Landlord at the expiration of the first Option Term. If (i) a Default by Tenant exists or ripens under any of the terms, covenants, or conditions of this Lease or (ii) Tenant does not occupy at least fifty percent (50%) of the Premises (as then configured), either at the time Tenant exercises the applicable Option or at any time thereafter

prior to the commencement date of the applicable Option Term (each, an " **Option Commencement Date** "), then in each case, Tenant's exercise of the applicable Option shall be of no force and effect and Tenant shall have no rights hereunder to extend the Initial Term.

The Options shall be personal to the entity then constituting the Tenant under this Lease, and shall not be transferable or assignable to any third party, except (i) an assignee of this Lease to which Landlord shall have expressly consented in writing (pursuant to the terms and conditions of this Lease) and/or (ii) a Permitted Transferee to which this Lease has been assigned (either being a " **Permitted Option Assignee"**); provided, however, that Tenant hereby agrees and acknowledges that, if any such Permitted Option Assignee exercises an Option, the assigning Tenant (to the extent still in existence), in each instance (i.e., any and all assignors), shall remain fully liable for any and all obligations of the "Tenant" under this Lease during the applicable Option Term (and any extensions thereof).

On or before five (5) business days after Tenant provides Landlord with notice of Tenant's exercise of an Option, Landlord and Tenant shall commence negotiations to agree upon the Prevailing Market Rent applicable thereto. If Landlord and Tenant are unable to reach agreement on the Prevailing Market Rent within fifteen (15) business days after the date negotiations commence, then the Prevailing Market Rent shall be determined as follows:

(a) If Landlord and Tenant are unable to agree on the Prevailing Market Rent within said fifteen (15) business day period, then, within five (5) business days thereafter, Landlord and Tenant shall each simultaneously submit to the other in a sealed envelope its good faith estimate of the Prevailing Market Rent. If the higher of such estimates is not more than one hundred five percent (105%) of the lower of such estimates, then the Prevailing Market Rent shall be the average of the two estimates; provided, however, in no event shall the Prevailing Market Rent be less than (A) with respect to the first Option Term, the Rent payable by Tenant to Landlord at the expiration of the Initial Term and/or (B) with respect to the second Option Term, the Rent payable by Tenant to Landlord at the expiration of the first Option Term .

(b) If the matter is not resolved by the exchange of estimates as provided in subparagraph (a) above, then either Landlord or Tenant may, by written notice to the other on or before five (5) business days after the exchange of such estimates, require that the disagreement be resolved by arbitration. Within ten (10) business days after such notice, the parties shall select as an arbitrator a mutually acceptable MAI appraiser with experience in real estate activities, including at least ten (10) years' experience in appraising office space in the County of Santa Clara, California. If the parties cannot agree on an appraiser, then, within a second period of ten (10) business days, each party shall select an independent MAI appraiser meeting the aforementioned criteria and, within a third period of ten (10) business days, the two appointed appraisers shall select a third appraiser meeting the aforementioned criteria and the third appraiser shall determine the Prevailing Market Rent pursuant to subparagraph (c) below. If one party shall fail to make such appointment within said second ten (10) business day period, then the appraiser chosen by the other party shall be the sole arbitrator.

(c) Once the arbitrator has been selected as provided for in subparagraph (b) above, then, as soon as practicable but in any case within ten (10) business days thereafter, the arbitrator shall select one of the two estimates of the Prevailing Market Rent submitted by Landlord and Tenant, which estimate shall be the one that is closer to the Prevailing Market Rent as determined by the arbitrator; provided, however, in no event shall the Prevailing Market Rent be less than (A) with respect to the first Option Term, the Rent payable by Tenant to Landlord at the expiration of the Initial Term and/or (B) with respect to the second Option Term, the Rent payable by Tenant to Landlord at the expiration of the first Option Term . The arbitrator's selection shall be rendered in writing to both

Landlord and Tenant and shall be final and binding upon them and shall not be subject to appeal. If the arbitrator believes that expert advice would materially assist such arbitrator, then the arbitrator may retain one or more qualified persons, including, but not limited to, legal counsel, brokers, architects or engineers, to provide such expert advice. The party whose estimate is not chosen by the arbitrator shall pay the costs of the arbitrator and of any experts retained by the arbitrator; provided, however, that any fees of any counsel or expert engaged directly by Landlord or Tenant shall be borne by the party retaining such counsel or expert.

45. Roof Space Equipment .

45.1 Right to Use . Subject to availability, upon no less than thirty (30) days prior written notice, Tenant shall have the right to use, at no additional cost, a portion of the roof of the Building, which portion of the roof shall be in such location(s), and encompass such area(s), as may be designated by Landlord from time to time, in Landlord’s reasonable discretion (such portion(s) of the roof being the “ **Roof Space** ”), to install, operate and maintain (provided, however, that the purchase, installation, operation and maintenance thereof shall be at Tenant’s sole cost and expense) the following equipment (including the wiring, cabling and other equipment relating thereto) to facilitate the conduct of Tenant’s business operations from the Premises (and only for such purpose): (i) antenna(ae), satellite dish and/or other telecommunications equipment and/or (ii) supplemental heating, ventilation and air conditioning equipment (such antenna(ae), satellite dish, telecommunications and/or supplemental HVAC equipment, as applicable, being, collectively, the “ **Roof Space Equipment** ”). Tenant shall provide Landlord with schematics for the Roof Space Equipment Tenant desires to install in the Roof Space showing the size, height and space requirements for the Roof Space Equipment. Thereafter, Landlord and Tenant shall mutually agree upon the location of the Roof Space based on available locations that will accommodate the Roof Space Equipment (in Landlord’s reasonable discretion).

45.2 Installation; Relocation . The installation of any Roof Space Equipment shall be treated as an Alteration subject to all of the terms and conditions of Paragraph 13 of this Lease. Without limiting the generality of the foregoing, the size, height and placement of all Roof Space Equipment shall be subject to Landlord’s reasonable review and approval and Tenant shall, at Tenant’s sole cost and expense, screen and/or cover all Roof Space Equipment as reasonably directed by Landlord. Tenant shall, at Tenant’s sole cost and expense, install, construct, maintain, use, repair and remove Tenant’s Roof Space Equipment in compliance with all laws, statutes, permit requirements, building codes, ordinances and governmental rules and regulations now in force or which may hereafter be enacted or promulgated. Tenant’s installation, construction, use, maintenance, repair and removal of Roof Space Equipment in the Roof Space shall not obstruct, impair or interfere with the rights of other tenants or occupants of the Project in existence as of the Effective Date or injure them. If Landlord requires access to the portion of the roof within the Roof Space for maintenance and repair, Landlord shall give Tenant written notice of such requirement and the dates on which Landlord proposes to perform such maintenance and repair. Prior to the date specified in Landlord’s notice, Tenant shall, at Tenant’s sole cost and expense, take all actions necessary to remove the Roof Space Equipment from the Roof Space and make the Roof Space available to Landlord for roof maintenance and repair. Upon completion of the roof maintenance and repair, Tenant shall reinstall the Roof Space Equipment at its sole cost and expense. If emergency roof repairs are necessary, Landlord may itself remove the Roof Space Equipment from the affected area, after first using reasonable efforts to notify Tenant, and Landlord shall not be liable to Tenant for any loss, cost, damage or expense arising from such removal during an emergency. In connection with the installation by Tenant of the Roof Space Equipment, Landlord shall grant Tenant access to and use of the Building risers, to the extent reasonably necessary.

45.3 Landlord Approval Right . Any contractor or person selected by Tenant to perform any work contemplated for the installation, maintenance, repair or removal of the Roof Space Equipment and all plans

and specifications for such work shall first be reasonably approved by Landlord in writing. In order to allow Landlord time to post a notice of non-responsibility, no such work by or on behalf of Tenant shall be allowed to commence until ten (10) business days following receipt by Landlord of written notice of the date Tenant proposes to commence the installation, maintenance, repair or removal of the applicable Roof Space Equipment.

45.4 Removal . Upon the expiration or earlier termination of this Lease, Tenant shall promptly remove all Roof Space Equipment, all anchors, and all separate meters and cabling, and repair any damage to the roof of the Building and other areas of the Project caused by such removal and return the Roof Space to Landlord in the same condition as received, ordinary wear and tear excepted.

45.5 Indemnity . Tenant shall indemnify, defend and hold Landlord, its partners, members, officers, directors, employees, agents and contractors and Landlord's property and all tenants, occupants, invitees and licensees of Landlord harmless from and against all liabilities, claims, actions, causes of action, losses, damages, injuries, liens, costs and expenses, including attorneys' fees and costs of suit, arising out of or relating to the installation, construction, presence, use, maintenance, repair, or removal of Roof Space Equipment. Such obligations of Tenant under this Paragraph 45 shall survive the expiration or earlier termination of this Lease.

45.6 Assumption of Risk . Tenant acknowledges that Landlord has no obligation to protect, secure, install, construct, maintain, repair or remove any Roof Space Equipment, and Tenant hereby assumes all risk of loss or damage to or from the Roof Space Equipment from any cause. Tenant hereby waives all claims against Landlord and its partners, officers, directors, employees, agents and contractors with respect to such loss or damage.

45.7 Permits . Tenant shall obtain all necessary municipal, state and federal permits and authorizations required to install, maintain and operate the Roof Space Equipment, and shall pay any charges levied by governmental agencies result therefrom.

46. Back-Up Generator . Subject to the terms and conditions of this Paragraph 46 and Paragraph 6 above, and so long as the Tenant under this Lease is in occupancy and possession of the entire Premises, upon no less than thirty (30) days' prior written notice to Landlord, Tenant shall have the right, at its sole cost and expense, to install, in such exterior area of the Project as may be designated by Landlord (in Landlord's reasonable discretion), an uninterrupted power supply system, consisting of a diesel generator and diesel fuel storage tank (such generator, together with any and all cabling and equipment relating thereto, shall be collectively referred to as the " **Generator** "), to supply electricity to the Premises during any interruption in electrical service to the Building. The fuel storage tank described in the preceding sentence shall be double-lined, vented and shall be equipped with leak detection alarms and otherwise acceptable to Landlord, in its reasonable discretion. Prior to installing a Generator, Tenant shall first submit plans and specifications therefor for Landlord's approval. Landlord may require as a condition of its approval of the plans and specifications for the Generator, among other things, that Tenant install such protective modifications to the area where the Generator is located as Landlord deems necessary to prevent or contain any release or spill of Hazardous Materials (as defined in Paragraph 6.4 above). The location of the Generator shall provide a readily accessible path for fresh air, exhaust and electrical feeders, and otherwise be acceptable to Landlord, in Landlord's reasonable discretion. Tenant shall install the Generator at its sole cost and expense in a good and workmanlike manner in accordance with any and all applicable laws, statutes, codes and ordinances of applicable governmental agencies. Tenant shall operate the Generator in accordance with Paragraph 6 of this Lease, all applicable Laws relating to Hazardous Materials, and all other applicable laws, statutes, codes and regulations of applicable governmental authorities. In furtherance of the preceding sentence, but without limiting the generality thereof, Tenant shall not install and/or operate the Generator unless and until Tenant shall have

obtained and provided Landlord with copies of (A) all permits and other governmental approvals required for the installation and/or operation of the Generator, including, without limitation, all necessary permits required by the City of San Jose, the Bay Area Air Quality Management District, State of California and all other applicable governmental authorities and (B) a "Hazardous Materials Data Sheet," or similar submittal, filed with the City of San Jose for the use and operation of the Generator. Tenant shall be responsible, at Tenant's sole cost and expense, for the installation of any electrical and/or water connections between the Generator and the Premises. If, after the initial installation of the Generator, Tenant modifies and/or replaces the same, then, unless otherwise directed by Landlord by written notice to Tenant given not less than thirty (30) days prior to the expiration of the term of this Lease (as the same may be extended), Tenant shall, at Tenant's sole cost and expense, remove such modified and/or replaced Generator (it being the intent of the parties that, in accordance with Paragraph 13 above, Tenant shall not be obligated to remove the initially-installed Generator) and restore the area where such modified and/or replaced Generator is located to the condition that existed prior to, as applicable, such modification of the original Generator, or the installation of the replacement Generator, in accordance with all applicable laws, statutes, building codes and regulations in effect as of the date of such restoration. Tenant acknowledges that Landlord has no obligation to protect, secure, install, construct, maintain, repair, insure or, subject to the terms and conditions of Paragraph 13 and this Paragraph 46 above, remove the Generator (and/or any component and/or element thereof), and/or incur any cost, expense and/or liability in connection therewith, and Tenant hereby assumes all such cost, expense and/or liability relating thereto, including, without limitation, the risk of loss or damage to or from the Generator, from any cause. Tenant shall be solely responsible for any and all cost and/or expense associated with the Generator, including, without limitation, with respect to the procurement, installation (including the rental of space required for the installation thereof), operation, repair, replacement and, subject to the terms and conditions of Paragraph 13 and this Paragraph 46 above, removal thereof. Tenant shall pay directly to the taxing authority any taxes or fees imposed upon Tenant's ownership, operation, maintenance and use of the Generator.

47. Counterparts; Electronic Signatures . This Lease may be executed in counterparts, each of which shall be deemed an original and together shall constitute one instrument. The execution of this Lease may be effected by facsimile or portable document format (".pdf") signatures, all of which shall be treated as originals. Landlord and Tenant each intend to be bound by its respective facsimile or .pdf transmitted signature, and each is aware that the other party will rely thereon, and each party waives any defenses to the enforcement of this Lease based solely on the fact that this Lease was delivered by facsimile or .pdf transmission. If the parties execute and deliver facsimile or .pdf transmission, the parties may thereafter deliver original signatures; provided, however, that the failure of either (or both) party(ies) to so deliver its/their original signatures shall in no event invalidate the mutual execution and delivery of such facsimile or .pdf signatures.

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IN WITNESS WHEREOF, the parties have executed this Lease effective as of the date set forth below.

LANDLORD :

ORCHARD PARKWAY SAN JOSE, LLC
a California limited liability company

By: /s/ Scott R. Trobbe
Name: Scott R. Trobbe
Its Authorized Signatory
Dated: March 9, 2018

TENANT:

CALIX, INC.,
a Delaware corporation

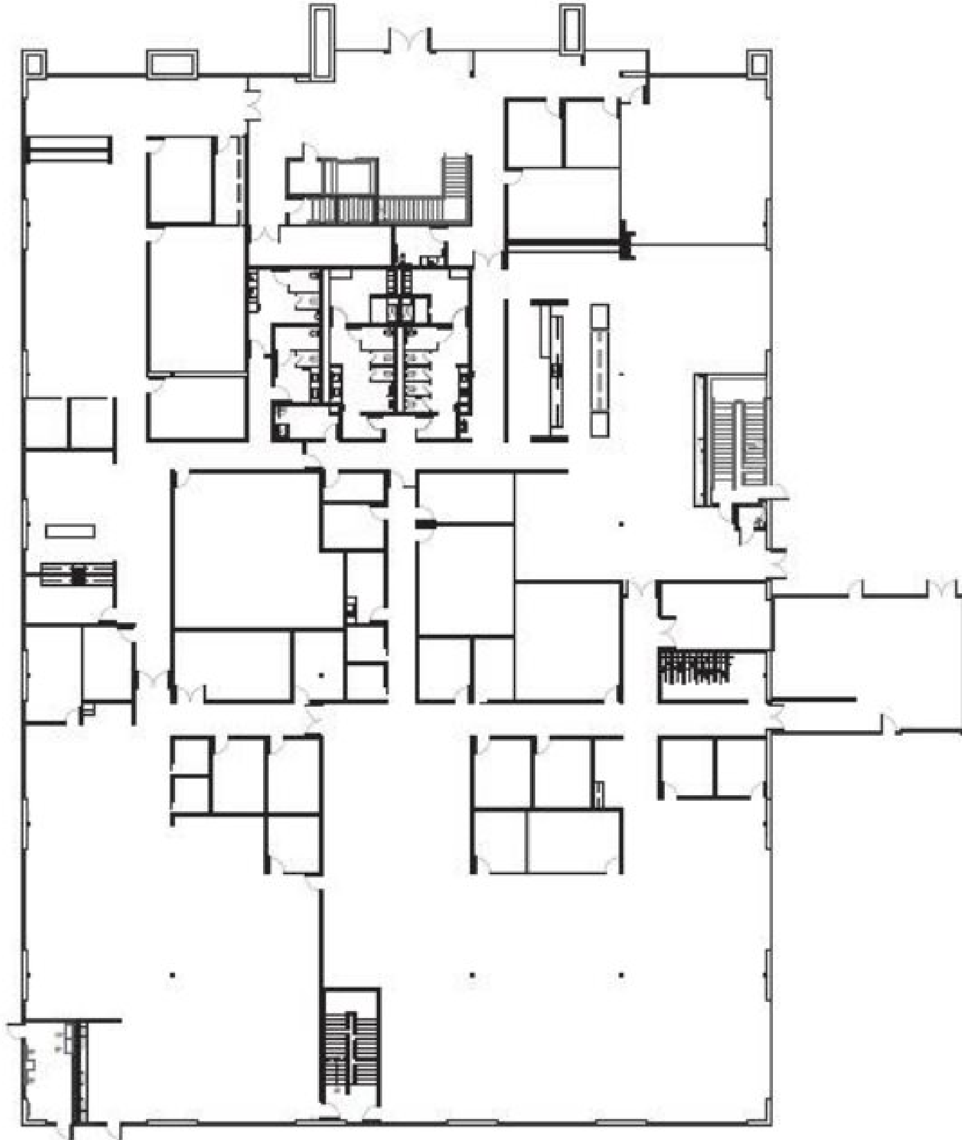
By: /s/ Diane R. Prins Sheldahl
Name: Diane R. Prins Sheldahl
Its: SVP, Talent and Culture
Dated: March 9, 2018

By: /s/ Suzanne Tom
Name: Suzanne Tom
Its: VP, General Counsel
Dated: March 9, 2018

<u>EXHIBITS</u>

A	Floor Plan	Paragraph 1.4 (Premises shown cross-hatched or otherwise identified)
B	Site Plan	Paragraph 1.4, Paragraph 1.13 and Paragraph 31 (Building shown cross-hatched or otherwise identified and the Land shown thereon pursuant to Paragraph 2.1; Tenant Parking Area delineated and location of Monument Signage)
C	Improvement Agreement	Paragraph 2.2
D	Commencement Date Letter	Paragraph 3.1
E	Intentionally Omitted	
F	Legal Description of Land	Paragraph 2.1
G	Form of Sight Draft	Paragraph 5

EXHIBIT A
FLOOR PLAN OF PREMISES

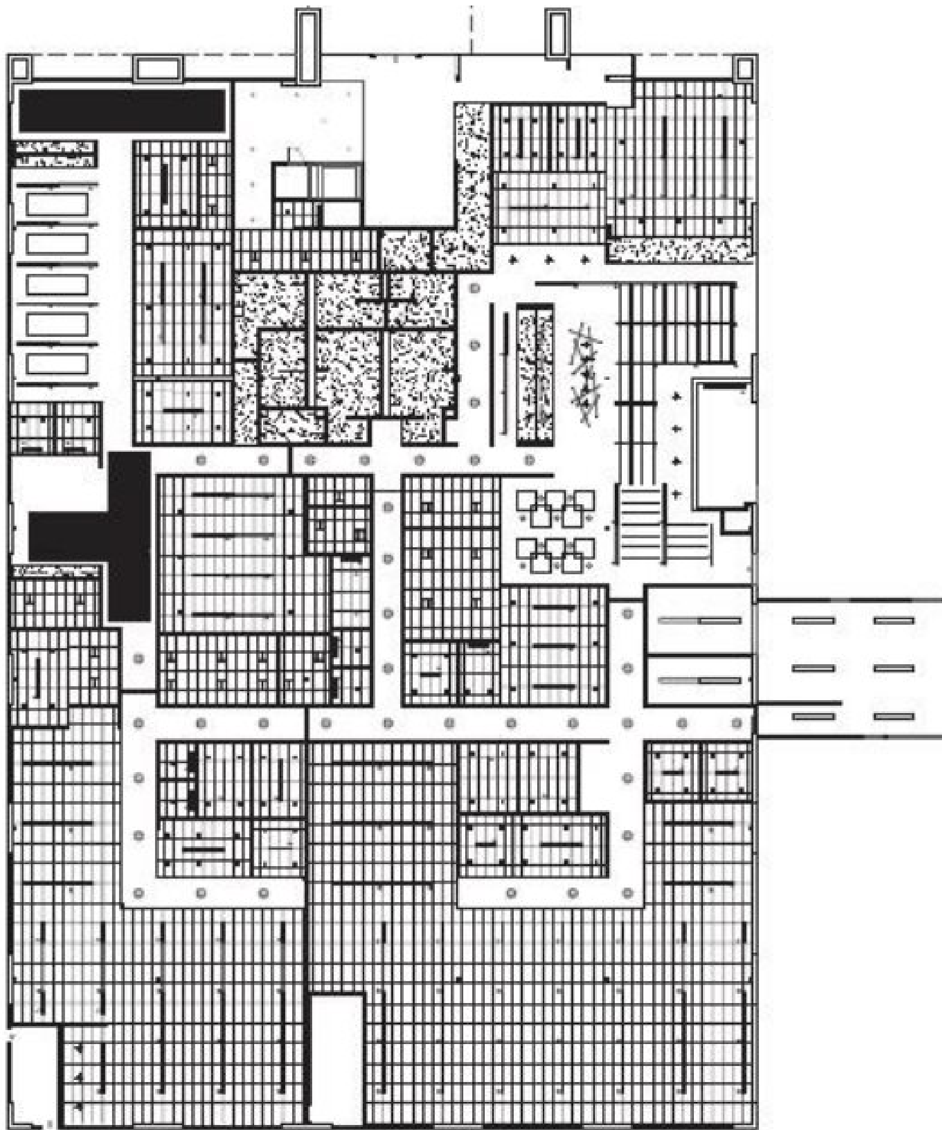


A Tenant Improvement for:
CALIX
2777 Orchard Parkway
San Jose, CA. 35131

PROJECT NO.174343.05
DATE 03.08.2018

FLOOR PLAN

FL-1



www.arctecinc.com

A Tenant Improvement for:

CALIX
2777 Orchard Parkway
San Jose, CA. 35131

PROJECT NO.174343.05
DATE 03.08.2018

Sheet Ref. No. / Sheet Number

RCP

FL-1

ARC TEC

Arizona
2960 E. Northern Avenue
Building C
Phoenix, AZ 85028

California
99 Almaden Boulevard
Suite 840
San Jose, CA 95113

www.arctecinc.com

A Tenant Improvement for:

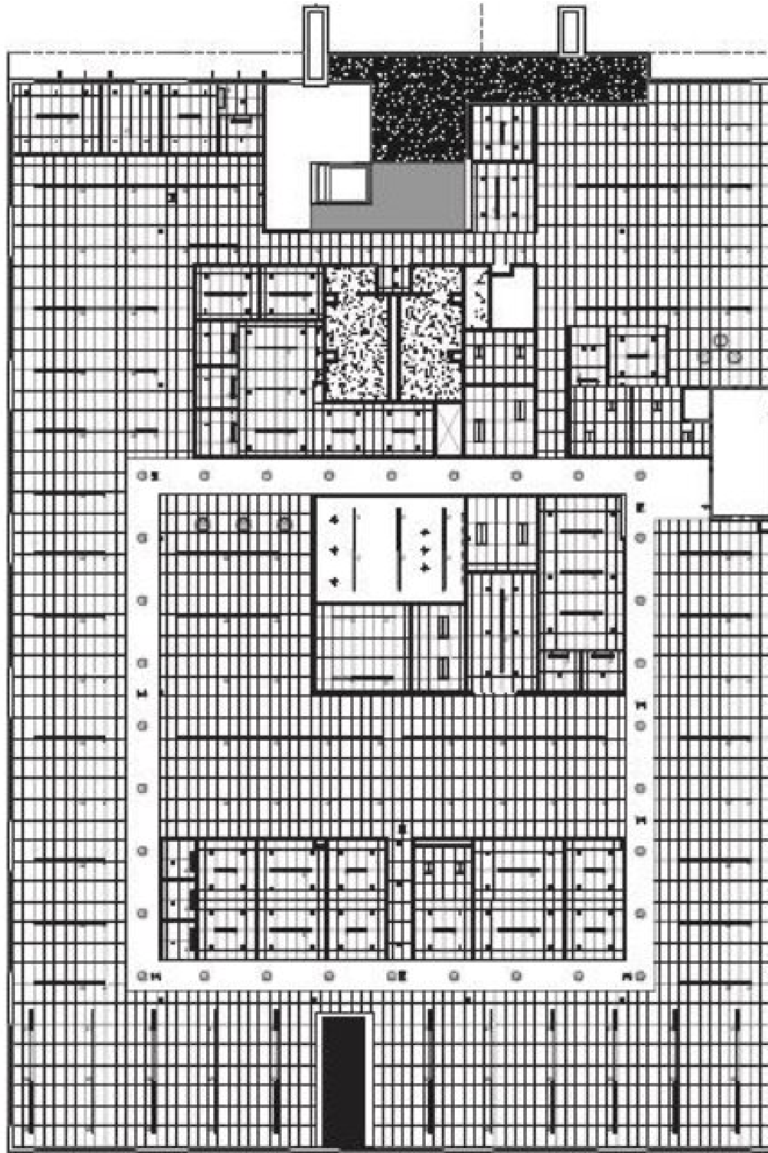
CALIX
2777 Orchard Parkway
San Jose, CA. 95131

PROJECT NO.174343.05
DATE 03.08.2018

Sheet Ref. No. / Sheet Number

FLOOR PLAN

FL-2



Arizona
2950 E. Northern Avenue
Building C

California
99 Almaden Boulevard
San Jose, CA

ARC TEC www.arctecinc.com

A Tenant Improvement for:

CALIX
2777 Orchard Parkway
San Jose, CA. 95131

PROJECT NO.174343.05
DATE 03.08.2016

Sheet Ref. No. / Sheet Number

FLOOR PLAN

FL-2

EXHIBIT B

SITE PLAN (i) SHOWING LOCATION OF BUILDING, (ii) DELINEATING TENANT PARKING AREA and (iii) SHOWING LOCATION OF MONUMENT SIGNAGE

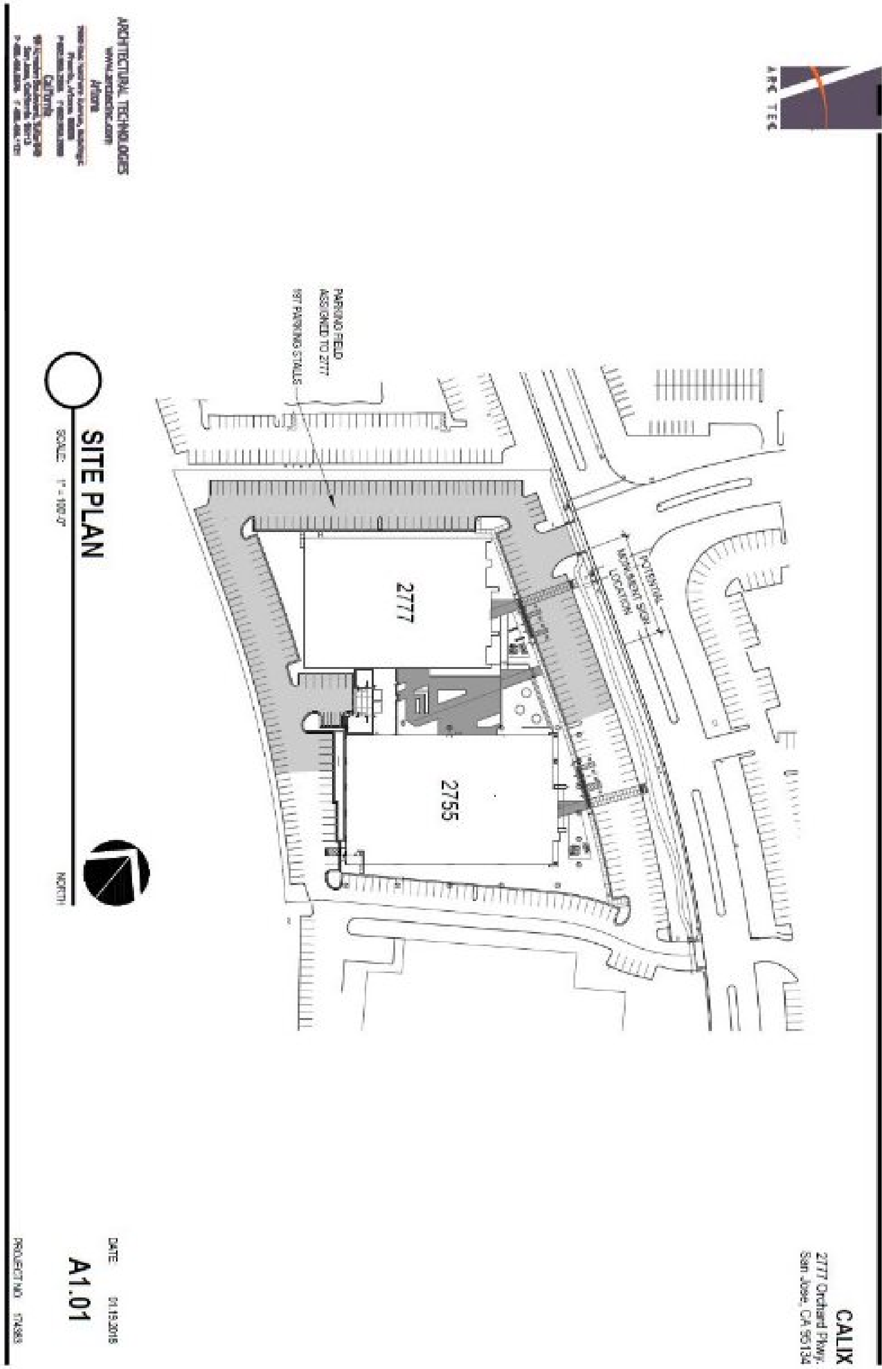


EXHIBIT C
IMPROVEMENT AGREEMENT

This Improvement Agreement (the " **Improvement Agreement** ") is hereby made a part of that certain Net Lease Agreement (the " **Lease** ") dated as of March 9, 2018, and made and entered into by and between ORCHARD PARKWAY SAN JOSE, LLC, a California limited liability company, as Landlord, and CALIX, INC., a Delaware corporation, as Tenant. Except as otherwise defined herein, all capitalized terms used herein shall have the meanings as are ascribed thereto in the Lease or in the exhibits attached thereto. Pursuant to the terms and conditions of this Improvement Agreement, Landlord shall construct, or cause to be constructed, the Tenant Improvement Work referred to below in accordance with the Approved Plans referred to below.

All leasehold improvement work required to be performed by Landlord or Landlord's contractor pursuant to this Improvement Agreement is hereinafter referred to as the " **Tenant Improvement Work** ". The Tenant Improvement Work shall consist of those leasehold improvements and work described or shown on the Approved Plans referred to below.

The Tenant Improvement Work shall be performed by a contractor designated by Landlord, in Landlord's reasonable discretion (" **Landlord's Contractor** "), in accordance with applicable Law in effect as of the date of the Lease, and, to the extent permits are required for such work, under validly issued municipal and other applicable permits. Landlord and Tenant hereby agree as follows with respect to the construction, installation or performance of the Tenant Improvement Work by Landlord for the benefit of Tenant:

1. PLANS FOR THE TENANT IMPROVEMENT WORK.

1.1 Approved Plans . Attached hereto as Exhibit C-1 is that certain document entitled *Drawing Index and Issue Dates,* dated March 8, 2018, prepared by ARC TEC, referencing Project No. 174343.05 (" **Index Sheet** "), which Index Sheet describes the plans and specifications that set forth, among other things, the design and layout of the Premises desired by Tenant, and the tenant improvements to be constructed, or caused to be constructed, therein by Landlord, including any special finishes and/or fixtures, mechanical, electrical and/or plumbing requirements, and/or special heating, ventilation and air conditioning requirements, of Tenant (such plans and specifications being the " **Approved Plans** ").

1.2 Project Schedule . Attached hereto as Exhibit C-2 is a tentative schedule for the construction of the Tenant Improvement Work, setting forth, among other things, milestones and an estimated timeline (all based upon Landlord's good-faith projections as of the Effective Date). Promptly upon the commencement of the Tenant Improvement Work, Landlord shall furnish Tenant with a revised construction schedule setting forth Landlord's revised good-faith projections of (x) the projected completion date(s) and milestones, (y) the deadlines for any approvals, submittals and/or other actions required to be taken by Tenant during such construction and/or (z) any other matters deemed necessary by Landlord to enable the substantial completion of the Tenant Improvement Work as soon after the Effective Date as is reasonably practicable; provided, however, that Landlord may from time to time during the prosecution of the Tenant Improvement Work modify or amend such schedule(s) due to any delays encountered and/or anticipated by Landlord. Landlord shall at all times use commercially efforts to meet such construction schedule(s) as the same may from time to time be modified or amended.

1.3 Requested Changes. Tenant shall make no changes or modifications to the Approved Plans without the prior written consent of Landlord, which consent may be withheld in Landlord's reasonable discretion if such change or modification would directly or indirectly delay the substantial completion of construction of the

Tenant Improvement Work and/or increase the cost of designing or constructing the Tenant Improvement Work, or for any other reasonable reason. All such requests for changes and consent shall be subject to the procedures set forth in Paragraph 5 of this Improvement Agreement.

1.4 Required Changes . Tenant hereby consents to any changes to the Approved Plans that may be deemed necessary by Landlord from time to time (in Landlord's reasonable discretion) to facilitate obtaining any permit(s) and/or approval(s) from any municipal department (or other governmental and/or quasi-governmental entity) having jurisdiction for the construction of such Tenant Improvement Work. Landlord shall notify Tenant of any and all such changes deemed necessary by Landlord within forty-eight (48) hours after such changes to the Approved Plans are made.

1.5 OAC Meetings . From and after the commencement of the Tenant Improvement Work, Tenant shall be notified by Landlord (which notification may be verbal) of the weekly meetings between Landlord, Landlord's architect and Landlord's contractor (" **OAC Meetings** ") regarding the progress/status of obtaining permits and approvals, and the performance of the Tenant Improvement Work. Such OAC Meetings shall be held at such location(s) within the Project (and at such time(s)) as may be designated by Landlord from time to time, and Landlord shall endeavor to provide Tenant with at least two (2) business days' prior notice thereof. Tenant may attend all such OAC Meetings.

2. COST OF PERFORMING TENANT IMPROVEMENT WORK. Except as otherwise provided in this Improvement Agreement, Landlord shall bear all costs of designing and completing (or causing the design and completion of) the Tenant Improvement Work shown on the Approved Plans, including, without limitation, the amount required to be paid to Landlord's architect, Landlord's Contractor and any other actual costs and charges for architectural fees, permits, approvals, material and labor, contractor's profit and general overhead incurred by Landlord for such Tenant Improvement Work.

Notwithstanding anything to the contrary contained in this Improvement Agreement, any and all cost and expense associated with, relating to and/or resulting from any change(s), modification(s) and/or other revisions to the Approved Plans (and/or the Tenant Improvement Work shown on such Approved Plans) requested by Tenant (collectively, " **Change Order Costs** ") shall be paid by Tenant, at Tenant's sole cost and expense, in accordance with Paragraph 5 below (subject to the availability of the Converted Amount Maximum). Subject to the availability of the Converted Amount Maximum, Tenant shall pay one hundred percent (100%) of any such Change Order Costs to Landlord within seven (7) business days after Tenant's receipt of Landlord's reasonably-detailed invoice therefor. Tenant's failure to make any payment of Change Order Costs within such seven (7) business day period shall automatically be deemed a Default by Tenant under the Lease and the amount so delinquent shall be deemed Additional Rent, and Landlord may exercise all rights and remedies set forth in Paragraph 14 of the Lease, and, in addition, Landlord may halt the performance of the Tenant Improvement Work until such payment is made, and such delay shall be deemed to be a Tenant Delay as defined in, and subject to the provisions of, Paragraph 7.2 below.

3. ACCEPTANCE OF PREMISES. As soon as all necessary permits and other governmental approvals, if any, required to construct the Tenant Improvement Work (the " **Permits** ") have been obtained and Landlord has entered into a general construction contract with Landlord's Contractor, Landlord shall cause construction of the Tenant Improvement Work to be commenced and shall diligently prosecute such construction to completion. Tenant shall have five (5) business days following the date Landlord notifies Tenant that the Tenant Improvement Work is substantially complete to inspect the same and to identify in writing any portion of the Tenant Improvement Work

still to be completed by Landlord, defective items and/or items that do not conform to the Approved Plans or Laws (the " **Punch List** "). Landlord shall use commercially reasonable best efforts to cause all Punch List items to be remedied within thirty (30) days of Landlord's receipt of such Punch List. Landlord shall cause such Punch List items to be diligently completed.

4. CONTRACTORS; MATERIALS. Except as otherwise herein provided or as may be otherwise approved by Landlord, all construction of the Tenant Improvement Work (including work to be performed at Tenant's expense, if any) shall be performed by Landlord's contractors (all of whom shall be duly licensed in California). Unless otherwise expressly described in the Approved Plans, all wall coverings, woodwork (if any), paint, floor coverings, and other finishes shall be of such quality, as may be determined by Landlord (" **Building Standard** ") from time to time for general tenant improvement work in the Project. Landlord and Tenant hereby agree and acknowledge that Tenant shall have the right to select, on or before such date that Landlord shall have informed Tenant is the "critical path" date (based upon the construction schedule) for making such selection, the color(s) of the paint and carpet so long as such selection(s) will not increase the cost of the item(s) in question and/or delay the construction of the Tenant Improvement Work.

5. EXTRA WORK.

5.1 In General. Except as expressly approved in writing by Landlord pursuant to the provisions of this Paragraph 5 or as otherwise expressly set forth in the Approved Plans, Landlord shall not be required to perform any additional or nonstandard work over and above that which is Building Standard, nor shall Landlord be required to revise the Approved Plans or any portion of the Tenant Improvement Work shown on such Approved Plans (all such additional, nonstandard, or revised work is hereinafter collectively referred to herein as " **Extra Work** "). Tenant acknowledges that any delays in the completion of the Tenant Improvement Work caused by the review of any request for, as well as any approval and/or performance of, Extra Work shall constitute a Tenant Delay as described in Paragraph 7.2 below.

5.2 Procedure. Any request by Tenant for Extra Work which would require a change to the Approved Plans shall be accompanied by all necessary additional and/or revised plans for such Extra Work, which revised plans shall be prepared at Tenant's expense. Landlord shall promptly respond in writing to any request by Tenant for the performance of Extra Work. Any approval of such request may, in Landlord's sole discretion, be conditioned upon any or all of the following: (i) subject to the availability of the Converted Amount Maximum, payment by Tenant, in advance, of all estimated costs of such Extra Work, which costs shall include Landlord's supervision fee of five (5%) percent of the cost of such Extra Work, (ii) the written acknowledgment by Tenant that any additional time required to perform such Extra Work shall constitute a Tenant Delay, provided that Landlord shall give Tenant a reasonable estimate of how much additional time would be required, and (iii) any other conditions which Landlord may find to be reasonable under the circumstances. If Tenant shall fail to meet any such conditions precedent to the performance of Extra Work within five (5) business days following Landlord's notice to Tenant of same, the proposed Extra Work shall be deemed disapproved by Tenant, and Landlord shall not be obligated to perform any portion thereof. As provided in Paragraph 1.3 of this Improvement Agreement, Landlord may withhold its consent in its sole discretion to any change or modification requested by Tenant that would directly or indirectly delay the substantial completion of construction of the Tenant Improvement Work, or increase the cost of designing or constructing the Tenant Improvement Work.

6. ENTRY MADE AT TENANT'S SOLE RISK.

6.1 Insurance . If Tenant constructs or installs any tenant improvements in the Premises prior to the Commencement Date of the Lease (which improvements shall be subject to the terms of Paragraphs 13 and 17 of the Lease), the Tenant shall, at its sole expense, be responsible for the securing of insurance by the Tenant's contractor and for the maintenance of same by the Tenant's contractor until completion and final acceptance of the work. Certificates of Insurance affording evidence of same shall be obtained from the Tenant's contractor by the Tenant and delivered to the Landlord prior to the commencement of any work by the Tenant's contractor. The required insurance coverage is as follows:

1. Worker's Compensation and Employers' Liability Insurance and affording thirty (30) days written notice of cancellation to Landlord. The Employers' Liability minimum limits required are as follows:

Bodily Injury by accident	$1,000,000	each accident
Bodily Injury by disease	$1,000,000	policy limit
Bodily Injury by disease	$1,000,000	each employee

2. General Liability Insurance on an occurrence basis for an amount of $2,000,000 each occurrence and including the following coverage:

a) Premises and Operations coverage.
b) Owners and Contractors Protective coverage.
c) Products and Completed Operations coverage.
d) Blanket Contractual coverage.
e) Personal Injury coverage.
f) Broad Form Property Damage coverage, including completed operations.
g) An endorsement naming Landlord and its lender as additional insured.
h) An endorsement affording 30 days written notice to Landlord and Landlord's lender in event of cancellation or material reduction in coverage.
i) An endorsement providing that such insurance as is afforded under policy of Tenant's contractor is primary insurance as respects Landlord and that any other insurance maintained by Landlord is excess and noncontributing with the insurance required hereunder.

No endorsement limiting or excluding a required coverage is permitted. CLAIMS-MADE COVERAGE IS NOT ACCEPTABLE.

3. Business Auto Liability Insurance for an amount of $1,000,000 combined single limit for bodily injury and/or property damage liability including:

a) Owned Autos,
b) Hired or Borrowed Autos,
c) Nonowned Autos, and
d) An endorsement affording 30 days written notice of cancellation to Landlord and Landlord's lender in event of cancellation or material reduction in coverage.

4. Tenant shall carry (or cause Tenant's contractor to carry) "Builder's All Risk" insurance or Course of Construction Insurance under Tenant's property policy in an amount equal to the estimated total cost, covering any such tenant improvements (as distinct from the Tenant Improvement Work) installed by or on behalf of Tenant,

for the full replacement cost thereof at the time of loss, and including coverage for materials destined for incorporation into such tenant improvements that are stored away from the worksite or are in transit. Such form of insurance coverage shall be acceptable to Landlord to insure the scope of the work to be performed.

A certificate and endorsements affording evidence of the above requirements must be delivered to Landlord before Tenant's contractor performs any work at or prepares or delivers materials to the site of construction.

Tenant shall require its contractor to require its subcontractors to provide insurance where Tenant's contractor would be required to carry insurance under this insurance section and to be responsible for obtaining the appropriate certificates or other evidence of insurance.

Tenant's contractor shall maintain all of the foregoing insurance coverage in force until the work under this Improvement Agreement being performed by Tenant is fully completed and accepted except as to 2c, (Products and Completed Operation Coverage), which is to be maintained for one (1) year following completion of such work and acceptance by Landlord and Tenant.

All insurance, except Workers' Compensation, maintained by Tenant's contractor and its subcontractors shall preclude subrogation claims by the insurer against anyone insured thereunder.

The requirements for the foregoing insurance shall not derogate from the provisions for indemnification of Landlord by Tenant under the "indemnity" provisions of Paragraph 8.4 of the Lease.

If the Tenant fails to secure and maintain the required insurance from Tenant's contractor, the Landlord shall have the right (without any obligation to do so, however) to secure same in the name and for the account of the Tenant's contractor in which event the Tenant shall pay the cost thereof and shall furnish upon demand, all information that may be required in connection therewith. Further, such failure to secure and maintain the required insurance shall constitute a Default by Tenant under the Lease and Landlord shall be entitled to immediately have all tenant improvement work cease.

6.2 **Safety Rules** **.** If Tenant constructs or installs any tenant improvements in the Premises, Tenant and Tenant's contractors shall abide by all safety and construction rules and regulations of Landlord, and all work and deliveries shall be scheduled through Landlord. All Tenant's materials, work, installations and decorations of any nature brought upon or installed in the Premises before the Commencement Date of the Lease shall be at Tenant's risk, and neither Landlord nor any party acting on Landlord's behalf shall be responsible for any damage thereto or loss, theft or destruction thereof. Tenant shall award its contracts and conduct its activities hereunder in a manner consistent with Landlord's contractor's labor agreement affecting the Building.

6.3 **Faulty Tenant Improvement Work** **.** Tenant shall reimburse Landlord for any extra expenses actually incurred by Landlord by reason of faulty work done by Tenant or its contractors (as reasonably determined by Landlord), or by reason of delays caused by such work, or by reason of cleanup which fails to comply with Landlord's rules and regulations.

6.4 **Signs** **.** Tenant's contractors shall not post any signs other than those required by law in connection with the construction of any improvements by or on behalf of Tenant on any part of the Premises.

6.5. **Hiring of Contractors to be Approved by Landlord** **.** If Tenant elects to perform, or cause to be performed, any work in the Premises prior to the Commencement Date of the Lease, then Tenant's contractors

and subcontractors performing any such work shall be licensed in California (to the extent licensing is required for such work) and shall otherwise be subject to the prior written consent of Landlord (which consent shall not be unreasonably withheld, conditioned or delayed). The foregoing requirements shall apply to all work performed in the Premises by Tenant or its contractors or subcontractors, including, but not limited to, installation of telephone and/or telecommunications equipment, electrical devices and attachments, and all installations (other than Tenant Improvement Work) affecting floors, walls, woodwork, trim, windows, ceilings, equipment, or any other physical portion of the Premises. All materials and workmanship used in the construction by Tenant or Tenant's contractors or subcontractors of any improvements in the Premises shall be of a quality that is at least Building Standard. If Tenant is to perform, or cause to be performed, any work in the Premises prior to the Commencement Date, Tenant shall give Landlord at least one (1) business days prior written notice of the same so that Landlord has sufficient time to post a notice of non-responsibility with respect to such Tenant work.

6.6 **No Warranty.** Landlord's supervision and/or approval of any contractor selected by Tenant or any contractor's work performed, or caused to be performed, by Tenant shall not under any circumstances constitute a warranty or representation that such work was properly performed or designed or create any liability for payment for such work by Landlord. Rather, Tenant acknowledges that such supervision by Landlord, regardless of whether Landlord earns a fee for same, is for the sole benefit of Landlord and the Premises, Building and Land.

6.7. **Tenant's Liabilities.** Landlord shall have no liability for any loss of or damage to any of Tenant's or Tenant's contractors' fixtures or property installed or left in the Premises, and Tenant shall be fully responsible for same. Tenant shall be responsible for the prompt removal of all rubbish and refuse left by Tenant's contractors and by the delivery of Tenant's personal property into the Premises. Tenant shall be liable for the repair of any damage to the Tenant Improvement Work to the extent such damage is caused by Tenant or any of its agents, employees, contractors, subcontractors or invitees during their entry into the Premises.

7. DELAY.

7.1 **Force Majeure Delays.** The term " **Force Majeure Delay** " shall mean any delay in the completion of the Tenant Improvement Work which is attributable to: (1) strike, lockout, or other labor or industrial disturbance, civil disturbance, judicial order, governmental rule or regulation, act of public enemy, war, riot, sabotage, blockade, embargo, inability to secure customary materials or supplies; (2) inability to secure building permits and approvals; (3) delay in completing the construction of the Tenant Improvement Work despite Landlord's diligent efforts to complete same, because of changes in any laws subsequent to the execution date hereof or changes in the interpretation of any such law by the applicable building department; or (4) lightning, earthquake, fire, storm, hurricane, tornado, flood, washout, explosion, or any other cause beyond the reasonable control or mitigation of Landlord.

7.2 **Tenant Delay.** The term " **Tenant Delay** " shall mean, with respect to the completion of the Tenant Improvement Work, delay which is attributable to any of the following: (1) actual delay in the giving of authorizations or approvals by Tenant or in the selection of any materials or colors of paint or carpet (to the extent Tenant is expressly granted under this Improvement Agreement the right to select any such materials (provided that Tenant shall have the right to select the color(s) of the paint and carpet in accordance with the last sentence of Paragraph 4 above); (2) the negligent or willfully wrongful acts or failures to act, of Tenant, its agents, or contractors, where such acts or failures to act actually delay the completion of the Tenant Improvement Work; (3) material interference by Tenant, its agents, or contractors with the completion of Tenant Improvement Work, including delays resulting from entry into the Premises by such persons as contemplated in Paragraph 6 above or pursuant to Paragraph 3.3 of the Lease; (4) any extension of time required to complete the Tenant Improvement Work because of changes to

the Approved Plans or the Tenant Improvement Work requested by Tenant, including any delays caused by requests for Extra Work pursuant to Paragraph 5 above; (5) delay attributable to Tenant's requirement for materials, components, finishes or improvements which are not available in a commercially reasonable time given the anticipated date of substantial completion of the Tenant Improvement Work and which are different from, or not included in, Landlord's standard improvement package items for the Building; (6) a breach by Tenant of any of the material terms of this Improvement Agreement or the Lease; or (7) any other event which is expressly identified as a Tenant Delay under this Improvement Agreement or in the Lease.

8. REPRESENTATIONS AND WARRANTIES . Landlord's general contractor responsible for constructing or installing the Tenant Improvement Work shall warrant the Tenant Improvement Work (but not any equipment included in the Tenant Improvement Work or any material or equipment that Landlord or its general contractor may reuse in the Premises, such as occupancy sensors, HVAC equipment, or other reusable wear and tear items) against defects in material and workmanship for a period of twelve (12) months from the Commencement Date. Said warranty extends only to Tenant and shall be effective only as to defects of which Landlord and the general contractor are notified in writing by Tenant within the warranty period. The general contractor's sole obligation shall be either to repair or replace, as the general contractor and Landlord's architect determine appropriate, any defect which is warranted hereunder. Any repair or replacement is warranted against defects in material and workmanship for a period ending on the date said warranty expires with regard to the original construction to which the repair or replacement was made. Tenant agrees that Landlord, Landlord's general contractor and Landlord's architect shall not be liable for consequential damages arising as a result of a defect warranted hereunder. Tenant covenants that it will not pursue any remedy against Landlord, Landlord's general contractor or Landlord's architect as a result of such consequential damages, if any. Landlord shall inform Tenant of all written equipment warranties existing in favor of Landlord which affect any equipment included in the Tenant Improvement Work. Landlord shall reasonably cooperate with Tenant in enforcing such warranties.

The warranties given or to be given set forth in this Paragraph 8 are all of the warranties of Landlord, Landlord's general contractor and Landlord's architect with respect to the Tenant Improvement Work. LANDLORD, LANDLORD'S GENERAL CONTRACTOR AND LANDLORD'S ARCHITECT MAKE NO OTHER EXPRESS OR IMPLIED WARRANTY WITH RESPECT TO THE CONSTRUCTION OR OPERATION OF THE TENANT IMPROVEMENT WORK INCLUDING, WITHOUT LIMITATION, ANY WARRANTIES OF FITNESS FOR PURPOSE OR MERCHANTABILITY.

Tenant covenants that Tenant will not pursue any action against Landlord, Landlord's general contractor or Landlord's architect if the Tenant Improvement Work made in accordance with the Approved Plans fails to meet Tenant's purpose. Landlord makes no warranty, express or implied, of fitness for purpose or merchantability, of any equipment or fixtures included in the Premises. Tenant acknowledges that Tenant shall rely upon the manufacturer of such equipment or fixtures for any warranty with respect thereto.

[END OF TEXT OF IMPROVEMENT AGREEMENT]

EXHIBIT C-1
INDEX SHEET

DRAWING INDEX AND ISSUE DATES

○ PRELIMINARY OR PRICING PLANS
● FIRST FORMAL SUBMITTAL OR NO CHANGES SINCE PREVIOUS ISSUE
✚ MODIFICATIONS SINCE PREVIOUS ISSUE

ISSUE DATES AND DESCRIPTIONS

Sheet	Description	03.08.2018
COVER SHEET		●
ARCHITECTURAL		
A0.01	PROJECT DATA, GENERAL NOTES AND DRAWING SYMBOLS KEY	●
A0.02	CALIFORNIA GREEN STANDARDS CODE - NON-RESIDENTIAL CHECKLIST	●
A0.03	GENERAL PROJECT ACCESSIBILITY REQUIREMENTS (SHEET 1 OF 3)	●
A0.04	GENERAL PROJECT ACCESSIBILITY REQUIREMENTS (SHEET 2 OF 3)	●
A0.05	GENERAL PROJECT ACCESSIBILITY REQUIREMENTS (SHEET 3 OF 3)	●
A0.11	FIRST LEVEL CODE AND OCCUPANT EXITING PLAN	●
A0.12	SECOND LEVEL CODE AND OCCUPANT EXITING PLAN	●
A1.01	REFERENCE SITE PLAN AND DETAILS	●
A2.01	FIRST LEVEL DEMOLITION FLOOR PLAN	●
A2.02	SECOND LEVEL DEMOLITION FLOOR PLAN	●
A2.03	FIRST LEVEL DEMOLITION REFLECTED CEILING PLAN	●
A2.04	SECOND LEVEL DEMOLITION REFLECTED CEILING PLAN	●
A2.11	FIRST LEVEL IMPROVEMENT FLOOR PLAN	●
A2.12	SECOND LEVEL IMPROVEMENT FLOOR PLAN	●
A2.21	FIRST LEVEL IMPROVEMENT REFLECTED CEILING PLAN	●
A2.22	SECOND LEVEL IMPROVEMENT REFLECTED CEILING PLAN	●
A3.21	INTERIOR ELEVATIONS	●
A3.22	INTERIOR ELEVATIONS	●
A5.00	RESTROOM ACCESSIBILITY REQUIREMENTS AND STANDARD DETAILS	●
A5.01	RESTROOM CORE - ENLARGED FLOOR PLAN	●
A7.01	DOOR SCHEDULE, HARDWARE SETS AND DOOR & WINDOW TYPES	●
A8.01	PARTITION TYPES AND DETAILS; FRAMING SCHEDULES	●
A8.01A	ALTERNATE LIGHT GAUGE OPENING FRAMING DETAILS WITH ProX HEADER SYSTEM	●
A8.31	SUSPENDED CEILING NOTES AND DETAILS	●
A8.41	MILLWORK DETAILS AND GENERAL NOTES	●
A9.00	SPECIFICATIONS AND DETAILS	●
A9.01	FIRST LEVEL FINISH PLAN	●
A9.02	SECOND LEVEL FINISH PLAN	●
A10.01	SPECIFICATIONS SHEET 1 OF 5	●
A10.02	SPECIFICATIONS SHEET 2 OF 5	●
A10.03	SPECIFICATIONS SHEET 3 OF 5	●
A10.04	SPECIFICATIONS SHEET 4 OF 5	●
A10.05	SPECIFICATIONS SHEET 5 OF 5	●

Arizona
2980 E. Northern Avenue
Building C
Phoenix, AZ 85028
t.602.953.2355
f.602.953.2988

California
99 Almaden Boulevard
Suite 840
San Jose, CA 95113
t.408.496.0676
f.408.496.1121

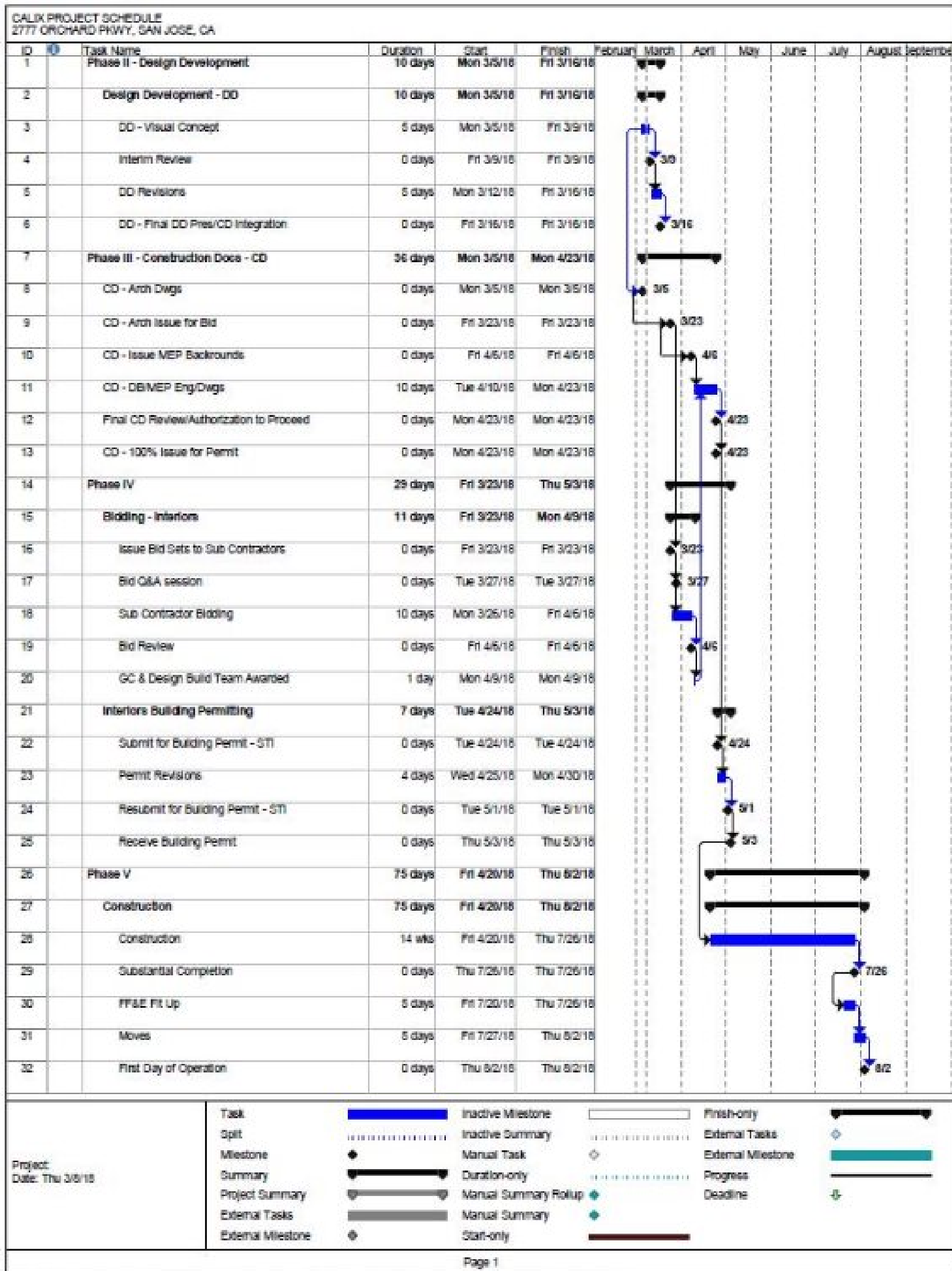
ARC TEC www.arctecinc.com

A Tenant Improvement for:
CALIX
2777 Orchard Parkway
San Jose, CA. 35131

PROJECT NO.174343.05
DATE 03.08.2018

Sheet Ref. No. / Sheet Number
SHEET INDEX
A0.00

EXHIBIT C-2
TENTATIVE CONSTRUCTION SCHEDULE



CALIX PROJECT SCHEDULE
2777 ORCHARD PKWY, SAN JOSE, CA

ID	Task Name	Duration	Start	Finish
1	**Phase II - Design Development**	**10 days**	**Mon 3/5/18**	**Fri 3/16/18**
2	**Design Development - DD**	**10 days**	**Mon 3/5/18**	**Fri 3/16/18**
3	DD - Visual Concept	5 days	Mon 3/5/18	Fri 3/9/18
4	Interim Review	0 days	Fri 3/9/18	Fri 3/9/18
5	DD Revisions	5 days	Mon 3/12/18	Fri 3/16/18
6	DD - Final DD Pres/CD Integration	0 days	Fri 3/16/18	Fri 3/16/18
7	**Phase III - Construction Docs - CD**	**36 days**	**Mon 3/5/18**	**Mon 4/23/18**
8	CD - Arch Dwgs	0 days	Mon 3/5/18	Mon 3/5/18
9	CD - Arch Issue for Bid	0 days	Fri 3/23/18	Fri 3/23/18
10	CD - Issue MEP Backrounds	0 days	Fri 4/6/18	Fri 4/6/18
11	CD - DB/MEP Eng/Dwgs	10 days	Tue 4/10/18	Mon 4/23/18
12	Final CD Review/Authorization to Proceed	0 days	Mon 4/23/18	Mon 4/23/18
13	CD - 100% Issue for Permit	0 days	Mon 4/23/18	Mon 4/23/18
14	**Phase IV**	**29 days**	**Fri 3/23/18**	**Thu 5/3/18**
15	**Bidding - Interiors**	**11 days**	**Fri 3/23/18**	**Mon 4/9/18**
16	Issue Bid Sets to Sub Contractors	0 days	Fri 3/23/18	Fri 3/23/18
17	Bid Q&A session	0 days	Tue 3/27/18	Tue 3/27/18
18	Sub Contractor Bidding	10 days	Mon 3/26/18	Fri 4/6/18
19	Bid Review	0 days	Fri 4/6/18	Fri 4/6/18
20	GC & Design Build Team Awarded	1 day	Mon 4/9/18	Mon 4/9/18
21	**Interiors Building Permitting**	**7 days**	**Tue 4/24/18**	**Thu 5/3/18**
22	Submit for Building Permit - STI	0 days	Tue 4/24/18	Tue 4/24/18
23	Permit Revisions	4 days	Wed 4/25/18	Mon 4/30/18
24	Resubmit for Building Permit - STI	0 days	Tue 5/1/18	Tue 5/1/18
25	Receive Building Permit	0 days	Thu 5/3/18	Thu 5/3/18
26	**Phase V**	**75 days**	**Fri 4/20/18**	**Thu 8/2/18**
27	**Construction**	**75 days**	**Fri 4/20/18**	**Thu 8/2/18**
28	Construction	14 wks	Fri 4/20/18	Thu 7/26/18
29	Substantial Completion	0 days	Thu 7/26/18	Thu 7/26/18
30	FF&E Fit Up	5 days	Fri 7/20/18	Thu 7/26/18
31	Moves	5 days	Fri 7/27/18	Thu 8/2/18
32	First Day of Operation	0 days	Thu 8/2/18	Thu 8/2/18

NOTE: ALL TASK DURATIONS REPRESENT WORK DAYS (M-F)

EXHIBIT D
COMMENCEMENT DATE LETTER

Re: Lease dated March ____, 2018, between Orchard Parkway San Jose, LLC, a California limited liability company, as Landlord, and Calix, Inc., as Tenant, concerning that premises, consisting of approximately 64,991 rentable square feet, more or less, consisting of the entire rentable areas of the building having a street address of 2777 Orchard Parkway, San Jose, California (the " **Premises** ").

Ladies and Gentlemen:

In accordance with the subject Lease, we wish to advise and/or confirm as follows:

1. Landlord delivered possession of the Premises to Tenant on _________________, with all improvements and work, if any, completed in a good and workmanlike manner and otherwise in the condition required under the Lease and Tenant accepted possession of the Premises.

2. The Commencement Date of the Lease Term for the Premises is _____________, 201_ (the " **Commencement Date** ") and the initial Lease Term for the Premises expires on ________________, 202_ (the " **Ending Date** "), unless sooner terminated according to the terms of the Lease.

3. That in accordance with the Lease, monthly base Rent shall commence to accrue on ________________, 2018 (except that monthly base Rent shall be conditionally abated for the first three (3) full months of the Lease Term in accordance with (and subject to) the provisions of Paragraph 1.8 of the Lease), and Tenant's obligation to pay Tenant's percentage share of Operating Expenses (as described below) shall commence to accrue on the Commencement Date. The Converted Amount (as defined in Paragraph 1.8) is the amount of __________________________ Dollars ($__,___.00).

4. Tenant's percentage share of Operating Expenses is one hundred percent (100%) as to the Building and ___________________ percent (____.00%) as to the Project.

5. Each party represents and warrants to the other that it is duly authorized to enter into this document and that the person signing on its behalf is duly authorized to sign on behalf of such party.

LANDLORD:

ORCHARD PARKWAY SAN JOSE, LLC,
a California limited liability company

By: ________________________
Name: ________________________
Its: ________________________

ACCEPTED AND AGREED:

TENANT:

CALIX, INC.,
a Delaware corporation

By: ________
Name: ________
Its: ________

EXHIBIT E
INTENTIONALLY OMITTED
[to be attached]

EXHIBIT F
LEGAL DESCRIPTION OF LAND

ALL THAT CERTAIN LAND SITUATED IN THE CITY OF SAN JOSE, COUNTY OF SANTA CLARA, STATE OF CALIFORNIA AND DESCRIBED AS FOLLOWS:

PARCEL ONE:

"NEW PARCEL 2", AS SHOWN AND DELINEATED ON THE PARCEL MAP FILED DECEMBER 9, 2014, IN BOOK 878 OF MAPS, PAGE 35 AND 36.

PARCEL TWO:

EASEMENTS FOR PRIVATE INGRESS, EGRESS AND EMERGENCY VEHICLE PURPOSES AS AN APPURTENANCE TO PARCEL ONE ABOVE, OVER AND ACROSS THAT PORTION OF "NEW PARCEL 1", SHOWN AND DESIGNATED AS "30' WIDE COE (PIEE & EVAE)" ON THE ABOVE MENTIONED PARCEL MAP.

APN: 101-18-008

EXHIBIT G
FORM OF SIGHT DRAFT

DATE: _______________ REF. NO. ___________________

A T SIGHT OF THIS DRAFT

P AY TO THE ORDER OF ________US$________________

US DOLLARS ____

DRAWN UNDER SILICON VALLEY BANK, SANTA CLARA, CALIFORNIA, IRREVOCABLE STANDBY
LETTER OF CREDIT NUMBER NO. _______________________ DATED ___________________

T O: SILICON VALLEY BANK
3003 TASMAN DRIVE
SANTA CLARA, CA 95054

____
(BENEFICIARY'S NAME)

..
Authorized Signature

GUIDELINES TO PREPARE THE DRAFT

1. DATE: ISSUANCE DATE OF DRAFT.
2. REF. NO.: BENEFICIARY'S REFERENCE NUMBER, IF ANY.
3. PAY TO THE ORDER OF: NAME OF BENEFICIARY AS INDICATED IN THE L/C (MAKE SURE BENEFICIARY ENDORSES IT ON THE REVERSE SIDE).
4. US$: AMOUNT OF DRAWING IN FIGURES.
5. USDOLLARS: AMOUNT OF DRAWING IN WORDS.
6. LETTER OF CREDIT NUMBER: SILICON VALLEY BANK'S STANDBY L/C NUMBER THAT PERTAINS TO THE DRAWING.
7. DATED: ISSUANCE DATE OF THE STANDBY L/C.
8. BENEFICIARY'S NAME: NAME OF BENEFICIARY AS INDICATED IN THE L/C.
9. AUTHORIZED SIGNATURE: SIGNED BY AN AUTHORIZED SIGNER OF BENEFICIARY.

IF YOU HAVE QUESTIONS RELATED TO THIS STANDBY LETTER OF CREDIT PLEASE CONTACT US AT _______________.

ALL THE DETAILS SET FORTH HEREIN IN THIS LETTER OF CREDIT DRAFT IS APPROVED BY APPLICANT. IF THERE IS ANY DISCREPANCY BETWEEN THE DETAILS OF THIS LETTER OF CREDIT DRAFT AND THE LETTER OF CREDIT APPLICATION, BETWEEN APPLICANT AND SILICON VALLEY BANK, THE DETAILS HEREOF SHALL PREVAIL."

______________________________ _______________
APPLICANT'S SIGNATURE(S) DATE

NET LEASE AGREEMENT

by and between

CALIX, INC.
a Delaware corporation
("Tenant")

and

ORCHARD PARKWAY SAN JOSE, LLC
a California limited liability company
("Landlord")

Exhibit 31.1

CERTIFICATION OF CHIEF EXECUTIVE OFFICER
PURSUANT TO SECTION 302 OF
THE SARBANES-OXLEY ACT OF 2002

I, Carl Russo , certify that:

1. I have reviewed this quarterly report on Form 10-Q of Calix, Inc. for the quarter ended March 31, 2018 ;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant’s other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant’s disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant’s internal control over financial reporting that occurred during the registrant’s most recent fiscal quarter (the registrant’s fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant’s internal control over financial reporting; and

5. The registrant’s other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant’s auditors and the audit committee of the registrant’s board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant’s ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant’s internal control over financial reporting.

Date: May 10, 2018

/s/ Carl Russo

Carl Russo
Chief Executive Officer

Exhibit 31.2

CERTIFICATION OF INTERIM CHIEF FINANCIAL OFFICER
PURSUANT TO SECTION 302 OF
THE SARBANES-OXLEY ACT OF 2002

I, Cory Sindelar , certify that:

1. I have reviewed this quarterly report on Form 10-Q of Calix, Inc. for the quarter ended March 31, 2018 ;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant’s other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant’s disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant’s internal control over financial reporting that occurred during the registrant’s most recent fiscal quarter (the registrant’s fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant’s internal control over financial reporting; and

5. The registrant’s other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant’s auditors and the audit committee of the registrant’s board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant’s ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant’s internal control over financial reporting.

Date: May 10, 2018

/s/ Cory Sindelar

Cory Sindelar
Chief Financial Officer

Exhibit 32.1

**CERTIFICATION OF CHIEF EXECUTIVE OFFICER AND INTERIM CHIEF FINANCIAL OFFICER
PURSUANT TO 18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

I, Carl Russo , certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that the Quarterly Report of Calix, Inc. (the "Company") on Form 10-Q for the fiscal quarter ended March 31, 2018 fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and that information contained in such Quarterly Report on Form 10-Q fairly presents in all material respects the financial condition and results of operations of the Company.

Date: May 10, 2018

/s/ Carl Russo

Carl Russo
Chief Executive Officer

I, Cory Sindelar , certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that the Quarterly Report of Calix, Inc. (the "Company") on Form 10-Q for the fiscal quarter ended March 31, 2018 fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and that information contained in such Quarterly Report on Form 10-Q fairly presents in all material respects the financial condition and results of operations of the Company.

Date: May 10, 2018

/s/ Cory Sindelar

Cory Sindelar
Chief Financial Officer

This certification accompanies the Form 10-Q to which it relates, is not deemed filed with the Securities and Exchange Commission and is not to be incorporated by reference into any filing of Calix, Inc. under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended (whether made before or after the date of the Form 10-Q), irrespective of any general incorporation language contained in such filing.