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EVALUATION OF CONCEPTUAL PROPOSAL FOR THE NORTHERN GATEWAY PROPERTY

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City of Benicia

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January 14, 2016

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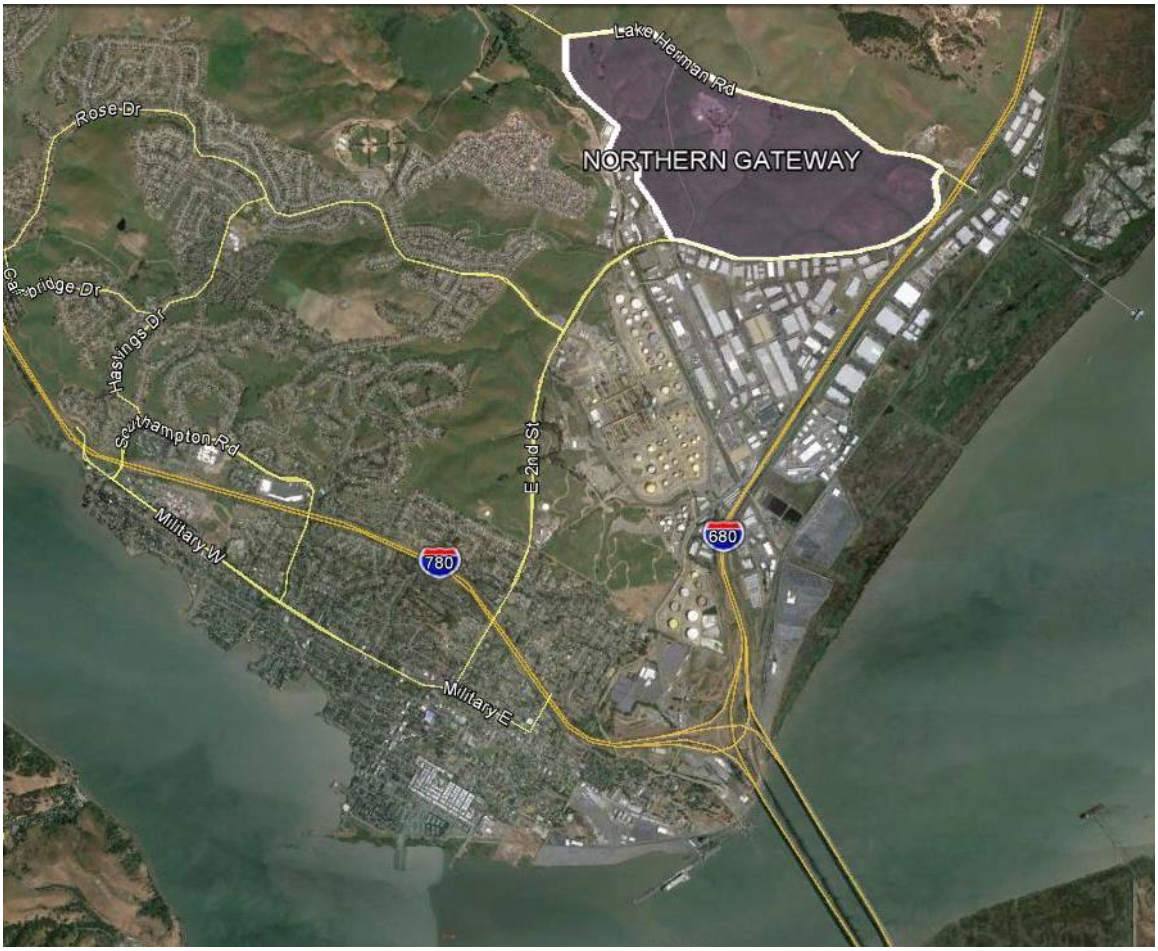
I. EXECUTIVE SUMMARY

The Northern Gateway Site, formerly referred to as the “Seeno” property, a 528 acre site, located at the southwest corner of Lake Herman Road and East Second Street in the City of Benicia, is being investigated by Schwartz Land Development Company for potential development which may require General Plan amendment and rezoning to achieve a financially feasible development scenario.

Northern Gateway Site Aerial



To evaluate the Schwartz Land Development Company’s development concept, the City of Benicia requested an evaluation of the market and financial feasibility of the conceptual mixed-use industrial, retail, and residential development on the Northern Gateway Property.

Purpose of this Market and Financial Feasibility Analysis

A **market analysis** the estimates demand for retail and industrial development on the property based on current and projected market conditions. The **financial feasibility analysis** evaluates the cost of developing the property relative to the value created to provide an indication if the development would generate a sufficient financial return to warrant development based on current market conditions.

The purpose of the evaluation is to assess:

1. The market and financial feasibility of developing the property in the near term with uses permitted under the existing zoning;
2. The market and financial feasibility of developing the property in the near term if the property is entitled for mixed-use development (including limited industrial, commercial, and residential uses); and
3. The degree to which mixed-use development (i.e., a development proposal that includes a mix of uses inclusive of industrial, commercial, and residential) would strengthen the Benicia Industrial Park (BIP).

The findings of the analysis comprise one aspect to be evaluated by decision makers in providing feedback on a proposal to permit a mixed-use project on the 528-acre Northern Gateway site[1].

Proposed Northern Gateway Project Concept

The applicant's, Schwartz Land Development Company, conceptual plan proposes to develop approximately 102 gross acres of industrial land and 11 gross acres of commercial land for residential use.

The applicant contends that developing the property exclusively with commercial and industrial uses is not financially feasible and that the residential component is necessary in order to generate sufficient revenues to cover the cost of developing the infrastructure necessary to develop the industrial and commercial components.

For this project, the following analysis addresses two key questions:

1. In order to realize new industrial and commercial development on the property, *is it in Benicia's best economic interest to retain the existing Limited Industrial and General Commercial-zoning or change the zoning to reduce the extent of commercial land and permit residential uses on the subject property*?

[1] A General Plan amendment has been submitted. Further submittals will be required of the applicant as well as evaluation pursuant to CEQA through an Environmental Impact Report before full consideration. This analysis is focused on market and financial feasibility of the proposed project.

2. If rezoned, *how much of the site should remain for light industrial use in order to meet the BIP's needs*?

It is important to note that this analysis does not include an evaluation of the fiscal impacts on the City of Benicia to be generated by the development of the property.

Proposed Project versus Prior Development Concept

The mixed-use project proposed by Schwartz Land Development Company consists of approximately 112 gross acres of residential uses, 150 gross acres of industrial uses, and 22 gross acres of commercial uses (November 2015 Concept Plan, page 12, Conceptual Zoning Exhibit). Excluding circulation, the applicant estimates that upon build-out, the development would approximate 86 net acres of residential uses, 136 net acres of industrial uses and 21 net acres of commercial uses (Table 1).

The current proposal differs from a previous proposal for the property, titled Mitigated Benicia Business Park Project (2008)[2], which was sponsored and later withdrawn by the property owner. The property owner is not the current applicant.

Although the 2008 proposal was withdrawn based on a determination that the project was not financially feasible, it represents the most detailed available build-out projection under current zoning. The significant differences between the 2008 Mitigated Project and the current mixed-use proposal are:

1) the current proposal includes 86 acres of residential whereas the 2008 proposal did not have any residential land;
2) the current proposal has slightly less industrial land; and
3) the current proposal has significantly less commercial acreage.

Table 1 compares the prior development concepts, 2008 Mitigated Project, and the current Mixed Use Proposal for the Northern Gateway property.

Table 1: Current and Prior Development Concepts for Northern Gateway Property

Net Acres	2008 Mitigated Project	Current Mixed Use Proposal
Residential Acres	0	86
Industrial Acres	153	136
Commercial/Retail	32	21
Open Space/Circulation	343	285

Source: KMA (2015), Benicia Business Park EIR (2008), Schwartz Land Development Company Conceptual Land Use Exhibit (2015)
Note: Commercial/Retail totals exclude Office/R&D.

[2] The 2008 Mitigated Benicia Business Park Project was a revision to the original proposal following the City Council's certification of the Benicia Business Park EIR in February 2008. The 2008 Mitigated Project reduced industrial development from 4.44 million to 2.35 million square feet, reduced grading, and provided increased open space buffers and hilltop preservation areas.

Industrial Market Demand

In January 2015 the Benicia City Council approved the Benicia BIP Market Study, which also looked at market opportunities for existing properties and adopting a goal of pursuing value-added revenue-producing manufacturing and technology firms.

This analysis is focused on the specific property and the potential absorption of the property based on current anticipated industrial employment growth, available land supply and the historical shares of market demand captured by Benicia and the county.

The Northern Gateway development could potentially absorb ***121 to 189 net acres of industrial uses through 2040 (excluding roadways)***. The projected demand is noted in Table 2.

Table 2: Cumulative Potential Absorption of Industrial Acreage at Northern Gateway

	Low Capture 18% of County Demand	***Moderate Capture 23% of County Demand***	***High Capture 28% of County Demand***
Through 2020	12 acres	24 acres	36 acres
Through 2025	38 acres	55 acres	72 acres
Through 2030	64 acres	87 acres	109 acres
Through 2035	91 acres	119 acres	147 acres
Through 2040	121 acres	155 acres	189 acres

Source: Keyser Marston Associates (2015)

It should be noted currently throughout the market area of Contra Costa County, Napa County and Solano County, warehouse/distribution space accounts for the single largest share of total industrial demand (approximately 50%), followed by industrial space (43%) and Research and Development/Flex space (7%). This demand could change over time given the market position of Benicia and Solano County to the Bay Area and the shifts that can occur in that market.

Retail/Commercial Market Demand

Given the location of Northern Gateway and competitive supply of shopping centers, *KMA concludes that the retail/commercial element of the project is best positioned as a community retail center*.

Community retail centers provide a full selection of convenience retail for residents and workers in the immediate vicinity of the project, a targeted selection of comparison goods (e.g., apparel, home furnishings, other specialty goods) not found in nearby communities, and dining options catering to both customer segments. Southampton Center is an example of a community retail center.

Despite ample acreage for commercial development, the site is not well situated to serve as a major regional retail destination in the foreseeable future. The Northern Gateway

site is not located in a large population center and there are established retail centers currently serving the market area, which includes Solano County and parts of Napa and Contra Costa counties. While other regional centers are planned for the future, the growth in online retail has dampened the demand for new retail space. The nearest regional shopping centers to Benicia are located in Vallejo and Concord/Pleasant Hill.

It is estimated that by 2040 the site could support upwards of 92,000 square feet of retail space. The increase in demand is attributable to both population and income growth within the project's primary trade areas for comparison and convenience goods.

Approximately 25,000 square feet of space would be dedicated to traditional neighborhood-serving tenants (including a fitness center), 54,000 square feet would consist of retailers that offer comparison goods that serve a larger market area, and 13,000 square feet would comprise food and beverage tenants serving both segments.

While the current movie theater market is adequately served, there may be potential in the future for additional demand, which could increase the total retail program to approximately 142,000 square feet. The addition of a hotel could bring the total commercial square footage to 212,000 square feet. The total program would require approximately 18 to 22 acres of net commercial acreage (excluding roadways).

Table 3: Cumulative Potential Absorption of Commercial Acreage at North Gateway

	Existing Demand	***Through 2020***	***Through 2040***
Convenience Retail	4,000 sf	6,000 sf	15,000 sf
Food & Beverage	7,000 sf	7,000 sf	13,000 sf
Comparison Retail	40,000 sf	44,000 sf	54,000 sf
Fitness center			10,000 sf
Movie Theater (potential)			50,000 sf
Hotel (potential)			70,000 sf
Total GBA SF	53,000 sf	57,000 sf	212,000 sf
Estimated Net Acreage	4 to 5 acres	4 to 5 acres	18 to 22 acres

Source: Keyser Marston Associates (2015)
GBA = Gross Building Area

The proposed development concept calls for the retail component to be developed in the last phase of the project. *This is consistent with the findings of the market analysis that retail opportunities are limited and will largely be driven by demand generated by the project and trade area growth.*

Financial Feasibility of Development Opportunity of Proposed Project

The purpose of the financial feasibility analysis is to assess the financial strength of a project from a **developer's perspective**, to answer the question: “Does it make financial sense to build the project?”

The approach that has been used to measure the financial viability of the project is the “residual land value approach.” Under this approach, the cost of developing building pads with backbone infrastructure is subtracted from the revenues to be generated from the sale of improved building pads to home builders, industrial builders, and commercial builders. If revenues exceed development costs then the remaining “residual land value” is positive and indicates that the development is financially feasible for a private developer to pursue.

The financial feasibility analysis assumes that there is sufficient market demand for each land use proposed under the developer’s mixed use concept. Based on this analysis along with a review of market area land sales, it appears that the overall project’s value will exceed development costs and is likely to be financially feasible. The costs of land development (grading, infrastructure and off-site improvements) are expected to be significant and challenging. Given the strength of the residential market, the residential components are anticipated to generate a significant net value. While the commercial components are anticipated to generally break-even, the industrial component is anticipated to generate a significant loss to the developer. Industrial values are sufficient to fund vertical (building) construction costs, but not to cover the full land development costs of this site.

In order for the development of the industrial space to be financially feasible for the developer, the excess value created by the residential development must be applied to cover the shortfalls of the industrial development.

Table 4: Net Residual Land Value, by Land Use Component*

	Residual Land Value of Vertical Development[1]	***Land Development Costs***	***Net Residual Raw Land Value[2]***
Residential– 86 acres	$100.8 million	$58.8 million	$42.0 million
Commercial – 21 acres	$13.9 million	$11.2 million	$2.7 million
Industrial – 136 acres	$28.7 million	$68.8 million	-$40.1 million
Total Project	$143.4 million	$138.8 million	$4.6 million

* Acreage excludes 285 acres dedicated to infrastructure, circulation and open space. Costs to develop these uses are distributed proportionally above.

[1] Residual land value before accounting for land development costs.

[2] Residual land value including land development costs.

The developer has provided a preliminary phasing plan for the purposes of this analysis. While the entire project is expected to be financially feasible, there are significant differences in feasibility among the phases because the mix of land uses in each phase is not uniform.

- The industrial space is anticipated to be developed in Phases 1, 3, and 4. Based upon the analysis, none of these phases would meet the test of financial feasibility by themselves in that development costs exceed value.
- However, Phase 2, which would consist entirely of single family homes, is anticipated to generate sufficient excess value to fund shortfalls in the phases with industrial development.

Table 5: Net Residual Raw Land Value in Each Phase of Development

Phase of Development	***Net Residual Raw Land Value***
Phase 1 – single family + industrial	-$2.3 million
Phase 2 – single family	$23.2 million
Phase 3 – single family + industrial	-$19.0 million
Phase 4 – single family + industrial	-$2.3 million
Phase 5 – apartments + commercial	$5.0 million
Total Project	$4.6 million

It is important to understand that at this stage of the planning process it is only possible to analyze the project at a conceptual level. As such, the analysis reflects an-order-of-magnitude (high level) assessment of financial feasibility. It may be necessary to re-evaluate the assumptions applied in this analysis as the project moves forward in the development process.

Implications of Market and Feasibility Study Findings on Land Use Mix

The market analysis indicates that the proposed industrial acreage is sufficient to meet demand in the near to mid-term and possibly through 2040 based on current market conditions. Under optimal demand scenarios, the market analysis indicates that industrial demand by 2040 would exceed the available supply at the Northern Gateway property. However, the financial feasibility analysis indicates that the development cannot include any additional industrial land and remain financially feasible because industrial values are insufficient to cover the projected land development costs of the site.

The market analysis indicates that the commercial acreage provided in the 2008 Project likely exceeds demand through the year 2040. The reduced acreage of the developer's conceptual proposal appears to be more in line with the demand projections.

The analysis supports the inclusion of the 86-acres of residential land in the development for the purposes of financial feasibility. Assuming that the land developer is incentivized to apply revenue generated by the residential property to cover the cost of

developing the industrial property, the residential development is a vital source of revenue to enable the industrial development to proceed.

Table 6: Market and Financial Feasibility Study Findings in Comparison with Current and Prior Development Concepts for Northern Gateway Property

	2008 Mitigated Project	Current Mixed Use Proposal	Market Study *Through 2040*
Residential Acres	0	86	Not Evaluated
Industrial Acres	153	136	121 - 189
Commercial/Retail			
Total Ac	32	21	18 – 22
Sq. Ft. Retail	207k	110k – 130k	92k
Sq. Ft. Hotel	240k	50k – 70k	70k
Sq. Ft. Movie Theater	60k	40k – 50k	50k
Open Space/Circulation	343	285	NA

Source: KMA (2015), Benicia Business Park EIR (2008), Schwartz Land Development Company Conceptual Land Use Exhibit (2015)
Note: Commercial/Retail totals exclude Office/R&D.

Impact of Development Concept on the Benicia Industrial Park

It is KMA's opinion that the mixed-use proposal will have a significant economic benefit on the BIP for the following reasons:

1. It will provide more land for industrial tenants. As evidenced by some recent tenant relocations to other industrial parks in Solano, Contra Costa and Napa counties, the lack of expansion space is one of the most critical factors impacting the health of the BIP. The current mixed use proposal will provide much needed land for expansion of existing tenants and the attraction of new tenants.
2. It will provide retail, dining and other commercial services for existing tenants.

Recommendations

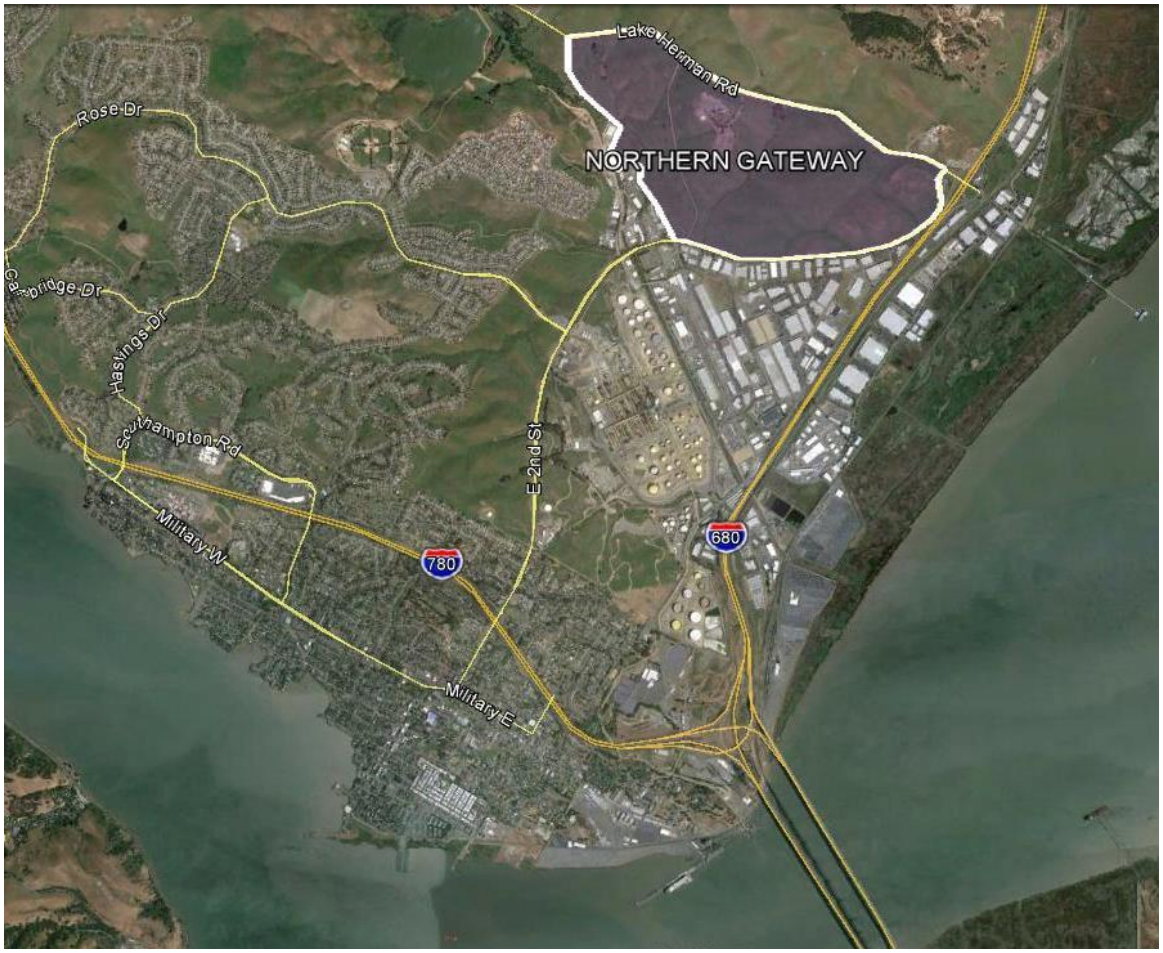
Given that the industrial development is not likely to be financially feasible without financing support from the residential component, KMA recommends that phasing or other requirements be put in place in the development agreement to ensure that the industrial development is built in a timely manner rather than trailing the rest of the development or not being built at all.

II. ANALYSIS BACKGROUND & AREA DESCRIPTION

Northern Gateway Property

The Northern Gateway Property is a roughly 528-acre site on the northern edge of the City of Benicia. The subject property is located immediately north of the Benicia Industrial Park (BIP) and contains approximately 496 acres zoned Limited Industrial (IL), with approximately 32 acres of General Commercial zoning at the northwest corner of East Second Street and Lake Herman Road. Given the site's proximity to the Benicia Industrial Park, BIP, and the importance of the BIP to Benicia, the City wishes to proceed cautiously in considering the Schwartz Land Development Company's proposal to develop this site with uses other than limited industrial and commercial development.

Figure 1: Northern Gateway Site Aerial



Source: KMA, Google Earth

Benicia Industrial Park (BIP)

The BIP is one of the City's primary economic engines but is facing challenges in maintaining its position in the marketplace. One of the BIP's constraints is that there is very little remaining developable land in the park, which makes it difficult to accommodate the needs of expanding large, new businesses. Some of BIP's tenants have relocated to other parks because of the lack of expansion space.

The City of Benicia recently completed the Benicia Industrial Park Market Study, accepted by City Council, January 2015, which highlighted the need for the improvements and actions to make the Benicia Industrial Park (BIP) competitive within the surrounding regional market. The City is currently engaged in a multi-faceted effort to strengthen the market position of the BIP, including:

- Looking for new development sites;
- Providing significant funding to upgrade existing streets in the park;
- Preparing a circulation analysis and plan to address traffic congestion in the BIP, the *Transportation Employment Center Plan;*
- Creating a transit hub along with needed road and infrastructure improvements, *The Industrial Bus Hub Project;* and
- Researching options for broadband and infrastructure financing.

In addition to physical improvements for the BIP, the City will be focusing on a 2020 BIP Strategic Action Plan which will include existing business outreach and expansion assistance and marketing to attract new compatible businesses to the BIP. The draft 2020 Strategic Action Plan will be completed in January 2016 with implementation beginning in the spring of 2016.

Northern Gateway Development Concept

The Schwartz Land Development Company currently has an option to purchase the Northern Gateway property and has prepared a draft concept plan with the following mix of uses and development phases:

Table 7: Proposed Land Use

Land Use	***Net Acres***	***Development Program***	***Phases***
Residential	86	810 to 910 units	1 – 5
Industrial	136	1.8 to 2.4 million sf	1,3, and 4
Commercial	21	110k to 130k of retail	5
		50k to 70k hotel	
		40k to 50k movie theater	
Open Space	241		

Source: Schwartz Land Development Company, October 2015.

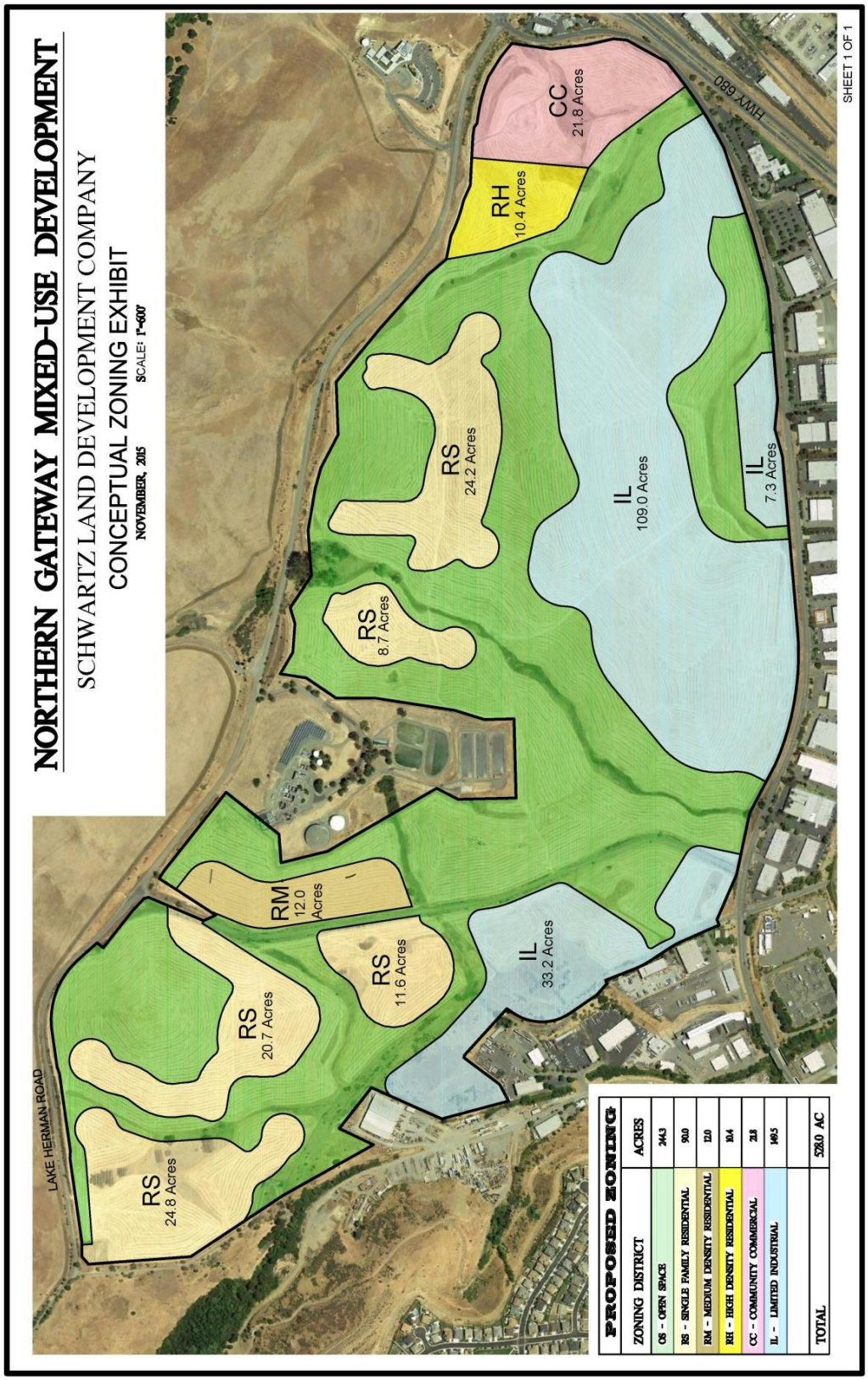
Net Acres excludes land reserved for roadways/circulation.

In 2008, the Northern Gateway property owner, who is not the current applicant, withdrew an application to develop the property with industrial and commercial uses ("Benicia Business Park") after determining that the project was not financially feasible due to high infrastructure costs, high vacancy rates, and a struggling economy.

The developer asserts that the current proposal, which is referred to as mixed-use due to the inclusion of industrial, commercial and residential uses, offers multiple benefits to Benicia, including:

1. Addition of industrial development capacity in the near term and revitalization of the BIP,
2. Economic diversity to capture job growth,
3. New sales tax revenues,
4. Support for the City's goal of sustainability,
5. Diversified land use opportunities that can attract new businesses and employees to the area, and
6. Additional housing for the City.

Conversely, the developer asserts that an industrial/commercial project similar to the 2008 proposal is not economically feasible and would preclude the property from being developed, including limited industrial development.



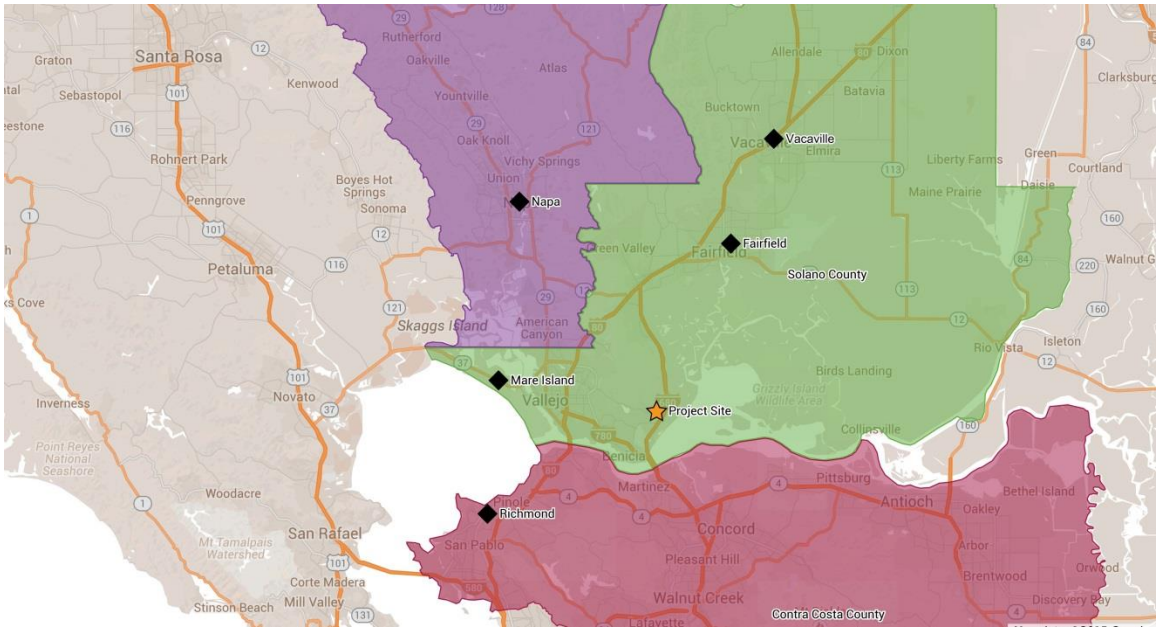
PROPOSED ZONING	
ZONING DISTRICT	ACRES
OS - OPEN SPACE	244.3
RS - SINGLE FAMILY RESIDENTIAL	90.0
RM - MEDIUM DENSITY RESIDENTIAL	12.0
RH - HIGH DENSITY RESIDENTIAL	10.4
CC - COMMUNITY COMMERCIAL	21.8
IL - LIMITED INDUSTRIAL	149.5
TOTAL	528.0 AC

III. INDUSTRIAL MARKET OVERVIEW

Market Area Definition

The industrial market area includes the industrial zones of Contra Costa County, Napa County, and Solano County. This market area is consistent with the 2014 Benicia Industrial Park Market Study prepared by Chabin Concepts and KMA.

Figure 2: Industrial Market Area



Source: Keyser Marston Associates, Google Earth

Real Estate Conditions

Within the market area, demand for industrial space, including warehouse and distribution, has strengthened in recent years and the market is exhibiting conditions that are favorable for new development. Among the strong market indicators are:

- Current vacancy for industrial uses is at a low of 6.6% (Colliers Q2 2015);
- Annual net absorption of industrial space has averaged more than 2 million sq. ft. per year over the last three years;
- Pipeline projects totaling 1.6 million sq. ft. of industrial space are under construction in the market area, indicating that the economics of industrial projects generally support feasibility of new construction;
- 70 million sq. ft. of unmet demand is being tracked for Bay Area industrial distribution space as compared with only 40 million sq. ft. of existing inventory, an indication of a significant demand/supply imbalance.[3]

[3] Real Estate Bisnow (September 2014)

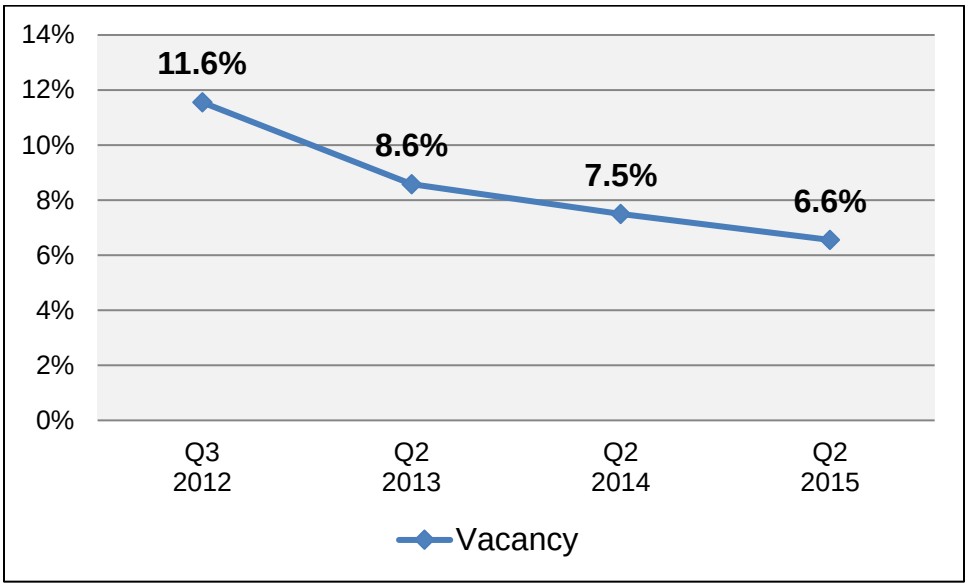
Table 8: Industrial Real Estate Conditions

		Submarkets				Total Market
	Benicia	**Solano***	**Napa**	**Hwy 4**	**Richmond**	**Area**
Inventory	8,497,794	35,061,333	12,906,393	16,282,751	13,102,249	**77,352,726**
% of Inventory	11%	45%	17%	21%	17%	**100%**
Vacancy Rate	10.1%	7.1%	2.2%	8.6%	6.8%	**6.6%**
Net Absorption (YTD)	160	102,546	341,899	-256,998	261,704	**449,151**
Under Construction	0	662,166	872,044	54,340	0	**1,588,550**
Monthly Asking Rent	$0.48	$0.51	$0.67	$0.73	$0.61	**$0.60**

Source: Colliers Q2 2015 Industrial Market Report

* Solano County submarket includes city of Benicia.

Figure 3: Historical Vacancy Rates in Market Area (Richmond, Solano / Napa, and Highway 4 Corridor)



Source: Colliers Q3 2012 to Q2 2015 Industrial Market Reports.

Product Types

Warehouse and Industrial Space

Among industrial building types, warehouse and distribution space is showing the strongest growth and has driven most of the recent absorption of newly constructed space. While warehouse product accounts for 40% of total inventory, it has represented 60% of absorption over the last three years. Demand for new and up-to-date warehouse and distribution facilities is likely to continue to outpace other industrial product types for the following reasons:

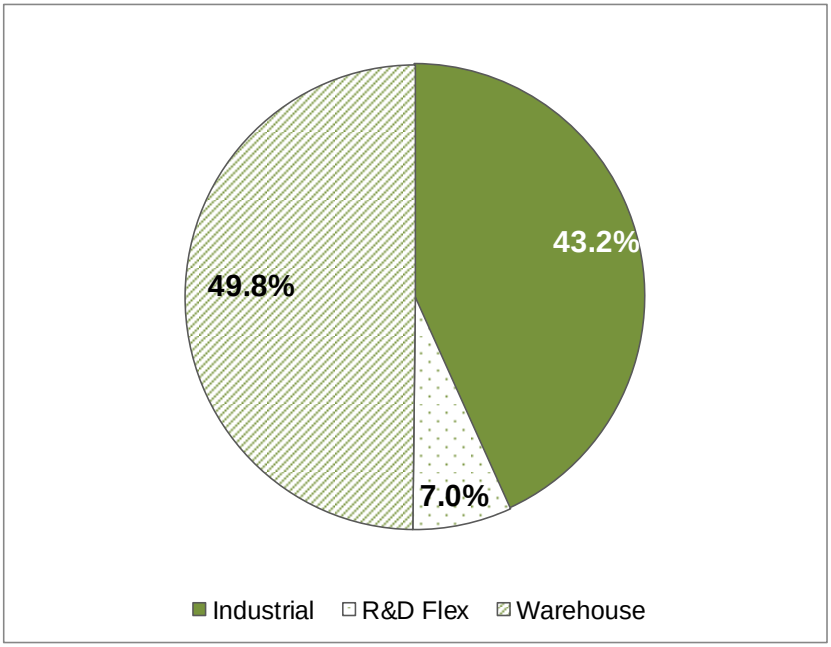
- As a major population center, the Bay Area generates demand for large quantities of goods and products, making it advantageous for warehouse facilities to locate nearby;

- The surging market for on-line purchases from companies such as Amazon and more recently Alibaba has created an expectation for same-day delivery of consumer goods;
- Large volumes of goods are imported and exported through the Port of Oakland.

Among warehouse users, demand has centered on “high-cube” distribution space, as firms seek to consolidate their operations (Colliers Q2 2015). “High-cube” buildings typically have a gross floor area greater than 100,000 sq. ft. and ceiling heights above 26 feet. Local examples include recent lease transactions by Pacific Cycle, Saxco Glass, and Encore Glass, each ranging from 300,000 to 650,000 sq. ft.

This economic cycle, there has been less demand for – and less investment in – light industrial space. Light industrial space represents half of the total inventory but just 30% of recent absorption. In the market area, there is currently just 54,000 sq. ft. of light industrial space under construction, compared to 1.5 million sq. ft. of warehouse space (Colliers Q2 2015).

Figure 4: Distribution of Industrial Space by Product Type



Source: Colliers Q2 2015

Research & Development / Flex Space

Research & Development (R&D) /Flex Space has historically captured a much smaller share of local demand, comprising less than 7% of inventory in the local marketplace. R&D/Flex Space is most common in advanced technology industries, such as life sciences and electronic hardware, because it allows for a mix of office, manufacturing and warehouse uses that can be adjusted within the building over time as company

requirements change. Correspondingly, most of the Bay Area's existing stock of R&D space is found in Silicon Valley, where such firms are concentrated. (Table 9)

Table 9: Regional Overview of R&D/Flex Market (sq. ft.)

	Silicon Valley	San Mateo	I-80/880 Corr.	Tri Valley	Solano/ Contra Costa/ Napa
R&D Inventory	168,529,581	19,439,590	33,289,542	7,409,710	5,386,302
Vacancy	9.9%	4.8%	13.3%	8.9%	5.3%
Under Construction	720,785	0	0	0	0
YTD Absorption	2,019,413	383,737	1,202,965	(33,352)	17,182
Monthly Asking Rent	$1.67	$2.75	$1.07	$1.22	$0.80

Source: DTZ Q2 2015 R&D Market Reports

Historically, R&D users have tended to migrate east or north when supply conditions tighten in Silicon Valley. However, brokerage firms note that despite strong demand during this economic cycle, spillover from Silicon Valley has yet to reach peripheral markets such as the Tri Valley (Danville – Livermore) and the I-80/880 Corridor (Richmond – Newark). There would need to be several more years of strong growth in R&D demand and tight real estate conditions across the Bay Area region for Solano County to capture a substantial share of spillover demand from Silicon Valley and other Bay Area R&D markets, such as the Tri Valley.

It is noteworthy that Solano County's 2014 economic development strategy report, Moving Solano Forward, names the medical and life sciences sector as one of four industries targeted for further growth. The county strategy recognizes that while Vacaville has had some success attracting large biotechnology firms including Genentech, Janssen, and Novartis, the presence of these anchors has not yet led to the formation of a cluster of suppliers and other ancillary users, which is necessary for a robust R&D market. To the extent the county's continued economic development efforts lead to greater synergy among biotechnology users, the R&D share of industrial demand could see an increase over time.

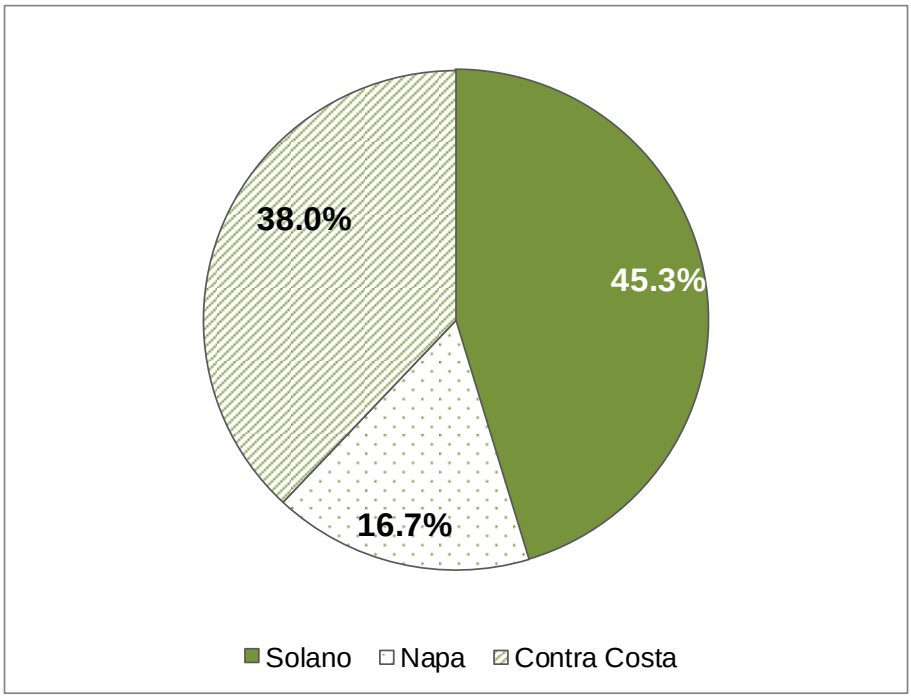
Solano County Market Position

The Solano County submarket (including cities and unincorporated areas) represents nearly half of the total industrial inventory in the market area and has captured approximately 60% of demand over the last three years. Solano County remains favorably positioned for industrial real estate expansion given that:

- Solano County is strategically located close to Bay Area population centers as well as to the wine country and Sacramento;
- Solano County has opportunities for large-scale industrial park development that do not exist in other parts of the market area;

- Solano County is a more affordable option for industrial businesses and their workers who are increasingly being priced out of other parts of the Bay Area.

Figure 5: Industrial Inventory by Submarket



Source: Colliers 2Q 2015

Northern Gateway Opportunity

The subject site is located in Benicia, whose industrial inventory has historically been synonymous with the Benicia Industrial Park (BIP). The BIP is a 3,000-acre industrial area that is largely built out. The Northern Gateway site is adjacent to the BIP and new industrial development will serve as an expansion of the park.

With little land remaining for expansion, Benicia's capture of local industrial demand has trailed other county submarkets, particularly Fairfield and Vacaville, which account for over 80% of recent absorption in the county and virtually all of the recent growth in industrial supply since 2007 (Vallejo Economic Trends 2015). As with the market area overall, absorption in both submarkets has been heavily weighted toward warehouse and distribution uses. Local brokerage firms cite a number of reasons for the emergence of Fairfield and Vacaville as the county's leading industrial centers, including:

- The completion of the Jameson Canyon/Hwy 12 widening project, which has improved connectivity with the wine industry;
- Reportedly low water rates for industrial users;
- High-quality industrial parks offering a full package of desirable infrastructure;

- Sufficient available land to accommodate new development.

Of the reasons above, supply factors provide the strongest explanation for why Fairfield and Vacaville have captured a greater share of demand this economic cycle. The need for large, modernized distribution facilities is driving industrial demand, favoring those submarkets that can accommodate new development. Benicia firms surveyed as part of the Benicia Industrial Park Market Study (2014) cited expansion capacity as the primary reason for why they would choose to relocate.

Northern Gateway has an opportunity to build on Benicia's competitive position as an industrial stronghold by capturing demand from the expansion of BIP users as well as growing regional demand from warehouse and distribution users associated with consumer goods and other industries. Access to a large labor market, customers, major highways, an adjacent deep water port and the Port of Oakland all favor demand for industrial development at Northern Gateway.

Industrial Land Supply

Many of the industrial parks that have captured a large share of absorption within Solano County are approaching build-out. These include, for example, the Busch Corporate Center and the Solano Business Park in Fairfield. Today, these developments have a limited number of large, contiguous sites available for development and/or a significant portion of remaining land owned by end users. Given current market conditions, local brokerage firms anticipate that remaining shovel-ready (fully improved) land in Solano County is likely to be absorbed very quickly.

Moving Solano Forward provides a recent estimate of the vacant industrial land inventory within the county. According to the report, as of 2014, there were approximately 287 acres of shovel-ready industrial land located in existing industrial parks, 484 acres of partially improved land, and more than 5,600 acres of raw (unimproved) industrial land. Of raw land, over 1,300 acres are located in cities and 4,300 acres are located in the unincorporated areas of the county. The raw land total includes the entire North Gateway site (528 acres). (Appendix Table A-4a)

Of course, only a portion of the county's vacant industrial land will be developed over the next twenty years. Table 10 identifies major industrial sites within Solano County and elsewhere in the market area that appear to have the greatest development potential.

Table 10: Industrial Areas Targeted For Future Development

	Industrial Land Supply		
Submarket	**Shovel Ready**	**Reserve**	**Total**
Solano County			
Northern Gateway[1]		528	528
Major Development Sites Elsewhere in Solano County[1]	244	982	1,226
	244	1,510	1,754
Contra Costa County			
Pinole Point Business Park[2]	26	-	26
Northern Waterfront Economic Development Initiative[3]	-	1,412	1,412
	26	1,412	1,438
Napa County			
Green Island Industrial Park & Napa Logistics Park[4]	50	350	400
Napa Commerce Center[5]	34	-	34
	84	350	434
Total Market Area	354	3,272	3,626
Solano County Share	69%	46%	48%
Years to Absorb[6]	4	75	79

Source: Keyser Marston Associates 2015, Moving Solano Forward 2014

Shovel Ready = Fully improved land.
Reserve = Partially improved and raw land.

(1) See Appendix Table A-4b.
(2) Contra Costa Times. 2014.
(3) Revitalizing Contra Costa's Northern Waterfront, January 2014. Craft Consulting Group and Cambridge Systematics.
(4) City of American Canyon
(5) The Pigman Companies.
(6) Based on projected market-wide absorption rate. 2015-2020 absorption rate is used for shovel-ready supply. Long-term absorption rate is used for land reserves.

IV. PROJECTION OF INDUSTRIAL DEMAND

Approach

KMA has used the following approach to estimate market demand for industrial space:

1. Employment Growth Projections: KMA reviews manufacturing and related industry employment projections to estimate growth in industrial employment over a 25-year time horizon for the market area;
2. Industrial Space Requirements: KMA converts employment projections into space needs and acreage needs based on the share of jobs requiring industrial space and employment density factors;
3. Project Capture: Based on historical market performance and the availability of space in Benicia and competing locations, a capture rate is used to estimate supportable development at the project site.

Key Assumptions

Employment Growth

Growth in industrial employment is estimated over the period 2015-2040 based on a variety of growth forecasts for Solano, Contra Costa, and Napa Counties. The industrial employment growth rate for 2015-2020 is assumed to be an average of near-term projections by the Association of Bay Area Governments (ABAG), the California Department of Transportation (Caltrans), the California Employment Development Department (Cal EDD), and Economic Modeling Specialists International (EMSI, a private data vendor). The long-term employment growth rate reflects an average of projections prepared by ABAG and Caltrans and historical growth in industrial employment for Solano, Contra Costa, and Napa Counties over the past twenty years. Per Table 11, fifty percent of the assumed long-term growth rate is weighted toward the ABAG/Caltrans forecasts, and fifty percent is weighted toward the historical trend.

Table 11: Industrial Employment Growth Assumptions

2015-2020 Employment Growth Rates	
Industrial Sector[1]	1.2%
Construction Industry	2.4%
Projection Sources	Average of ABAG, Cal EDD, Caltrans, EMSI
2020-2040 Employment Growth Rates	
Industrial Sector[1]	0.5%
Construction Industry	0.6%
Projection Sources	*50%:* Average of ABAG, Caltrans; *50%:* 20-Year Historical Growth

Source: Keyser Marston Associates 2015

[1]Includes manufacturing, wholesale trade, transportation, warehousing & utilities

Space Requirements

Employment growth is converted to industrial space based on the following assumptions:

1. For each industry, the share of new jobs requiring industrial space is calculated based on a study of industrial land requirements conducted in Portland, Oregon, with minor adjustments made to reflect local market conditions;

2. Jobs requiring industrial land are apportioned to light industrial, warehouse, and flex uses based on the historical shares of these product types in the local marketplace;

3. Typical employment density factors for light industrial (1,000 sq. ft. / employee), warehouse (1,700 sq. ft. /employee), and R&D space (600 sq. ft. / employee) are applied to determine the amount of square footage necessary to accommodate growth in industrial employment (assuming a typical vacancy rate of 8%);

4. Vacancy-adjusted square footage requirements are converted to land acres assuming a floor-area-ratio (FAR) of 0.35.

Projected Absorption in Market Area and Solano County

KMA concludes that from 2015-2040, growth in industrial employment will support development of 1,358 acres of industrial land in the market area, including 674 acres for warehouse, 587 acres for industrial, and 96 acres for R&D (Appendix Table A-7).

Assuming Solano County maintains its historical share of 50% of industrial demand in the market area, countywide industrial development is projected to total approximately 679 acres over the period (Appendix Table A-8).

Project Capture and Land Absorption

Based on an assessment of Benicia's competitive position and the nature of the competitive supply, KMA has assumed that the project will capture between 18% and 28% of total county demand over the period. On this basis, the project has the potential to absorb between 121 acres and 189 acres of industrial land through 2040. This implies average annual absorption of 5 to 8 acres per year, though absorption rates will vary over the study period.

Using the assumptions described above, 150 acres of industrial land as proposed under the 2008 Mitigated Project would be absorbed over 21 to 31 years. In contrast, the 129 acres of industrial land proposed under the mixed-use development concept would be absorbed in 18 to 27 years. The difference in absorption timeframes between the two proposals is explained by the amount of industrial land targeted for development.

KMA's projection assumes the distribution of industrial, warehouse, and flex uses at the project will reflect the existing distribution in the local marketplace: 43% industrial, 50% warehouse, and 7% flex/R&D.

Table 12: Northern Gateway Industrial Absorption Estimates

	Capture of County[1]		
North Gateway Project	**Low**	**Mid**	**High**
	18%	23%	28%
Cumulative Absorption			
2015-2020	12	24	36
2020-2025	38	55	72
2025-2030	64	87	109
2030-2035	91	119	147
2035-2040	121	155	189
Years to Absorb			
129 Acres	27	22	18
150 Acres	31	25	21

Source: Keyser Marston Associates 2015.

See Appendix tables A-7 and A-8 for details

[1] Reflects average capture rate for 2015-2040. Capture rates vary by period.

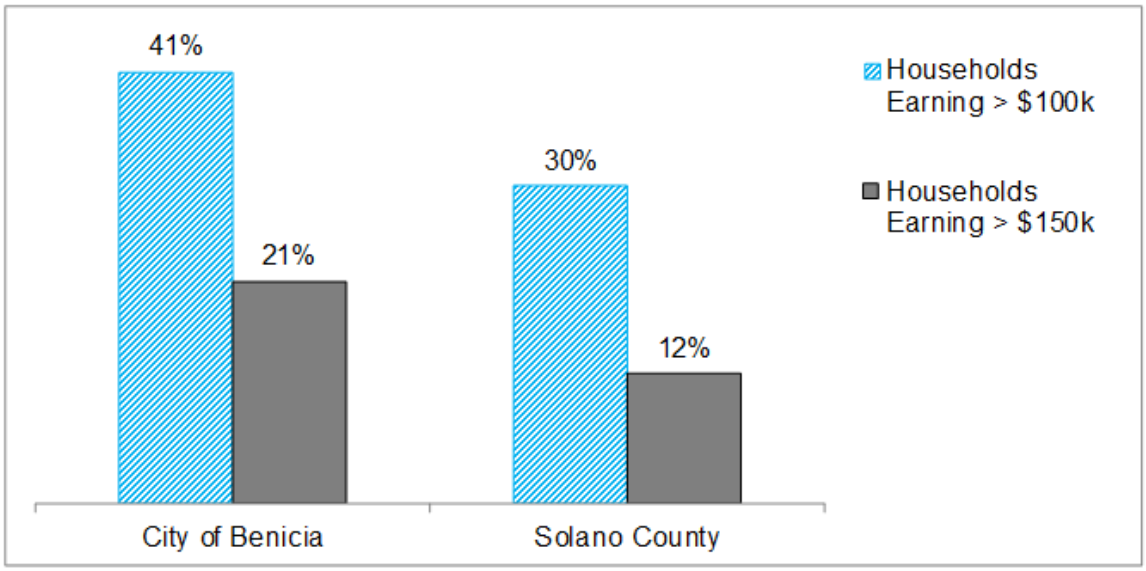
V. RETAIL MARKET OVERVIEW

City and County Demographics

As of 2015, there are an estimated 10,800 households and 27,200 residents living in the City of Benicia, representing approximately 6% of Solano County's population (ESRI 2015). According to ESRI Business Analyst, a private demographic firm, Benicia's population is projected to remain relatively flat through 2020, adding just 700 residents over the next five years.

Residents of the City of Benicia have higher incomes than Solano County overall. The median household income in Benicia is $84,000, compared to $67,000 across Solano County. More than 20% of Benicia households have incomes above $150,000 per year, nearly double the county average.

Figure 6: Share of Households Earning Above $100,000 and $150,000



Source: KMA, ESRI 2015

Economic conditions are improving countywide, as communities recover from the economic recession. Over the past five years, the unemployment rate has been cut in half, home prices have increased by nearly 60%, and the county has added approximately 15,000 residents (Solano County Economic Indicators report 2014).

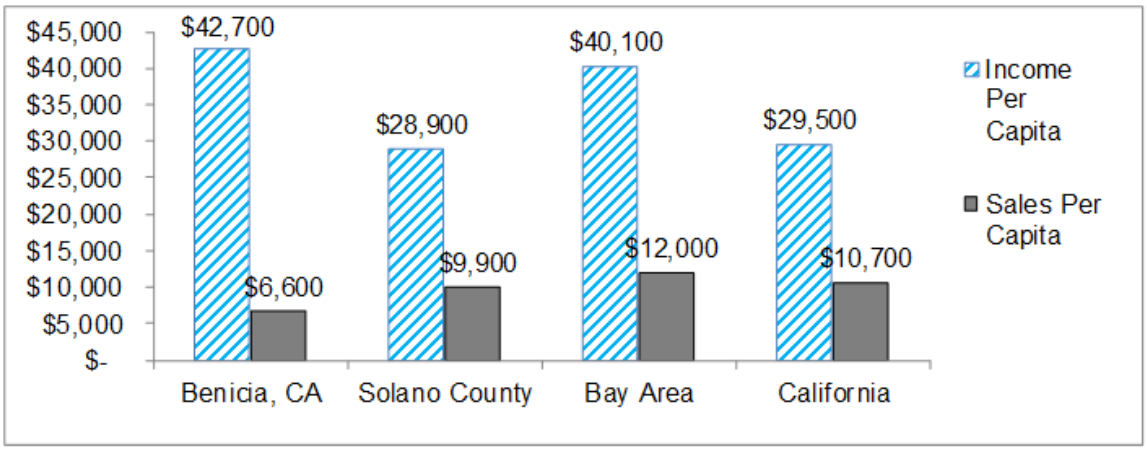
Retail Sales Trends

Retail Sales by Jurisdiction

Sales tax data published by the California Board of Equalization suggest that on the whole, Benicia retailers are not capturing their fair share of local expenditure potential. In

2013 (the most recent year available), taxable retail sales per capita in Benicia were $6,600, compared to $9,900 per capita in Solano County, $12,000 per capita in the Nine-County Bay Area, and $10,700 per capita in the state – despite Benicia having the highest per capita income of any of the comparison areas. These findings indicate that Benicia residents are spending a substantial portion of their discretionary incomes outside the boundaries of the City.

Figure 7: Taxable Retail Sales and Income per Capita by Jurisdiction (2013)



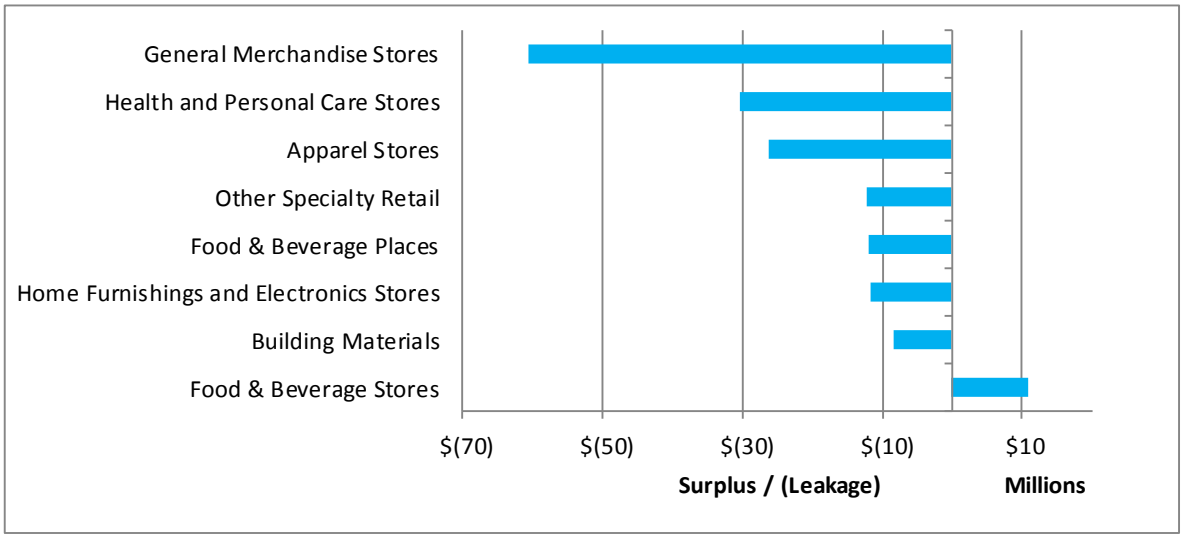
Source: KMA, California Board of Equalization 2013, American Community Survey 2009-2013

Citywide Retail Leakage Analysis

Retail leakage is calculated as the difference between actual and potential sales for a given retail category. Retail leakage is an indicator that demands for particular goods or services is being met outside the boundaries of the City.

Because the California Board of Equalization does not publish taxable sales by sector for the City of Benicia, this analysis relies on sales and expenditure potential estimates for 2015 prepared by ESRI to quantify the degree of surplus or leakage of retail dollars within specific retail sectors in Benicia. Figure 8, below, summarizes the results of the citywide retail leakage analysis.

Figure 8: Citywide Retail Sales Leakage (2015)



Source: ESRI Business Analyst 2015
Sales leakage includes leakage of resident expenditure potential to online retailers.

Per Figure 8, retail leakage exists across all categories of comparison goods including apparel stores, home furnishings and electronics, general merchandise, and other retailers, as well as health and personal care stores. Nearly half of residents' expenditure potential for retail goods and services is being met outside the city (leaving aside auto and building materials categories). The only category where estimated sales exceed expected expenditures is for grocery stores.

The potential for new retail development to recapture retail spending leakage is determined by a number of factors, including retail trade areas and regional supply characteristics. Demand for convenience retail (health and personal care stores and food stores in Figure 8) as well as food and beverage places should be met within the local trade area, and any leakage has strong potential to be recaptured by new development. For other categories, such as general merchandise, retail leakage is a largely unavoidable consequence of Benicia being located within the trade areas of department stores in Concord, Pleasant Hill and elsewhere in the market area. Specialty comparison retail categories, such as apparel and home furnishings, offer limited opportunities to attract retailers who do not yet have a presence in nearby communities.

Retail Real Estate Market Overview

National Retail Trends

National retail trends, particularly the rise of online retailing, have the potential to influence local market conditions over the coming years. E-commerce firms such as Amazon and Alibaba have rapidly grown their market share for retail goods, impacting sales at some brick-and-mortar stores. While it remains to be seen how retail space

requirements may change in response to further growth in online retailing, the preliminary impacts are evident at many shopping centers, including:

- Recent decisions by Macy's, Sears, Kmart and JC Penney to close hundreds of department stores nationwide, which can be attributed in part to increased competition from online retailers;
- Greater emphasis by shopping center operators on destination retail to retain their customer base, including the expansion of entertainment and dining districts in spaces vacated by traditional department store anchor tenants; and
- Greater focus by retailers on the use of physical storefronts to enhance online sales and vice versa, for example, by offering in-store returns for purchases made online.

Local Real Estate Conditions

Northern Gateway is located in a competitive retail environment Retail demand by Benicia residents is captured by community and regional-serving centers located elsewhere in the region, in addition to shopping centers within the city of Benicia.

Table 13 identifies key retail clusters within a 20- to 30-minute drive of Northern Gateway. The market area consists of nearby community-serving retail clusters in Benicia and Vallejo and regional-serving retail destinations throughout Solano, Contra Costa, and Napa counties. In total, the market area contains approximately 21 million square feet of shopping center space.

Retail real estate conditions in Solano County submarkets are not as strong as the overall market area, or the Bay Area as a whole. Average annual lease rates of $17 per square foot in Solano County are below the regional average of $24 per square foot (DTZ Q2 2015). Vacancy rates are higher in Solano County, although available space is reportedly concentrated in Class B and C buildings. (For purposes of comparison, retail space is generally grouped into three classes of buildings: Class A includes buildings of the highest quality commanding the highest rents, Class B represents the mid-range of retail buildings, and Class C consists of older, outdated buildings offering functional space at discounted rents.)

Very little retail development has occurred anywhere in the county over the last five years. In Benicia, the last major retail project was the Rose Center, a 30,000 square foot neighborhood shopping center at Rose Drive and Columbia Parkway, which opened in 2007. Real estate conditions in Benicia have remained relatively flat since then. However, brokerage firms anticipate that pent-up consumer demand and a shortage of Class A retail space may favor retail development in Solano County over the next several years.

Table 13: Retail Market Conditions

Submarket	Retail GLA [1]	Vacancy	Lease Rates	Driving Distance from Project
Solano County				
Benicia/Vallejo	2,696,292	10%	$17.36	0-15 min.
Fairfield	2,854,337	5%	$18.22	20 min.
Vacaville	2,759,491	9%	$17.17	25 min.
	8,310,120	8%	$17.41	
Contra Costa County				
North I-680 [2]	5,653,294	7%	$27.34	10-25 min.
North I-80 [3]	4,116,136	6%	$22.93	20-30 min.
	9,769,430	6%	$25.48	
Napa County				
Napa/American Canyon	2,886,534	3%	$35.64	20-30 min.
Retail Market Area	20,966,084	6%	$23.68	
Bay Area	133,207,063	5%	$24.09	

Source: DTZ Q2 2015, Newmark Cornish Carey Q1 2015, Google Maps (for driving times)

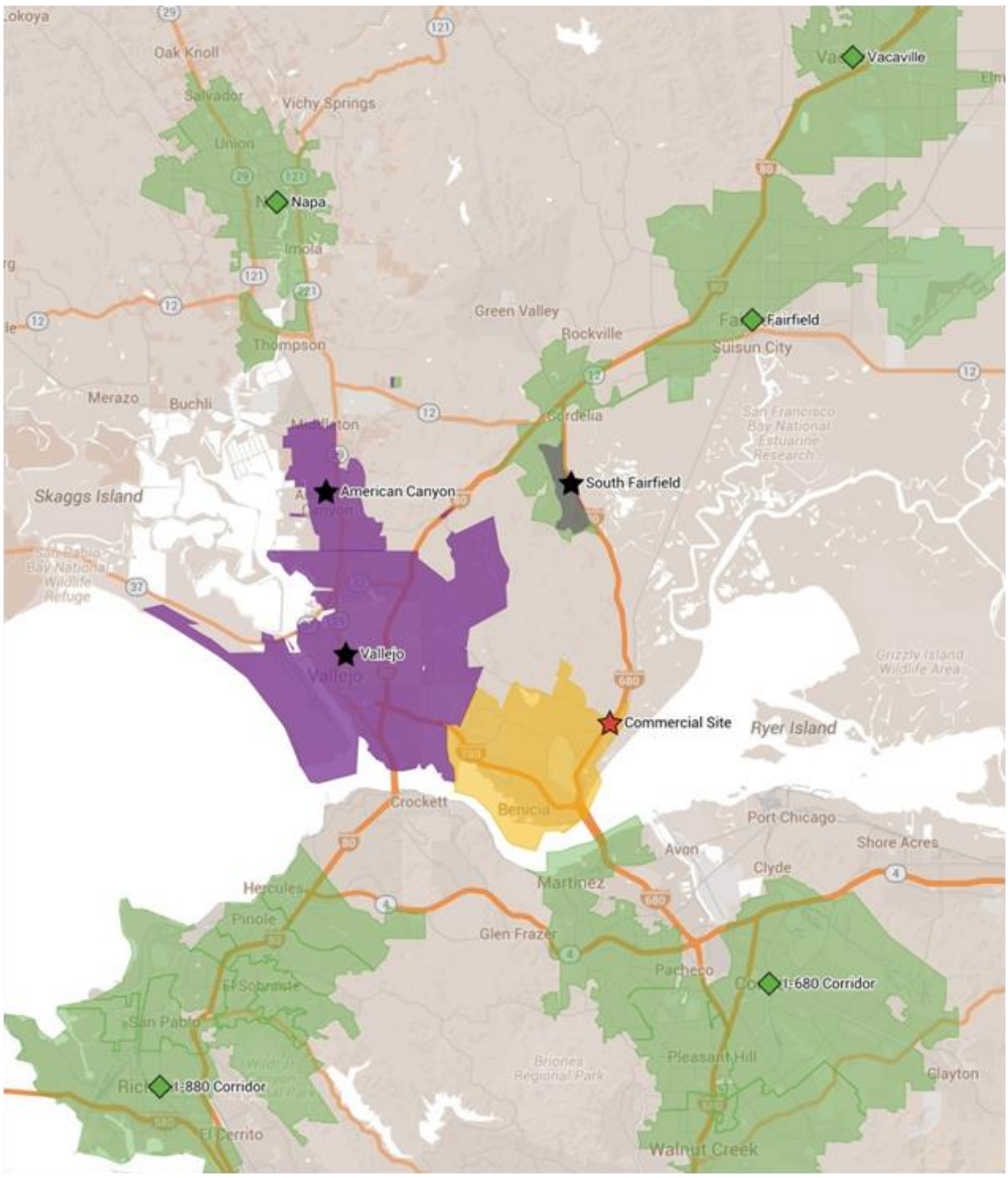
GLA = Gross Leasable Area

[1] Includes space contained by shopping centers.

[2] Concord, Pleasant Hill, Walnut Creek, Martinez

[3] Richmond, Pinole, Hercules

Figure 9: Retail Submarkets in Solano, Napa, and Contra Costa Counties



Retail Supply

Retail Market Segmentation
The following section reviews the competitive supply of retail space in the market area across three types of shopping centers:

- ***Regional-serving centers,*** which focus primarily on comparison goods and entertainment; they are marketed as regional destinations and can draw from a trade area of 5-10 miles, or more.

- ***Neighborhood-serving retail centers,*** which offer everyday goods and services, including groceries and hair salons, that customers tend to purchase within a short drive from their homes (1-2 mile radius);

- ***Community-serving retail centers,*** which include a mix of neighborhood-serving and regional-serving tenants; these centers tend to serve residents within a 3-6 mile radius from the site.

Regional Shopping Centers
Regional-serving centers sell primarily comparison goods for which the gain resulting from price and quality comparison is relatively high. There is a diverse offer of regional shopping destinations within a 30 minute drive from the project site. Profiles of the area's largest shopping centers, and their representative tenants, are included in Table 14.

Currently, three shopping centers in the region have greater than 1 million square feet of gross leasable area: Sunvalley Shopping Center in Concord, Solano Town Center in Fairfield, and the struggling Hilltop Mall in Richmond (likely to be sold and redeveloped in the near future). In addition, Broadway Plaza in Walnut Creek is anticipated to reach 1 million square feet following a planned expansion. Regional shopping centers such as these draw from large trade areas as consumers are willing to drive longer distances to shop and dine in these locations and are one of the reasons why Benicia sees significant leakage of retail expenditures in comparison goods categories. These clusters are advantaged in attracting comparison goods retailers and shoppers because they already support a critical mass of comparison retail and can satisfy in-line retailers' co-tenancy requirements.[4] In addition, population density around the largest shopping centers has supported their development.

[4] In-line retailers may include co-tenancy requirements in their lease agreements allowing for termination of the lease, reduced rent or other recourse if the shopping center fails to attract specific anchor tenants or achieve a minimum level of occupied space.

Table 14: Area's Largest Regional-Serving Shopping Centers

Center Name and City	Type	Sq Ft	Representative Tenants
Sunvalley Shopping Center Concord	Super Regional	1,400,000	Sears, Macys, JC Penney, Forever 21
Solano Town Center Fairfield	Super Regional	1,052,391	Macy's, JCPenney, Sears, Best Buy, Forever 21, H&M
Hilltop Mall[1] Richmond	Super Regional	1,074,432	JC Penney, Sears, 24 Hour Fitness, Wal-Mart, Macy's
Broadway Plaza[2] Walnut Creek	Lifestyle Centers	778,000	Nieman Marcus, Macys, Nordstrom
Gateway Plaza Vallejo	Power Center	570,000	Bed Bath & Beyond, Ross, Century Theatres, Toys "R" Us
Vacaville Premium Outlets Vacaville, CA	Outlet	447,700	Banana Republic, Ann Taylor, Adidas
South Napa Market Place Napa	Large Community	349,000	Home Depot, Target
Downtown Pleasant Hill Pleasant Hill	Lifestyle	345,687	Golfsmith, Century Theater, Bed Bath & Beyond
Napa Premium Outlets Napa	Outlet	179,000	Brooks Brothers, Banana Republic, Ann Taylor

Source: International Council of Shopping Centers Directory, shopping center websites

[1] Likely to be redeveloped when project goes up for sale early next year, according to Contra Costa Times.
[2] Undergoing expansion to 1 million square feet.

Solano County Positioning

Neighborhood/Community Centers: Benicia, Vallejo, and Nearby Submarkets

With the exception of Gateway Plaza in Vallejo (Table 14, above) Benicia/Vallejo retail submarket is characterized primarily by neighborhood- and community-serving retail clusters, as opposed to the large, regional malls seen elsewhere in the region. The same is generally true of retail clusters in South Fairfield/Cordelia, 15 minutes north of the site, and in American Canyon, 20 minutes northwest of the site. Table 15 lists nearby community centers greater than 100,000 square feet and their representative tenants. Notably, nearby shopping centers offer a full selection of convenience goods and a limited selection of comparison goods, corroborating the findings of the citywide retail leakage analysis.

Table 15: Nearby Community Centers Greater than 100,000 square feet

Center Name and City	Type	Sq Ft	Representative Tenants
Vallejo Plaza Vallejo	Community Center	239,705	dds Discounts, Big 5 Sporting Goods
Napa Junction[1] American Canyon	Community Center	215,000	Wal-Mart, Sonic
Vallejo Corners Vallejo	Community Center	194,054	Target, Sears Home Appliance
Green Valley Crossing[2] South Fairfield	Community Center	171,898	Safeway, TJ Maxx, Ethan Allen
Southampton Center Benicia	Community Center	160,000	Raley's, ACE Hardware
Park Place Vallejo	Community Center	150,766	24 Hour Fitness, Raley's
Meadows Plaza Vallejo	Power Center	126,155	Vacant, former Wal-Mart site

Source: International Council of Shopping Centers, project websites

[1] Expansion underway (16,000 sq. ft., largely fast food).
[2] Located just outside the trade area but serving South Fairfield/Cordelia.

The retail supply in the City of Benicia consists of four neighborhood shopping centers totaling approximately 300,000 square feet, and Downtown Benicia, a main street commercial district with approximately 200,000 square feet of commercial space. Downtown includes a variety of local specialty shops, making it one of the few comparison shopping destinations located in the local submarket.

Planned Supply

Two projects containing more than 400,000 sq. ft. of retail are being planned within the local submarket, in Vallejo and American Canyon, respectively. Both projects are poised to introduce a greater selection of comparison retail, entertainment, and dining options to the marketplace:

- **Solano Fairgrounds Redevelopment, Vallejo.** The County has initiated negotiations with Solano Community Development LLC to redevelop the Solano Fairgrounds in Vallejo. The land use program includes approximately 330,000 sq. ft. of entertainment-oriented commercial uses, which may include a department store, in-line specialty shops, restaurants, and entertainment venues, such as a movie theater;

- **Watson Specific Plan, American Canyon.** The developer, McGrath Properties, is currently seeking approvals for a mixed-use project in American Canyon, which

would include approximately 94,000 sq. ft. of retail uses, including entertainment and dining, in addition to 1,300 residential units and a 100-room hotel.

Likely Retail Orientation for Northern Gateway

In order to assess the retail demand for Northern Gateway, KMA has determined the likely retail orientation for the project, in particular, whether the project will be oriented toward the immediate neighborhood, nearby communities, or the larger region. Given the location of Northern Gateway and the nature of the competitive supply, KMA concludes that the retail/commercial element of the project is best positioned as a community-serving retail center.

As a community-serving center, the project has the potential to offer a mix of convenience retail for residents and workers in the immediate vicinity of the project, a targeted selection of comparison goods not found in nearby communities, and dining options catering to both customer segments. While there is potential to attract a select group of comparison retailers, it is anticipated that the offer of comparison goods would be less extensive than what is found at larger regional malls, such as Sunvalley Shopping Center or Solano Town Center (Table 14).

A larger regional mall is not considered appropriate for the site for a variety of reasons, including: (1) the lack of an existing critical mass of comparison retailers near the site, (2) lower population density within a 5 mile radius of the property, in comparison to other regional retail destinations (see Appendix Table B-5), and (3) competition with large retail projects being planned in the trade area. The focus of this analysis is therefore on the market demand for neighborhood-serving retail and services within the immediate vicinity of the site, as well as a targeted selection of comparison retail serving communities within a roughly eight mile ring from the site.

VI. PROJECTION OF RETAIL MARKET DEMAND

Study Approach

The following approach was used to evaluate retail development opportunities at the Northern Gateway project site:

1. Trade Area Identification – A trade area refers to the geographic area where the majority of a retail center's customers reside. It also contains the retail center's primary competitors. Distinct trade areas for convenience and comparison retail are defined based upon the likely drawing-power of retailers within the category and the location and nature of existing and planned competition;

2. Expenditure Potential – Expenditure potential within the trade area is estimated using available demographic data and retail sales data (see Key Assumptions);

3. Assessment of Project Capture and Supportable Square Feet – Expenditure potential captured by development of the subject site is estimated by use of capture rates that take into consideration retail competition, location, and other factors. Projected sales are converted to supportable square feet of retail based upon industry benchmarks of sales per square foot for newly constructed retail space.

Key Assumptions

Retail Expenditure Potential

Retail expenditure potential is generally a function of the size of the market and the share of aggregate income spent on retail. Expenditure potential changes over time according to shifts in population, income, and consumer expenditure patterns.

For residents of the trade area, estimates of population and income through 2020 and the share of income spent on retail goods and services are provided by ESRI Business Analyst. Estimates of population and income growth for the remainder of the study period (2020-2040) are based on projections published by ABAG and Caltrans. Household incomes of future residents of the proposed Northern Gateway development are implied from the average price targeted for planned residential units. Expenditure patterns of Northern Gateway residents are assumed to be the same as the trade area population at large.

Per capita retail expenditures by nearby industrial workers are derived from a national survey of office worker expenditures (International Council of Shopping Centers 2012). KMA assumes that industrial employees will spend in the same range as clerical office workers, who reported per capita expenditures of approximately $1,900 per year on convenience goods and dining near their place of work.

Sales Performance
Retail expenditure potential captured by the project is converted to square footage of retail space according to industry benchmarks of sales per square foot for newly constructed retail space. Sales benchmarks vary by retail category and are based on June 2015 averages for Western Regional Malls provided by the International Council of Shopping Centers.

Findings

Table 16 illustrates the projected growth in retail demand over time, and the corresponding square footage that can be supported at the project. Based on the analysis that follows, KMA concludes that in the near term (through 2020), the Northern Gateway site is capable of supporting approximately 57,000 sq. ft. in neighborhood and comparison retail uses, including 7,000 sq. ft. reserved for food and beverage establishments. A retail project of this size would generate annual sales of $30 million based on industry benchmarks of sales per square foot for newly constructed space.

In the long term, another 35,000 sq. ft. could be added to the project to capture growth in retail demand, for a total of 92,000 sq. ft. of retail space by 2040. Total supportable retail includes 25,000 square feet of neighborhood-serving retail (including a fitness center), 54,000 square feet of comparison retail serving a larger market area, and 13,000 square feet of food and beverage establishments serving both market segments. At full-build out, the volume of total retail sales would approximate $46 million per year.

While demand is shown in phases in Table 16 below, it is possible that the developer would choose to wait for much of the long-term demand to materialize before initiating development of the shopping center, in order to ensure the center generates the activity and tenant mix necessary for a successful project. KMA concludes that this approach would be advisable, given that a significant portion of the retail demand is contingent on long-term growth in the trade area.

Table 16: Retail Market Assessment Summary

Retail Demand Findings	2015	2020	2040
Estimated Retail Sales at Project	$27.3M	$30.4M	$46.1M
Estimated Share of Total Benicia Sales	*16%*	*16%*	*18%*
Supportable Square Feet			
Neighborhood Trade Area			
Convenience	4,000	6,000	15,000
Food and Beverage	3,000	3,000	6,000
Fitness Center	-	-	10,000
	7,000	9,000	31,000
Community Trade Area			
Comparison	42,000	44,000	54,000
Food and Beverage	4,000	4,000	7,000
	46,000	48,000	61,000
Total Supportable	53,000	57,000	92,000
Food and Beverage	*7,000*	*7,000*	*13,000*
Estimated Land Absorption	4-5 acres	4-5 acres	8-9 acres

Source: Keyser Marston Associates

See Appendix Table B-10 for analysis. Figures may differ from Appendix due to rounding.

KMA considered opportunities to develop the full 267,000 sq. ft. of retail space allowed under existing zoning by adding a movie theater, hotel or destination retailer. A qualitative market overview is provided below. KMA's conclusion is that while there may be opportunities for entertainment, hotel and other commercial uses on the site over the long-term, development is conditioned on further growth in the trade area and/or changes to the existing supply. The addition of a hotel and movie theater to the site could bring the total commercial square footage to 212,000 square feet. The total program would require approximately 18 to 22 acres of net commercial acreage.

Table 17: Total Supportable Commercial GBA by 2040, Including Long-Term Opportunities

Total Commercial GBA	2040
Supportable Retail (1)	92,000
Movie Theater *(potential)* (2)	50,000
Hotel *(potential)* (2)	70,000
Total Potential GBA	**212,000**
Estimated Acreage	**18-22 acres**

GBA = Gross Building Area

(1) See Table 16.

(2) Maximum square footage, contingent on long-term growth in demand.

Finally, the extent to which a mixed-use project supports retail development is considered. It is estimated that residents of the proposed residential project would support approximately half of future retail expenditure potential within the neighborhood-

serving retail trade area. Without the proposed residential units, the development opportunity for neighborhood-serving retail at the project site would be significantly reduced. For comparison retail, the impact is more nuanced. Given that comparison retail tenants are anticipated to draw from a larger trade area, the decision to restrict residential uses at the project would have a very minor influence on the sales potential for comparison goods. However, given that neighborhood-serving retail contributes to the critical mass of retail activity necessary for a successful community shopping center (which targets both comparison and convenience segments), the absence of nearby residential uses could indirectly detract from the development potential for community/comparison retail on the site.

Neighborhood-Serving Retail

Trade Area Definition

The neighborhood (convenience) retail trade area is comprised of three primary segments of consumer demand:

- Existing workers of the Benicia Industrial Park;
- Future workers employed by industrial firms located at Northern Gateway; and
- Future residents of Northern Gateway.

Consideration was given as to whether to include other Benicia residents living nearby as part of the neighborhood trade area. Currently, no residents live within one mile of the Northern Gateway site and 11,000 residents (one-third of the City's total population) live within 3 miles of the site (ESRI 2015). Since most of these residents also live within the trade areas of neighborhood-serving retail clusters in downtown Benicia and the city's four established shopping centers, no residents beyond the project were included in the primary trade area.

Trade Area Expenditure Potential

KMA estimates that upon completion of the Northern Gateway project, the primary trade area will include approximately 9,100 total workers and 2,160 residents with a combined retail expenditure potential of approximately $33 million per year (excluding comparison goods categories).

Currently, the 7,000 workers employed at the adjacent Benicia Industrial Park represent the only source of trade area demand (City of Benicia 2015). These workers would support about 40% of demand by 2040, with an aggregate expenditure potential of approximately $13 million (Table 18).

The remaining 60% of retail demand by 2040 would be derived from new residents and workers associated with the build-out of the Northern Gateway property. Per the development concept for the site, the proposed project is anticipated to add another

2,100 employees and 2,160 residents, contributing approximately $20 million to trade area expenditure potential (Table 18).

Table 18: Neighborhood Trade Area Demographics

	BIP	Future Development: Northern Gateway		Total
Neighborhood Retail Trade Area	Workers	Workers	Residents	
Population[1]	7,000	2,100	2,160	**11,260**
Households	n/a	n/a	860	**$860**
Average Household Income	n/a	n/a	$126,000	**$126,000**
Retail Expenditure Potential				
Annual Per Capita[2]				
Neighborhood Retail	$1,200	$1,200	$4,300	**$1,800**
Food & Beverage	$700	$700	$2,900	**$1,100**
Total[3]	**$1,900**	**$1,900**	**$7,200**	**$2,900**
Gross Expenditure Potential				
Neighborhood Retail	$8,400,000	$2,500,000	$9,300,000	**$20,200,000**
Food & Beverage	$4,900,000	$1,500,000	$6,300,000	**$12,700,000**
Total[3]	**$13,300,000**	**$4,000,000**	**$15,600,000**	**$32,900,000**

Source: KMA 2015, ESRI 2015, ICSC 2012, City of Benicia 2015

[1] Population for Benicia Industrial Park estimated by the City of Benicia. Northern Gateway resident and worker population estimated by KMA according to proposed development program. The number of residents per household is based on the citywide average (ESRI 2015).
[2] Worker expenditure potential only includes expenditures near work.
[3] Excludes demand for comparison goods (analyzed separately).

Project Capture

Northern Gateway would be one of the most convenient commercial sites to future trade area residents and workers. For this reason, KMA assumes that 40% of trade area worker demand and 80% of trade area resident demand for convenience goods (including grocery, drug store, and ancillary goods and services) will be captured by the project. For residents, a more moderate capture rate of 30% is assumed for food and beverage places, given that residents of the project would presumably take advantage of dining options elsewhere in Benicia or the county during their leisure time. Table 19 summarizes the potential for neighborhood retail demand at the Northern Gateway site.

Based on the above capture rates of trade area expenditure potential, convenience retail sales are estimated to reach approximately $12 million at build-out. Based on industry benchmarks of sales per square foot for newly constructed retail space, sales of $12 million would support approximately 15,000 sq. ft. of convenience retail development, such as a small market, a drug store, and other ancillary retail and services. In addition, the neighborhood retail trade area has the potential to generate more than $4 million in food and beverage sales at the project, comprising 6,000 square feet upon build-out.

Pent-up demand from industrial park workers accounts for 7,000 sq. ft. of neighborhood-serving retail and food establishments and $5 million in potential sales. This portion of demand represents an immediate development opportunity. The remainder of the supportable retail space is contingent on development of the industrial and residential components of the project over the next 25 years. (Table 19)

While a formal market study was not conducted, KMA concludes that the project could also accommodate a 10,000 sq. ft. fitness center at build-out, for a total of 31,000 sq. ft. of neighborhood-serving commercial uses. The market opportunity for a fitness center is in consideration of the size of the existing 5,000 square foot fitness center within the Benicia Industrial Park and potential growth in demand associated with new industrial and residential development at Northern Gateway. While a 10,000 sq. ft. fitness center is substantially smaller than was proposed under the 2008 mitigated project, the size is more consistent with the scale of retail development supported by the site.

Table 19: Summary of Neighborhood Retail Market Assessment

Neighborhood Trade Area	Estimating Factor		2015	2020	2040
Project Retail Sales [1]					
BIP Workers	40%	of exp. potential	$5,320,000	$5,320,000	$5,320,000
N. Gateway Residents	60%	of exp. potential	-	$1,682,000	$9,333,000
N. Gateway Workers	40%	of exp. potential	-	$175,000	$1,596,000
			$5,320,000	$7,177,000	$16,249,000
Share of Sales by Category					
Convenience	73%	of total sales [2]	$3,488,800	$5,047,000	$11,997,000
Food & Beverage	27%	of total sales [2]	$1,831,200	$2,130,000	$4,252,000
Supportable Retail Sq. Ft.					
Convenience	$780	sales PSF [2]	4,000	6,000	15,000
Food & Beverage	$710	sales PSF [2]	3,000	3,000	6,000
Subtotal			7,000	9,000	21,000
Fitness Center [3]					10,000
Total Neighborhood Retail			7,000	9,000	31,000

Source: KMA 2015

[1] Table 18.

[2] Derived from an analysis of retail growth/sales gaps by retail category. See appendix tables B-18 to B-20. Factors vary by phase. Those displayed represent 2040 condition.

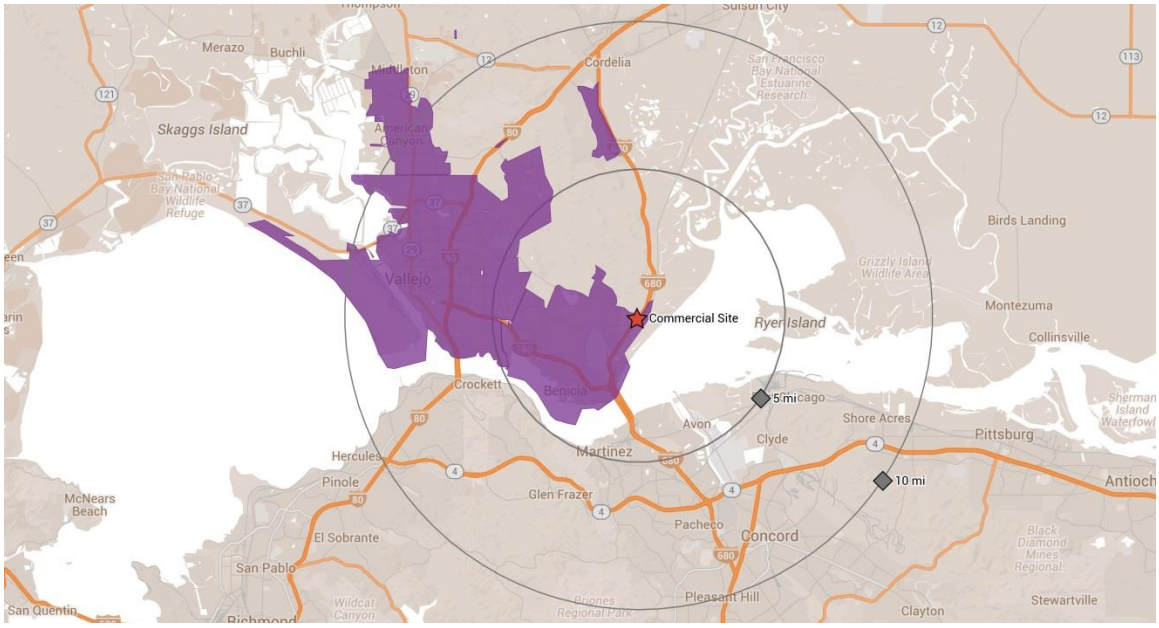
[3] Size of fitness center based on a qualitative analysis independent of sales projections above.

Community-Serving Retail

Community Retail Trade Area

The trade area for community-serving (comparison) retail consists of the cities of Benicia, American Canyon, Vallejo, and Fairfield's South Cordelia neighborhood west of I-680 and south I-80 (see map). The trade area generally includes communities within an 8 to 10-mile drive of the project site. Communities in Contra Costa County south of the Benicia-Martinez Bridge were excluded from the trade area considering that they are generally well served by existing regional retail centers, which are accessible without the need to cross a toll bridge.

Figure 10: Community-Serving Retail Trade Area



Source: Keyser Marston Associates, Google Maps

Trade Area Expenditure Potential

The community trade area includes a population of approximately 173,000 residents, anticipated to increase to 179,000 residents by 2020 and nearly 200,000 residents by 2040 (ESRI and ABAG projections). Aggregate income within the trade area exceeds $5.1 billion and is projected to grow to more than $5.5 billion by 2020 and $7.5 billion by 2040. Expenditure potential in the comparison and food and beverage retail categories is anticipated to approximate $900 million by 2020 and $1.3 billion by 2040.

Table 20: Community Trade Area Demographics

	2015	2020	2040
Community Trade Area			
Total Population	172,930	178,836	199,531
Households	60,379	62,611	68,215
Per Capita Income	$29,691	$30,857	$37,651
Aggregate Income ($ millions)	$5,134	$5,518	$7,513
Regional Retail Exp. Potential ($ millions)	$869	$937	$1,275
Average Household Income	$84,424	$88,136	$110,132
Households Earning > $100k	18,571	22,120	n/a
Households Earning > $150k	8,011	10,553	n/a

Source: ESRI 2015, ABAG 2013

Project Capture

Existing Demand

While existing retailers in the trade area already capture three-quarters of expenditure potential, approximately $199 million in annual expenditures are leaking to neighboring jurisdictions, including $152 million in comparison goods categories, such as apparel, and $46 million in food and beverage sales (ESRI 2015, Appendix Table B-15). This represents demand that could be captured by new retail development in the trade area.

Based on an assessment of competitive retail centers in the trade area, the location of the subject site, and other factors, KMA estimates that 10% of the primary trade area sales leakage in food and beverage and comparison retail categories can be recaptured in the retail element of the proposed project. On this basis, it is estimated that approximately 46,000 sq. ft. can be developed on the site to serve pent-up retail demand (see Table 21).

Demand Through 2040

Approximately $400 million in retail expenditure potential is projected to be added to the trade area through 2040, based on population and income growth projections (Table 20). Some retail centers will have a competitive advantage over others in capturing growth in demand due to their location, size, retail mix, visibility, branding and other attributes.

KMA has assumed that in the aggregate, Northern Gateway will capture 2% of future growth in demand within the community trade area (Figure 10). Capture rates vary by specific retail category and are documented in greater detail in Appendix B. A 2% capture rate of trade area growth implies an additional $8 million in sales, including sales to visitors living outside the trade area, and 15,000 sq. ft. of additional retail development, for a total of 61,000 square feet of community-serving retail.

Total Supportable Retail

In summary, a total of 61,000 sq. ft. of community-serving retail can be captured by the project by 2040. KMA recommends that 54,000 sq. ft. be reserved for specialty retailers and 7,000 sq. ft. for food and beverage establishments. Total supportable food and beverage development at the project is anticipated to reach 13,000 square feet, combining what is supported by the neighborhood and community trade areas. Tenant types will not necessarily differ between the two segments of food and beverage, as tenants are anticipated to draw customers from both trade areas.

Table 21: Summary of Community Retail Market Assessment

Community Retail Trade Area	Estimating Factor		2015	2020	2040
Project Sales					
Recapture of Sales Leakage (1)	10%	of leakage	$19,753,000	$19,753,000	$19,753,000
Incremental Growth (2)	2%	of growth	-	$1,142,000	$7,072,000
Visitor Inflow (3)	10%	of proj. sales	$2,195,000	$2,322,000	$2,981,000
			$21,948,000	$23,217,000	$29,806,000
Share of Sales by Category					
Comparison	83%	of proj. sales (4)	$19,368,000	$20,279,000	$25,007,000
Food & Beverage	17%	of proj. sales (4)	$2,580,000	$2,938,000	$4,799,000
Supportable Square Feet					
Comparison	$460	sales PSF (4)	42,000	44,000	54,000
Food and Beverage	$710	sales PSF (4)	4,000	4,000	7,000
Total Community Retail			46,000	48,000	61,000

Source: Keyser Marston Associates

Supportable retail totals rounded to nearest thousand.

(1) Based on retail sales leakage analysis. See appendix Table B-15.

(2) See Table 20.

(3) 10% of sales assumed to derive from visitors based on the experience of similar projects.

(4) Derived from a detailed analysis of sales gaps and growth by retail category. Factors vary by phase. 2040 factors displayed. See Appendix Table B-15.

Additional Commercial Development Opportunities

Based on the above analysis, it is estimated that by 2040, the site could support upwards of 92,000 square feet of community- and neighborhood-serving retail. KMA builds up to the total recommended square footage based on a quantitative analysis of the market potential for comparison and convenience retail.

A variety of other commercial uses are possible under existing zoning, or are being considered by the developer, but are not reflected in the estimate above. For example, the current mixed use proposal allocates 50,000 square feet for a movie theater and up to 70,000 square feet for a limited service hotel. Adding these uses to the development program would bring the total square footage to 212,000 square feet. A program of this

size would require approximately 18 to 22 acres of net commercial acreage. These and other commercial development opportunities are assessed in qualitative terms below.

Table 22: Total Supportable Commercial GBA by 2040, Including Long-Term Opportunities

Total Commercial GBA	2040
Supportable Retail [1]	92,000
Movie Theater *(potential)* [2]	50,000
Hotel *(potential)* [2]	70,000
Total Potential GBA	212,000
Estimated Acreage	18-22 acres

[1] See Table 16.

[2] Square footage based on current mixed-use proposal.

Including the hotel and movie theater, the total retail program recommended by KMA would fall within the range of the current mixed use proposal (200,000 to 250,000 square feet) but would still be significantly less than the commercial square footage proposed under the 2008 Mitigated Project, which allocates 207,000 square feet for retail uses, 60,000 square feet for a movie theater, and up to 240,000 square feet for a hotel/conference center.

Table 23: Comparison of Retail Programs

	2008 Mitigated Project	Current Mixed Use Proposal	Market Study *Through 2040*
Commercial/Retail			
Total Ac	32	21	18 – 22
Sq. Ft. Retail	207k	110k – 130k	92k
Sq. Ft. Hotel	240k	50k – 70k	70k
Sq. Ft. Movie Theater	60k	40k – 50k	50k

Hotel

Based on a review of past market studies, hotel development at the project site should be considered a long-term opportunity. In 2011, a comprehensive market study was undertaken for Solano County, the City of Vallejo and the Solano County Fair Association to analyze the possibilities for redevelopment of the Solano County Fairgrounds (Solano 360), including a convention/conference element. This study concluded that the market for hotel and conference facilities is limited for the foreseeable future. More recent market research in the market area has concluded that while conditions have improved since 2011, the opportunity for hotel development is likely another decade away (Vallejo Economic Trends Report 2015). The 50,000 square foot to 70,000 square foot, limited service hotel included in the current mixed use proposal appears to be a more likely development scenario than the larger hotel and conference center proposed under the 2008 Mitigated Project, as it better reflects the size of the existing hotel offer in the marketplace.

Movie Theater

Given the comparably high disposable incomes of Benicia residents and the lack of an existing movie theater in Benicia, there may be an opportunity to attract a movie theater to the project site. However, this opportunity is also not likely to materialize in the near-term, based on the following market factors:

- The trade area includes a 14-screen movie theater in Vallejo, which is sufficient to meet theater demand of Vallejo residents, based on national benchmarks of movie screens per capita (National Association of Theater Operators 2013);

- While unmet demand exists at the periphery of the trade area, in American Canyon and Benicia, the population of these communities is not large enough to justify development of a 10-screen theater, which is typically the minimum size that a theater operator would seek for a newly built multiplex;

- The Solano 360/Fairgrounds Redevelopment may include a movie theater as part of a retail project that is substantially larger than what is planned for Northern Gateway;

- A surplus of movie screens in Contra Costa County communities to the south of the site, as well as the presence of a 16-screen multiplex in Fairfield to the north, suggests that drawing customers from beyond the primary trade area will be a challenge.

Despite the above, the economics of movie theaters are complex, and a variety of other factors can influence where theaters locate. Theater operators may select locations to achieve market share and to vie for a superior market position relative to competitors, which may not always align with where unmet demand is greatest. Specialty movie theaters, such as those that provide dining and additional entertainment options, may serve as destinations that draw from a larger trade area. Furthermore, movie theaters are considered amenities to a shopping district and, as such, are sometimes financially subsidized and underwritten. For these reasons, there may be an opportunity over the long-term to attract a theater to the site, particularly as older theaters within and beyond the primary trade area come to the end of their useful life.

Outlet Retail

While not included in the current proposal or the 2008 Mitigated Project, development of outlet retail or specialty/destination retail on the subject property has the potential to support a development program substantially larger than what is recommended above. In contrast to a traditional regional- or community-serving retail center, outlet and other destination retail draws from a trade area of 25 to 75 miles and receives a significant

sales inflow from international and domestic tourists (ICSC 2015). Outlet and destination retail generally requires a critical mass of comparison retail of at least 150,000 sq. ft. or a highly unique shopping experience combined with entertainment, leisure and tourism uses.

Northern Gateway's proximity to San Francisco and Oakland international airports as well as wine country tourist destinations presents an opportunity for major outlet or destination retail development on the subject site. The challenge is that in the Bay Area, there is currently more than 2 million sq. ft. of outlet space located in Napa, Vacaville, Livermore, Gilroy, and Petaluma. San Francisco Premium Outlets in Livermore alone contains 745,000 sq. ft., making it the largest outlet mall in California. In addition, Bass Pro Shops recently completed an approximately 200,000 square foot retail and entertainment complex in San Jose and plans are underway for a 500,000 square foot urban retail outlet at Candlestick Point in San Francisco. Given the extent of the existing supply, the opportunity for outlet or other destination retail development on the subject property would be contingent on further growth over the long-term in tourism and Bay Area consumer demand and the project's ability to offer brands not found at other projects in the region.

VII. FINANCIAL FEASIBILITY

Financial Feasibility Context

The Schwartz Land Development Company has asserted that the full development of industrially zoned land on the site is not economically feasible without a mixed-use concept, including residential development, to enhance the property's overall economic value and returns.

At this point in time, the project is in a conceptual stage and detailed site plans, mix of unit sizes, and home price points have not yet been established. Additional revisions to the site plan or land use mix may arise during the development of the Specific Plan or through the City's review of the development proposal. However, Schwartz has prepared an estimate of the cost of developing on and off-site improvements for the purposes of this analysis.

"Order of Magnitude" Evaluation

KMA has undertaken an "order of magnitude" pro forma evaluation of the project's development economics in order to develop a general understanding of the economics of each land use component and each proposed phase of development.

The findings of the analysis should be viewed as indicative of feasibility rather than a precise assessment due to the conceptual nature of the development program and information at this time. The pro forma analysis consists of:

1. Estimates of values of finished improvements – home values; value of retail space;
2. Estimates of development costs of vertical improvements;
3. Estimates of the residual value supported by vertical construction for finished land;
4. Estimates of development costs for horizontal land improvements; and
5. Estimates of the residual value supported by developing land for an investment in the site in its current condition.

Value of Finished Vertical Development

KMA developed pro forma models for each component of the development. The models are provided in Appendix Tables D-1 through H-4.

- Home prices are based on a review of existing home sales in Benicia, and the prices of new homes for sale in Vallejo, Fairfield and Martinez.
- Given that the approach to satisfying the affordable housing requirement has not yet been established and approved by the City, the analysis at this time reflects a market rate residential development.
- It is estimated that new market rate homes could command a 10% premium over the average prices (distributed by size of home) of existing homes in Benicia. Aside from

two recently approved small single-family infill subdivisions – one consisting of four lots and the other consisting of five lots – there are currently no major new home developments on the market in Benicia.

- The rental rates and values of new industrial space and retail space has been estimated based on a review of current lease terms with an upward adjustment of 10% to reflect a premium for new space.
- For the commercial space, projected stabilized income has been converted into values using market rate cap rates for development in the western region.

In summary, the per unit values assumed in the analysis, Table 24, are as follows:

Table 24: Per Unit Values Assumed in the Analysis

	Estimated Rental Rate	***Estimated Value per Unit/ SF***	***Estimated Value Per Acre***
Single Family Homes – 2,300 sf		$670,000; $292 per sf	$5.7 million
Townhomes – 1,600 sf		$528,000; $330 per sf	$4.0 million
Apartments	$2,530 per mo.	$375,500	$8.6 million
Industrial Space	$0.60 per sf	$107 per sf	$1.6 million
Retail Space	$1.70 per sf	$273 per sf	$2.6 million
Hotel Rooms	$150 ADR	$182,000 per room	$10.4 million

Development Costs

Development costs evaluated in the analysis include both the cost of developing vertical, finished product, and the cost of undertaking the necessary on and off-site improvements.

- The cost of direct on and off-site improvements by phase of development has been prepared by SCO Planning, Engineering & Surveying on behalf of the developer and is provided as Appendix Table I-1.
- Direct on and off-site costs for the entire project are estimated to total $122.7 million, or $505,000 per acre.
- The land development costs of this project are somewhat higher than the costs of other development due to the significant grading and back-bone infrastructure (e.g., roadways, sewer and water systems) that needs to be undertaken to develop the site.

The cost of developing the vertical (building) improvements has been estimated based on published construction cost estimates as well as KMA's experience with other projects (see Appendix Tables E-1 – H4).

- The cost of developing the vertical improvements has been converted into per acre costs by land use based on the anticipated density of the project and have been added to the land development costs to derive total development costs per acre.

Table 25: Cost of Developing Vertical Improvements

	Vertical Development Costs	Land Development Costs	Total Development Costs
Lower Density Single Family	Per du:$433,000 Per acre: $3.7 M	Per du: $76,000 Per acre: $682,000	**Per du: $509,000** **Per acre $4.38 M**
Medium Density Single Family	Per du:$341,000 Per acre:$2.6 M	Per du:$88,000 Per acre:$786,000	**Per du: $429,000** **Per acre:$3.39 M**
Apartments	Per du: $289,000 Per acre$6.5 M	Per du: $27,000 Per acre: $617,000	**Per du: $316,000** **Per acre $7.12 M**
Industrial	Per GBA: $79 Per acre: $1.2 M	Per GBA: $33 Per acre: $506,000	**Per GBA: $112** **Per acre $1.7 M**
Retail	Per GBA: $177 Per acre:$1.7 M	Per GBA $53 Per acre: $513,000	**Per GBA $230** **Per acre $2.21 M**
Hotel	Per Rm: $138,000 Per acre: $7.9 M	Per Rm: $9,000 Per acre: $513,000	**Per Rm $147,000** **Per Acre $8.4 M**

Residual Value and Financial Feasibility

The general financial feasibility of each land use, each phase of development, and the total development has been evaluated by estimating the residual value that is available for acquiring the raw land after all development costs have been funded.

A **positive residual value** indicates that the component, phase, or project is financially feasible. A **negative residual value** indicates that the project does not achieve general industry standard return requirements to attract institutional investors, but the project may still be viable given the specific requirements of a developer, use of value-engineering, or adjustments to product types, etc.

The findings of the feasibility analysis are summarized in Table 26 and presented in Appendix Tables C1a – C1c.

Table 26: Net Residual Land Value, by Land Use Component

	Residual Land Value of Vertical Development	***Land Development Costs***	***Net Residual Raw Land Value***
Residential– 86 acres	$100.8 million	$58.8 million	$42.0 million
Commercial – 21 acres	$13.9 million	$11.2 million	$2.7 million
Industrial – 136 acres	$28.7 million	$68.8 million	-$40.1 million
Total Project	$143.4 million	$138.8 million	$4.6 million

The findings by phase are as follows:

Phase of Development	***Net Residual Raw Land Value***
Phase 1 – single family + industrial	-$2.3 million
Phase 2 – single family	$23.2 million
Phase 3 – single family + industrial	-$19.0 million
Phase 4 – single family + industrial	-$2.3 million
Phase 5 – apartments + commercial	$5.0 million
Total Project	$4.6 million

The disparate findings by phase and land use indicate that a financing plan and agreement are likely to be needed to ensure that the industrial development is built and built within a timely manner.

In summary, the analysis indicates that:

1. The single family residential development components are the most profitable land use components;
2. The retail and hotel components will likely generate sufficient revenue to cover development costs;
3. The industrial space is not generally financially feasible as an isolated component because the rental rates are insufficient to support the site's significant infrastructure costs;
4. The order for the industrial space to be financially feasible, significant residential development needs to occur and the excess value of the residential component needs to be dedicated to subsidizing the industrial;
5. Phases 1, 3, and 4 are anticipated to include industrial space and each of those phases is anticipated to generate a negative return.
6. Phases 2 and 5, which include only residential development or residential development with retail development, are anticipated to generate positive returns;
7. The overall project appears to be financially feasible if the proposed concept of residential development is developed in tandem with the industrial use and the excess value to be generated by the residential use is made available to subsidize the development of the industrial space.

VIII. GLOSSARY OF TECHNICAL TERMS

Absorption	The amount of total square feet or total acreage sold or leased over a specific period for a particular type of use (industrial, retail, etc.).
Capitalized value	The value of an asset based on its future income stream, taking into account the time value of money. A capitalization rate is used to determine the relationship between a property's net operating income and its present value.
Capture rate	The share of total market demand assigned to a specific submarket or project.
Class A space	Top-tier classification reserved for buildings of the highest quality, with the most competitive amenities, commanding the highest rents.
Class B space	Mid-tier classification reserved for buildings of average to high quality commanding competitive rents.
Class C space	Lower-tier classification reserved for generally older and outdated buildings that tend to command discounted rents relative to the overall market.
Community-serving retail center	A type of shopping center, which includes a mix of neighborhood-serving and regional-serving tenants; these centers tend to serve residents within a 3-6 mile radius.
Comparison retail	Retail goods for which the gain resulting from price and quality comparison is relatively high. Comparison retail includes general merchandise, apparel, furniture and other specialty retailers.
Convenience retail	Retail goods and services that customers tend to purchase within a short drive from their homes, such as grocery stores, drug stores, and personal services.

Financial feasibility analysis	An analysis evaluating the development economics of a project, comparing development costs and market values for the proposed mix of uses.
Gross acres	Total acreage, inclusive of roadways/circulation.
Gross building area (GBA)	Total built area, including common areas and circulation.
Gross leasable area (GLA)	Total floor area available to be leased.
High-cube distribution space	Warehouse and distribution buildings with a gross floor area greater than 100,000 sq. ft. and ceiling heights above 26 feet.
Horizontal improvements	Improvements related to land development including installation of infrastructure and paving of roads, sidewalks and gutters.
Market analysis	An analysis estimating demand for different types of development based on an assessment of local market conditions.
Neighborhood-serving center	A type of shopping center, which offers everyday goods and services, including groceries and hair salons, that customers tend to purchase within a short drive from their homes (1-2 mile radius).
Net acres	Total acreage net of roadways/circulation
Raw land	Unimproved land requiring significant horizontal improvements prior to development.
Regional-serving center	A type of shopping center, which focuses primarily on comparison goods and entertainment; they are marketed as regional destinations and can draw from a trade area of 5-10 miles, or more.

Residual land value	Residual land value is the value of land that remains after deductions associated with the cost of developing, maintaining or reselling the land. It is estimated by subtracting the cost of development from the capitalized value of the income stream generated by the project. A positive residual value indicates that the component, phase, or project may be financially feasible.
Shovel-ready land	Fully improved land with on-site grading and off-site infrastructure in place. Shovel-ready land can accommodate vertical development within a relatively short timeframe.
Trade area	The geographic area where the majority of a retail center's customers and competitors are located.
Vertical improvements	Core and shell building improvements and related site work.