

The Sonoma County Airport and Environs Area Plan 2011-2012



Sonoma County Airport and Environs Area Plan

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Planning Workshop
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Introduction

The Environmental Studies and Planning Program at Sonoma State University gives senior planning students the task of preparing an Existing Conditions Report and an Area Plan for a pre-determined town or region. For the 2011-12 school year, the selected area is the Sonoma County Airport and its environs. During this year-long class, planning workshop students are able to put into practice the lessons that have been taught during the course of the program. The first semester, Fall 2011, focused on the Existing Conditions Report (ECR), which was presented to the public in early February. The second semester of the class has focused on creating the Area Plan with a horizon year of 2030, and addresses both the current and future needs of the study area.

The study area, which includes unincorporated Sonoma County and parts of the Town of Windsor, presents a lot of opportunity for growth that will happen along with the Airport expansion. As we prepared the ECR in the fall semester, we saw great potential for the area in agricultural and open space lands, as well as the vacant buildings and existing infrastructure. We also conducted residential and user surveys that provided useful information on the wants and needs of the study area.

For this Area Plan, we have combined the ECR, survey results, and the knowledge and skills we have obtained from the planning program to create the following document. In creating this plan, we acknowledge the ever-growing population of the state of California, and in particular Sonoma County. This growth is accompanied by a need for additional housing, jobs, adequate transportation, recreational opportunities, and protection of the environment. The Sonoma County Airport and environs study area has many diverse opportunities, and if they can be utilized, a distinct creation will emerge and produce a unique experience, a *Blend of Sonoma County*.

Vision Statement

In 2030, the Sonoma County Airport and environs study area reflect the natural beauty and open space due to smart, compact design. This design exists through a tight-knit commercial district with transportation to local and regional connections. The harmonious and compatible land uses include vineyards, agriculture lands, industry, and residential homes, all contributing to a desirable quality of life.

Residents and users of the study area are able to convene in several gathering places, including bars, cafes, and restaurants. The study area is a safe and organized community with distinguished signs and street lamps. Many commuters find comfort among the landscaped streets on their morning walk to the SMART train station. Residents and visitors are part of a vibrant community with trees along the streets that weave the natural environment into the urban setting. They also provide shade, environmental health, and serene living. Paved bike paths connect the vivacious neighborhoods in the western vineyards and riverfront, allowing use of the beautiful scenery that Sonoma County offers.

The study area provides a diversity of jobs for all income and education levels. There is a high occurrence of skilled jobs that involve innovation and creative thinking. Many firms throughout the Bay Area see the Charles Schulz Airport Industrial Park as a desirable place to locate their growing businesses, while the area also serves as a catalyst for entrepreneurial activities. There is a plethora of retail opportunities supported by a good jobs-to-housing balance, as well as entertainment activities that make this area a desirable place to live. This in turn has created high demand for housing in Windsor and the surrounding communities.

The Airport is the heart of the business community. It supports local, vibrant commercial activities. The Airport expansion provides connections to more destinations, allowing local businesses to connect with other economic centers.

The completed expansion and runway decoupling has provided FAA compliance and state-of-the-art safety. The widening of Airport Boulevard provides convenient access to the airport services. The recently added local SMART train stop provides an easy and efficient alternative mode of public transportation. The increased number of flights brings more tourism to the community and allows more personal and business travel. General Aviation has become a thriving part of Airport operations.

Natural habitats support several federal and state endangered species, helping and encouraging their reproduction at sustainable rates. Fish populate the Russian River as well as various creeks in the area, and the populations continue to flourish. Gravel mining in the Russian River no longer exists, the water has cleared, and native species are thriving. Native plants in several habitats are growing without the interruption of invasive species and people. The local resources used on a daily basis are not wasted as water is recycled in an aggressive water conservation program in addition to the airport and other buildings, which are operating on an energy efficient design. Air quality is at a healthy level and greenhouse gas emission levels continue to decrease. Also, the expanded Sonoma County-Charles Schulz Airport facility exists in harmony with nature. Overall, the area has a fresh and appealing aroma to it and a soothing feel. It is inviting and has beautiful surroundings for visitors and residents to enjoy.

Goals

Land Use Goal:

An efficient pattern of land use that balances and connects the urban landscape with the rural beauty, and fosters a healthy and safe environment.

Economic Development Goal:

A thriving and innovative business district that sustains economic fluctuations, both through its diversity of industry types as well as fostering an entrepreneurial atmosphere where new and emerging regional businesses can locate providing jobs to the study area.

Circulation Goal:

A safe, efficient, interconnected and adaptive circulation system that promotes the health and economic well-being of the community through environmentally sound transportation options.

Sonoma County Airport Goal:

The Charles M. Schulz Airport is the foundation of a robust industrial and business center; and offers safe and convenient air travel for corporate, personal, and tourist travel.

Environment Goal:

A unique, natural environment that efficiently uses local resources, sustains healthy habitats, and promotes the livability of surrounding neighborhoods.

Community Design Goal:

A visually pleasing and unified community with abundant business, social, and recreational opportunities that exist in harmony with nature.



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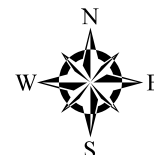
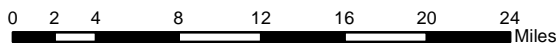
Regional Map



Existing Conditions Report 2011-2012

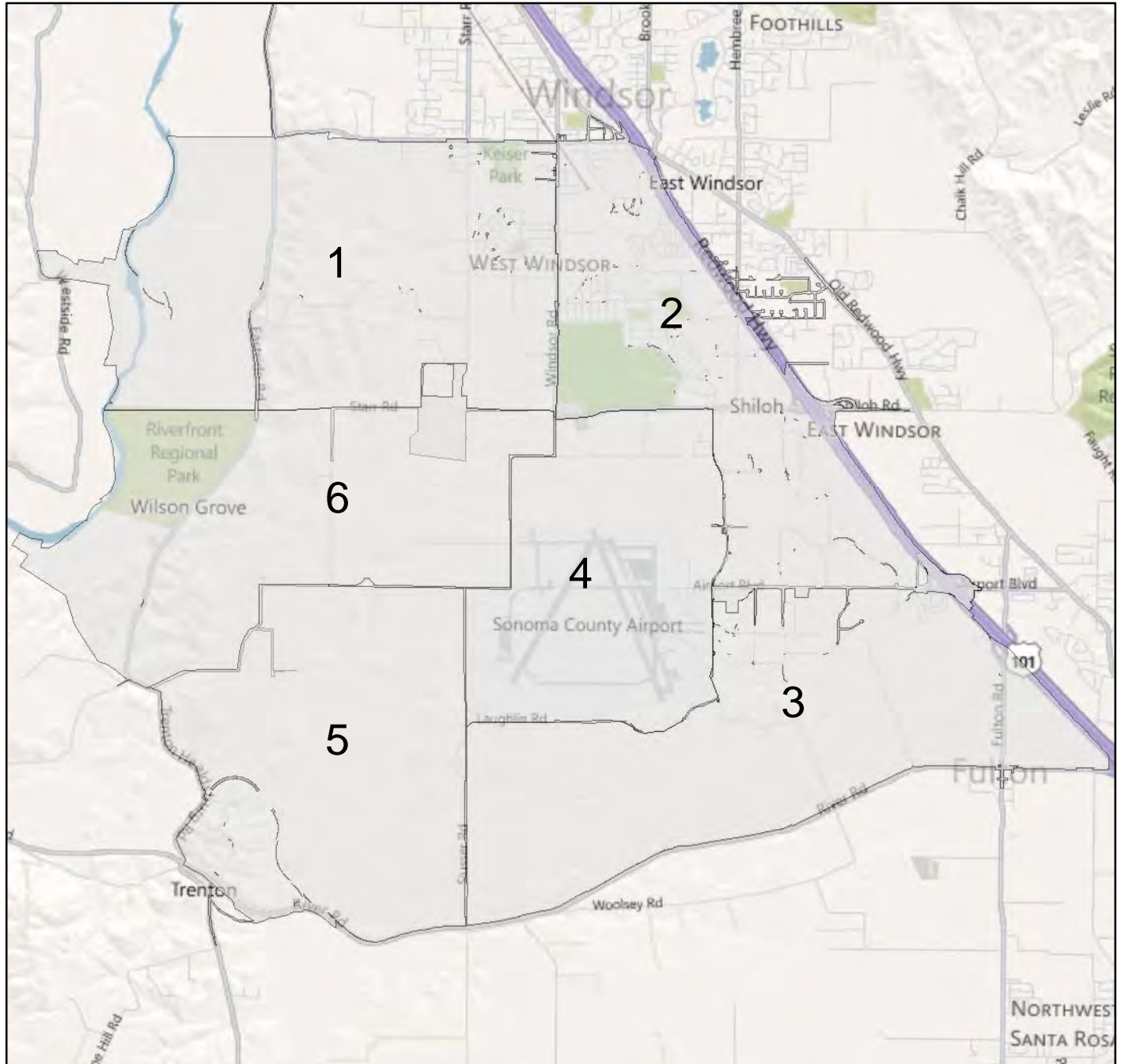
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


-  Study Area Boundary
-  City Limits

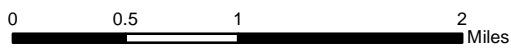


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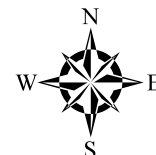
Study Area With Study Zones



-  Zone 1
-  Zone 2
-  Zone 3
-  Zone 4
-  Zone 5
-  Zone 6



Existing Conditions Report 2011-2012



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AIRPORT BUSINESS CENTER

Land Use & Economic Development

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Introduction

The land use and economic development section of this document will focus on several tasks: changing the land use designations for more efficient and productive uses; designating and totaling housing units over the next 20 years; and creating local economic stimulus programs keeping in mind a reasonable fiscal budget. The Airport Industrial Park and Southwestern Windsor offer many opportunity sites for residential and commercial expansion. This section has tailored specific policies to promote the most beneficial use of land to ensure a healthy, sustainable, and efficient community. This section is joined with *Appendix C* and *D* at the end of this document, detailing a form-based code that applies to specific nodes and corridors outlined in the Appendix. These Appendices are the heart of the land use designations and community design specifically drafted to ensure vibrant neighborhoods.

Existing Situation

The existing situation of the Sonoma County Airport and environs study area varies by type of use. The separation of uses and growth outside city limits indicates no traces of smart growth. Current infrastructure only extends throughout Windsor's city limits and the Airport Industrial service area. Basic needs such as sewage, water, and electrical grid are not a current issue or foreseeable future issue. Both the commercial and industrial areas present problems within our study area. The Airport Industrial Park is only 50% developed (2009) and has experienced high vacancy rates. Along with the high vacancy, there is an oversupply of parking areas and a lack of sidewalks, inhibiting the ability to walk from one building to the next. The only open spaces between these offices are privately owned parks, creating a disjointed sense of place. There are 9,000 jobs within our study area, mainly located within the Airport Business Park. In the study area, the western and southern sections mainly consist of wineries and vineyards offering a small amount of seasonal agricultural jobs (see *Land Use diagram in Appendix E*). Sonoma County has an overall unemployment rate of 8.9% and overall

has a poor job-housing ratio. The housing in the study area seems to be adequate and meets most residential and neighborhood needs. There are 2,140 housing parcels within the study area and there are adequate residential parks dispersed throughout the populated neighborhoods. Schools within the study area include: SRJC extension, Windsor High School, Sonoma Country Day School, and Windsor Creek Elementary. This indicates a sufficient supply of classrooms. However, there is no indication that sustainable development practices are being exercised within the area. Residents and users indicated in our survey that they would like to see more of these services: (1) shopping, (2) food, (3) entertainment, and (4) health services.

Expected Future Conditions

The expected future conditions of our study area consist of the addition of a SMART station, public facilities, housing, sustainable development, and implementation of more jobs. A SMART station has long been proposed on Airport Boulevard. It was recently approved by the SMART board as reported in the Press Democrat on April 20th, 2012. No indication that a breakdown of the separation of uses will cease in the future, preventing any smart growth principles taking place. There are no plans to increase retail or health services in the area; however, a hospital is being built just south of the study area. It is expected that jobs will improve with the national economy, mainly with increases in low-skill jobs such as retail and basic service positions, which will exacerbate the poor job-housing ratio. Public facilities will continue to meet the demand in the future, especially when considering future growth. Housing will be incrementally changed and will follow contemporary patterns of growth. No additional schools or parks appear to be planned. There is no sustainable development planned for the future of the study area.

Problems

- Lack of demand for transit due to land use constraints
- Poor business atmosphere with high unemployment rates

- Insufficient housing options available for all price ranges
- Mismatch of employment skills with demand of job skills (our study area requires a higher educated workforce than is provided by the county demographics)
- Lack of geographic coverage for infrastructure
- Water restrictions for agricultural uses
- The changing climate has been affecting crop yields
- The separation of uses is causing a heavy dependence on automobile use

Constraints

- Lack of Transit-Oriented Development land
- National economic conditions reflect poorly on the area
- Noise around the train tracks and the Sonoma County Airport creates an undesirable place for housing and businesses
- Demand for local retail is low, making it difficult to improve the local economy
- Government budget doesn't provide for study area's needs
- Lack of land to expand on for agriculture
- National housing options and changing real estate trends don't allow for all qualities of living to reside in the area

Opportunities

- SMART train tracks run through the entire north/south length of the study area creating more job opportunities and easier commutes
- Developable land within the urban service areas of the unincorporated county and southern Windsor

- The Airport Urban Service Area will create job opportunities
- Business infrastructure in the area will encourage new businesses
- Higher educated workforce than the California average allows for high-end businesses to locate here
- Global connectivity via Sonoma County Airport will bring more business to the area
- Existing infrastructure for agriculture allows for wineries and vineyards
- Rebounding wine industry with overseas demand

Transit Oriented Development Goal:

Establish an appropriate fusion of land uses which complements the transit system and facilitates a center of transportation that links other communities.

Objective TOD-1: Increase density of future development within 1/4 mile of SMART station (see *Appendix C and Appendix D*).

Policy TOD-1.a: Locate mixed-use development on parcels south of Airport Boulevard and east of the tracks (see *Appendix C and Appendix D*).

Objective TOD-2: Ensure land uses around SMART stations support ridership.

Policy TOD-2.a: Locate tight-knit housing east of the tracks and south of mixed-use development (see *Appendix C and Appendix D*).

Objective TOD-3: Locate a SMART station at the intersection of Airport Boulevard and the train tracks.

Policy TOD-3.a: Utilize the parcel directly west of the tracks and south of Airport Boulevard to locate Smart station (see *Appendix C and Appendix D*).

Objective TOD-4: Establish compact commercial and residential development for all future construction within a half mile of the SMART station.

Policy TOD-4.a: As indicated on proposed building diagram (see *Appendix C and Appendix D*).

Objective TOD-5: Increase the formation of mixed-use development within a 1/4 mile radius of the Airport Boulevard SMART station.

Policy TOD-5.a: Creation of a mixed-use code around the SMART station to encourage transit users to shop before and after they ride as well as providing a destination for visitors (see *Appendix C and Appendix D*).

Objective TOD-6: Localize new retail commercial and new residential development to SMART station area whenever feasible.

Policy TOD-6.a: Promote retail uses around the station to encourage the station as an entertainment node for surrounding residents and citizens from both Marin and Sonoma County (see *Appendix C and Appendix D*).

Objective TOD 7: Locate a local grocery store on the corner south of Airport Boulevard and Aviation Boulevard.

Policy TOD-7.a: As indicated in the Form-Based Codes in *Appendix C and Site Plan 1*.

Housing Goal:

Preserve the community character of the study area by ensuring high quality housing and neighborhoods within the area surrounding the Sonoma County Airport.

Objective H-1: Develop affordable senior housing to allow for a more cohesive environment in which seniors can have a thriving community.

Policy H-1.a: Expand senior housing at Concourse and Aviation Boulevards.

Site	Very Low	Low	Moderate	Market	Total
1	345	166	120	422	1,053
2	261	188	187	0	714
3	25	25	25	171	246
4	206	122	122	0	450
Total	837	501	454	593	2,463

Policy H-1.b: Develop senior housing as indicated by *Site Plan 4*.

Objective H-2: Develop affordable low-income housing to allow for low income tax brackets to be part of a safe neighborhood and environment.

Policy H-2.a: Develop affordable, low-income housing off of Johnson Street and Bell Road.

Policy H-2.b: Encourage property owners and developers to include affordable housing for both renters and homeowners enabling citizens to rent or own a decent home.

Policy H-2.c: Require new residential developments to allow for very low, low, and moderate income housing.

Objective H-3: Provide opportunities for the changing housing demand to help promote healthy lifestyles in which goods and services are within walking distance of homes.

Policy H-3.a: Create a pedestrian walkway along the Shiloh corridor to make the area more pedestrian friendly and to create a sense of community.

Policy H-3.b: Provide mixed-use development with retail and services along the Shiloh Road corridor as seen in *Site Plan 3*.

Policy H-3.c: Encourage mixed-use development within 1/2 mile of the proposed SMART station with retail, coffee shops and restaurants to increase revenue and draw attention to the area.

Policy H-3.d: Encourage all new housing developments to be done in a sustainable manner, allowing for recyclable materials and materials that are not harmful to the environment to be used.

Policy H-3.e: Keep all new construction of housing consistent with existing neighborhoods to create a cohesive look in the study area.

Policy H-3.f: Encourage construction of second units and granny units on existing parcels in accordance with existing zoning codes.

Jobs Goal:

Expand the size and diversity of the employment base while fulfilling the changing skills requirements of the modern economy with training programs and talent acquisition from surrounding regions.

Objective J-1: Provide ample training opportunities for employees for the changing economy.

Policy J-1.a: Establish partnership between Santa Rosa Junior College and Sonoma State University with the Chambers of Commerce for Sonoma County and the Town of Windsor to develop professional training programs that teach the skills needed in today's economy.

Policy J-1.b: Support training programs operated by a new non-profit organization composed of business leaders from the Airport Business Park.

Objective J-2: Reduce unemployment by increasing the size of the employment base within the Airport Business Park.

Policy J-2.a: Require firms that participate in training workshops funded by public agencies to give preference to qualified local personnel.

Policy J-2.b: Site Plans in *Appendix D* provide over 3,500,000 more square feet of commercial space, equating on average to approximately 10,000 jobs over the next 20 years.

Site	Commerical	Industiral
1	2,386,120	1,146,757
2	489,970	0
3	675,615	0
4	23,522	0
Total	3,575,227	1,146,757

Objective J-3: Promote innovation and entrepreneurship by attracting human capital from around the Bay Area to initiate movement towards higher paying and skilled employment.

Policy J-3.a: Encourage promotion of employment opportunities in Sonoma County during job fairs at regional universities to entice students to relocate in the County.

Policy J-3.b: Fund research grants for student and faculty groups at regional universities that could substitute private contractor studies with the hopeful effect of influencing human capital location decisions while also creating ties with local universities.

Policy J-3.c: Collaboratively work with research and development businesses within targeted industries to create internships for science and technology students from Bay Area universities.

Objective J-4: Capitalize on manufacturing trends and support manufacturing employment over basic retail jobs.

Policy J-4.a: Promote training of manufacturing skills that support living wages and increase incentives for businesses that employ higher paid, higher skill industrial employment.

Business Development Goal:

Establish a resilient business environment supporting innovative and entrepreneurial enterprises that will authenticate business cluster development within the Sonoma County Airport Study Area.

Objective BD-1: Retain current businesses and develop cluster industries while diversifying the economic base.

Policy BD-1.a: Creation of a Business Attraction and Retention Plan with permit assistance.

Policy BD-1.b: The Town of Windsor shall prioritize business permit review for firms that fall within these cluster industries: (1) green services and construction, (2) agriculture, food, and wine, (3) retail, and (4) tourism.

Policy BD-1.c: Create marketing strategies to attract targeted businesses through specialized trade publications, participation in industry trade shows & conferences, and hosting seminars for particular industries.

Policy BD-1.d: Support communication with, and periodic surveying of local businesses to better understand the needs and problems that local businesses face.

Policy BD-1.e: In order to uphold business development and collaboration, appoint local business owners or managers to local boards and commissions even if they are not residents of that jurisdiction.

Objective BD-2: Expand commercial and industrial space within the Airport Industrial Park by developing underutilized and undeveloped parcels.

Policy BD-2.a: Preserve minimal underdeveloped land for highly desirable, beneficial, and high-growth firms to build new commercial space suited specifically to the needs of these businesses.

Policy BD-2.b: Develop new industrial and commercial office buildings as indicated in Site Plan 1 in *Appendix D*.

Policy BD-2.c: Initiate intra-regional coordination with economic development programs and planning that will support Pareto efficiency and support the location of jobs and businesses to the Airport Business Park while focusing on neighborhood development in the city limits of Windsor, providing tax revenue to both governments and preventing tax incentive competition.

Policy BD-2.d: Encourage the elimination of massive tax incentive programs that compete with other jurisdictions in Sonoma County.

Policy BD-2.e: Support the minimization of tax breaks only to targeted firms considering locating from outside the region or firms considering leaving the County, only at appropriate times.

Policy BD-2.f: Streamline development review by conducting analysis on key regulatory development requirements every five years to review and improve effectiveness and feasibility, and lower compliance costs.

Policy BD-2.g: Work with commercial real estate leasing companies to create co-habited workspace for small and emerging businesses that fosters an entrepreneurial atmosphere.

Objective BD-3: Assist the establishment and expansion of small businesses in the fulfillment of their growth and employment objectives.

Policy BD-3.a: Supplement the Small Business Development Center Program to seek out small firms through efficient technological communication to discover what local businesses need.

Policy BD-3.b: Establish entrepreneurship training at local the college and university while also introducing these concepts at high schools through the mandate for matriculation at all high schools within Sonoma County.

Policy BD-3.c: Support a Revolving Loan Fund to provide subsidized loans to small businesses to help grow and increase employment in the County.

Objective BD-4: Support regional and global shipping from Industrial Park.

Policy BD-4.a: Support local businesses in their aspirations to expand operations outside Sonoma County, California, and potentially even the United States through the creation of a County Regional Trade Coordinator.

Policy BD-4.b: Establish better infrastructure to enable manufactured goods within the Airport Industrial Park to utilize the newly revitalized railroad tracks to support intraregional trading.

Quality of Life Goal:

Provide adequate shopping and recreational opportunities that satisfy local needs in a manner that promotes a rich quality of life.

Objective QL-1: Foster a healthy community by promoting a wide variety of recreational and educational activities and services.

Policy QL-1.a: Encourage “Walking Wednesdays” in Windsor schools where the students and faculty are encouraged to walk to and from school.

Policy QL-1.b: Develop a community garden at Keyser Park to be used for teaching educational lessons such as organic gardening and water conservation.

Policy QL-1.c: Encourage Windsor schools to conduct bimonthly plastic bag and recycling drives.

Policy QL-1.d: Encourage new housing developments to have a designated community garden that produces fruits and vegetables (*see Appendix C for required amount*).

Objective QL-2: Maintain an overall safe environment by encouraging safe designs.

Policy QL- 2.a: Ensure that new housing is located in areas free from dangerous or hazardous uses.

Policy QL- 2.b: Require that new buildings with shared outdoor parking areas have at least one window on each story from which the parking lot is visible.

Policy QL- 2.c: Encourage new recreation facilities to be designed in a manner that promotes visibility from adjacent structures.

Policy QL-2.d: Establish neighborhood watch groups in all neighborhoods.

Objective QL-3: Provide public gathering facilities and neighborhood activity centers to boost social connections and create opportunities for community interaction.

Policy QL-3.a: Establish a multiuse Community Center (*as indicated by Site Plan 3 in Appendix D*).

Policy QL-3.b: Restore agricultural land along Shiloh Road (*as indicated by Site Plan 3 in Appendix D*).

Policy QL-3.c: Establish small parks along the new housing corridor of Skylane Boulevard (*as indicated by Site Plan 2 in Appendix D*).

Policy QL-3.d: Create regional parks (*as indicated by Site Plans 1, 2, and 3, in Appendix D*).

Policy QL-3.e: Create a disc golf course at Riverfront Regional Park.

Objective QL-4: Increase the diversity of entertainment opportunities for residents within the Sonoma County Airport Study Area.

Policy QL-4.a: Promote the Russian River wine appellation, and create a “wine village” development on Airport Blvd (*as indicated by Site Plan 1 in Appendix D*).

Policy QL-4.b: Establish a multiuse cinema and concert venue on the corner of Windsor River Road and Bell Road (*as indicated by Site Plan 4 in Appendix D*).

Policy QL-4.c: Construct a beer garden and brewery restaurant (*as indicated by Site Plan 3 in Appendix D*).

Objective QL-5: Minimize risk to people and property from environmental hazards, and minimize noise exposure from the airport and trains through smart building design.

Policy QL-5.a: Ensure coordination between state and county emergency responses when natural disasters occur.

Policy QL-5.b: Create a multiuse Community Center as a designated emergency response location (*as indicated by Site Plan 3 in Appendix D*).

Policy QL-5.c: Before development approval, require geological studies to be completed by a registered Californian geologist or engineer.

Policy QL-5.d: Ensure that new buildings within the study area are constructed free from excessive noise.

Policy QL-5.e: Establish sound walls between tracks and residential uses.

Smart Growth Goal:

Enable the study area to implement Smart Growth strategies to enrich the area with a diverse mix of uses.

Objective-SG 1: Create nodes and corridors that follow Smart Growth policies.

Policy SG-1.a: Create a node (1/4 mile radius) around the intersection of Airport Blvd. and the train tracks.

Policy SG-1.b: Create a corridor (1/8 mile radius) along Airport Blvd.

Policy SG-1.c: Create a node at the intersection of Shiloh Road and Skylane Blvd.

Policy SG-1.d: Create a corridor along Shiloh Road.

Policy SG-1.e: Create a corridor along Skylane Blvd.

Policy SG-1.f: Create a node at the intersection of Windsor River Road and Windsor Road.

Policy SG-1.g: Create a corridor along Windsor River Road.

Objective SG-2: Create a pedestrian friendly, vibrant community that emphasizes both transit-oriented and mixed-use developments.

Policy SG-2.a: Construct a multimodal SMART train station at the intersection of Airport Blvd. and the train tracks.

Policy SG-2.b: Create a wine and shopping transit village adjacent to the SMART train station.

Policy SG-2.c: Establish new urbanism residential and commercial communities.

Objective SG-3: New development shall concentrate on compact developments.

Policy SG-3.a: Housing density should be at a minimum of 20 units per acre and no more than 30 units per acre (see *Appendix C*).

Policy SG-3.b: All new commercial buildings must have a floor area ratio minimum of .85 and a maximum of 2.5.

Policy SG-3.c: All new mixed-use buildings must include retail or commercial on the first floor with residential for at least 1 floor and at a maximum of 3 additional floors.

Objective SG-4: Reuse vacant office buildings for retail and residential uses in the vicinity of the train station.

Policy SG-4.a: Adaptively reuse building R-3, shown in Site Plan 2, to include residential lofts (see *Appendix D*).

Policy SG-4.b: Support the transition of vacant commercial buildings into residential lofts.

Objective SG-5: Provide for the daily needs of residents that will reduce the need of automobile use.

Policy SG-5.a: Place a grocery store at the corner of Aviation Blvd. and Airport Blvd. in a mixed-use development.

Policy SG-5.b: All new housing developments shall include designated areas for community gardens.

Policy SG-5.c: Create retail within ¼ mile of residential communities proposed in the Site Plans (see *Appendix D*).

Policy SG-5.d: Integrate retail into new and existing residential communities.

Policy SG-5.e: Develop live/work housing units in nodes and corridors.

Objective SG-6: Provide a diversity of housing options.

Policy SG-6.a: Expand senior housing on Concourse Blvd. and Aviation Blvd.

Policy SG-6.b: All new housing developed within a ¼ mile of designated nodes and corridors must have units dedicated to very-low, low, and moderate-income housing (see *Appendix D*).

Open Space Goal:

Protect existing agriculture and open space, while encouraging a movement towards sustainable practices.

Objective OS-1: Under Williamson Act agreements, increase amount of land contracted.

Policy OS-1.a: Create educational programs that will inform farmers of the advantages of the Williamson Act.

Policy OS-1.b: Identify all agricultural lands that are potential candidates for the Williamson Act that are not currently under contract.

Policy OS-1.c: Evaluate upcoming renewals for Williamson Act that are near the end of their contracts annually.

Objective OS-2: Engage in a sustainable, systematic approach where biodynamic agriculture is employed and the vineyard's natural resources are utilized.

Policy OS-2.a: Evaluate all agricultural lands within the study area for transition to biodynamic agriculture through Demeter Association Inc.

Policy OS-2.b: Establish specialized food cart permits in the Wine and Shopping Transit Village that features biodynamic agriculture from the region.

Policy OS-2.c: Outline the necessary steps to become certified biodynamic for farmers.

Objective OS-3: Increase the production of sustainable wines that both reduce carbon footprint and are healthier for the consumer.

Policy OS-3.a: Encourage winemakers to switch to sustainable winemaking.

Policy OS-3.b: Encourage membership with Sustainable Wine Alliance that connects winemakers with local businesses for increase of sales.

Objective OS-4: Maintain a presence of parks, walkways, and open spaces to encourage exercise options and the creation of third places.

Policy OS-4.a: Establish a connective bicycle and pedestrian path between all nodes and corridors.

Policy OS-4.b: Establish open space districts where agricultural, industrial & commercial, or residential development cannot occur.

Policy OS-4.c: Create public parks around all new developed residential units (see *Appendix D*).

Policy OS-4.d: Establish educational programs that teach residents how to run community gardens and facilitate food swaps.

Objective OS-5: Protect agricultural land from industrial, commercial or residential development.

Policy OS-5.a: All new development within the study area shall not expand into any existing agricultural land.

Policy OS-5.b: Redesign urban growth boundaries that do not extend into existing agricultural lands.

Implementation Tools

(*Indicates Existing Tools/Programs)

Tool A: Community Development Block Grant*

This grant program is funded by the federal Department of Housing and Urban Development and distributed to state and local governments to fund affordable housing, community centers, and infrastructure improvements.

Tool B: Small Business Development Center*

This program is a partnership between government and colleges & universities administered through the Small Business Administration. It provides assistance with business development and training workshops.

Tool C: Economic Development Agencies

The Sonoma County Economic Development Board and Windsor economic development efforts are responsible for business retention and acquisition activities in support of a prosperous Sonoma County.

Tool D: Public-Private Partnerships

The Public-Private Partnerships are programs and activities that are co-sponsored by government and private party actions that promote mutually beneficial goals.

Tool E: Site Plans

These micro specific plans are located in Appendix D of this proposal and outline the future development of the targeted corridors and nodes within the study area.

Tool F: Planning Departments Procedural Activities

This program supports the achievement of policies under the responsibility of the Town of Windsor and Sonoma County planning departments.

Tool G: Capital Improvement Plans*

A five-year plan that outlines government funded infrastructure improvements to support economic development and local infrastructure needs.

Tool H: Form-Based Codes

These codes located in Appendix C of this Area Plan describe in detail the form that all new development must take within ¼ mile of targeted corridors and ½ mile of targeted nodes.

Tool I: Zoning

The Town of Windsor and the County of Sonoma shall use zoning tools to allow for the creation of residential units, commercial units, agricultural lands, open spaces, industrial units, mixed-use developments, and planned developments to implement the Sonoma County Airport and Environs Area Plan.

Tool J: Development Agreements

The Town of Windsor and the County of Sonoma shall create development agreements for commercial and residential development to ensure all policies in the city's general plan and the Sonoma County Area Plan are being met.

Tool K: Green Schools Initiative

Schools in the Windsor School District shall add requirements to the "Green Schools Initiative" regarding "Walking Wednesday," community gardening, and bi-monthly recycling drives to promote sustainability and a green future.

Tool L: California's Standardized Emergency Management System*

This system serves as the primary level of coordination and organization between a state and a county for response and recovery activities following an emergency or natural disaster.

Tool M: Williamson Act*

The Williamson Act is run through the state of California. The act enables farmers to sign agreements that prevent development on their land for a specified numbers of years in exchange for tax breaks on their land.

Tool N: Department of Health Services*

The Department of Health Services offers documentation to ensure the health and safety of food and beverages sold in the County.

Tool O: Demeter Association Inc. Certification*

This non-profit certifies that all aspects of a piece of agricultural land are biodynamic and that there is no use of Genetically Modified Organisms in the food produced.

Tool P: Sonoma County Agricultural Preservation and Open Space District*

This organization permanently protects agriculture, natural resources, and open space lands within Sonoma County.

Tool Q: Community Garden Resolution

The Community Garden Resolution supports community gardens in residential communities, provides spaces for food swaps, and creates farmers' markets featuring local agriculture.

Tool R: Noise Insulation Standards*

The State Noise Insulation Standards, Chapter 12, Section 1207 will be enforced by Sonoma County to protect occupants of apartments and other dwellings in areas that are affected by excessive noise.

Tool S: Sound Walls

Sonoma County shall establish sound walls between railroad tracks and residential uses to reduce noise.

Tool S: Neighborhood Watch Group

Sonoma County shall encourage Neighborhood Watch Groups in all neighborhoods. These groups will coordinate with the Windsor Police Department and other surrounding neighbors to create a schedule and be "on watch," in addition to reporting crime and suspicious activity.

Tool U: Sustainable Wine Alliance*

The Alliance establishes high standards of sustainable practices, education, and farmer/community interaction in support of sustainable winemaking.

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Circulation

Fiorella Silva
Benjamin Sullivan
Ryan Whalen

Introduction

The purpose of the Circulation chapter is to provide an environment where walking, cycling, light rail, and public transit may be used to access all corridors of the study area. This section will propose policies to introduce new bike lanes, create safe sidewalks, expand roads, reduce greenhouse gas emissions, and encourage the use of public transportation.

Existing Conditions

The majority of people use personal automobiles for travel in the Sonoma County Airport and environs study area, which is reflected in the high number of vehicle trips. The study area has poorly connected sidewalks in the business district. There is a Level of Service between C and F during the peak AM and PM hours.

Currently, Class II and Class III bicycle paths exist in the study area. This means cyclists are riding directly next to or are sharing the road with vehicles, causing an unsafe situation for riders. The Town of Windsor is in the process of implementing a continuous Class II cycle network that will improve access to and from the study area. The area currently has limited bus routes and stops, which has led to a one percent ridership. The Charles M. Schulz Airport has finalized their plans to expand the airport runways and terminal facilities, which will lead to more vehicle trips to and from the airport. The current infrastructure is poor due to increased use and minimal upkeep over the last 20 years.

There was a recent decision to approve a SMART train station in the Sonoma County Airport and environs study area on April 20, 2012. The SMART train is expected to be a more sustainable mode of transportation with regards to greenhouse gases if it proves attractive to automobile users.

Expected Future Conditions

The Sonoma County Airport expansion is expected to increase business opportunities in the local area. However, the increase of vehicle trips to and from Airport Boulevard will exceed the street capacity and lead to unsafe street systems. The increase in vehicle trips will also lead to lower Levels of Service on all major roadways in the vicinity of Windsor. More people will be utilizing public transportation systems due to increased activity in the area surrounding the Airport, however, only one percent can be expected to actually use the systems due to the lack of connectivity. Also, it can be expected that not enough attention will be directed toward developing the “complete streets” model. This will cause residents and users to have difficulty reaching their destination due to traffic congestion, regardless of the mode of transportation they are utilizing.

Problems

- Lack of funding for the project
- Existing infrastructure is based around vacated lots rather than a connected network
- High volumes of automobile traffic have led to low Levels of Service
- Bike paths are unsafe and lack connectivity between themselves and other modes of transportation
- Public transportation represents only one percent of the travel done around the study area
- Expanding the roadway reduces space available to do other things such as connect sidewalks, add transit stops, and add aesthetic character to the streets

Constraints

- Lack of space, which could be used to connect sidewalks, expand streets, and build transit stops

- The automobile is currently the only safe connection to all corridors of the area
- Lack of funding for both the construction and retention stages of the project

Opportunities

- With a rise in the overall population of the area, there will be a higher demand for public transportation
- Large renovation projects, such as the Airport expansion, allow implementation of Transit-Oriented Development outlined by the updated guidelines to the California general plan focused around the “Complete Streets” Model
- High vacancy rates will allow general infrastructure improvements—such as connecting sidewalks—to be done prior to businesses occupying lots, potentially avoiding any controversial land use dilemmas
- The SMART train, a coordinated transit system, and fully connected pedestrian and bicycle facilities will increase transit options and encourage people to drive less
- The newly adopted Windsor Bicycle and Pedestrian Plan will connect the study area between the Airport and Town of Windsor

Circulation Goal:

A safe, efficient, interconnected and adaptive circulation system that promotes the health and economic well being of the community through environmentally sound transportation options.

Objective C-1: Provide safe and enjoyable pedestrian routes to and from Charles M. Schulz Airport, SMART train station, and housing and business communities.

Policy C-1.a: Create a continuous Class II bike network on Airport Boulevard and all roads intersecting Airport Boulevard (see *Appendix E for Bike Lane diagram*).

Policy C-1.b: Connect all sidewalks on Airport Boulevard from the Charles M. Schulz Airport to Mark West Station Road, and all streets that intersect Airport Boulevard.



Policy C-1.c: Increase lighting along Airport Boulevard and intersecting streets to create safer night commutability.

Policy C-1.d: Create crosswalks at all intersections around Airport Boulevard with ADA complying curb ramps that allow wheelchair access.

Policy C-1.e: Reinvent Airport Boulevard as a multimodal street accommodating automobiles, busses, bicycles and pedestrians following the “complete streets” model.

Policy C-1.f: Limit parking on Airport Boulevard and Aviation Boulevard using available space to connect bike lanes and sidewalks.

Policy C-1.g: Make pedestrian paths aesthetically pleasing through landscaping.

Policy C-1.h: Directly connect Aviation Boulevard east of Skylane Boulevard to allow for through traffic.



Objective C-2: Promote the use of public transportation to and from the area, specifically Airport Boulevard and intersecting roadways, to create economic well-being for commuters.

Policy C-2.a: Extend public transit hours of service, beginning earlier in the morning and ending later at night, in order to accommodate a larger diversity of commuting schedules.

Policy C-2.b: Add more busses and increase the number of stops on existing transit routes, particularly along Airport Boulevard and intersecting streets, to reduce wait times and thus reduce overall travel time.



Policy C-2.c: Lower the cost of all major public transportation systems including SMART train, Sonoma County Transit, and shuttle service to and from the Windsor area by offering monthly discounted multimodal cards.

Objective C-3: Connect local to regional transportation systems to allow for more adaptable long distance commuting.

Policy C-3.a: Build a central transit facility at the intersection of Airport Boulevard and Regional Parkway (Northwest Regional Industrial Park), which houses the SMART train station and provides service stops for both local and regional public transit routes (see *Appendix F*).

Policy C-3.b: Build a parking structure adjacent to the transit station to promote a centralized location for commuting.

Policy C-3.c: Create a shuttle route that travels between the three nodes of the study area including the SMART train station and the Airport (see *Appendix E for Public Transit Diagram*).

Policy C-3.d: Develop a bike path parallel to the SMART train line that provides a direct regional pedestrian route.

Objective C-4: Provide an automobile Level of Service C or better on all roadways and intersections in the study area.

Policy C-4.a: Expand Airport Boulevard to four lanes of traffic for its entire length, in order to alleviate an increase of traffic from the expansion.

Policy C-4.b: Adjust delivery times for all businesses so as not to coincide with peak AM and PM hours of daily commuting.

Policy C-4.c: Make all intersections on Airport Boulevard signalized, reducing travel time.

Policy C-4.d: Add a roundabout at the intersection of Windsor River Road and Windsor Road to reduce traffic delay, increase traffic capacity, and reduce long-term operational cost as well as the frequency and severity of crashes.

Objective C-5: Reduce greenhouse gasses in the study area, caused by the transportation sector, to 25% below 1990 levels by 2015 to meet the targets established in Sonoma County Climate Protection Action Plan (see *Environment Element*).

Policy C-5.a: Create a program that encourages business employees to use alternative means of transportation by offering discounted fare rates on all public transportation modes.

Policy C-5.b: Increase public transportation ridership. (*Refer to Objective C-2 policies*).

Policy C-5.c: Reduce congestion by improving the overall Level Of Service.

Objective C-6: Provide alternative transportation accommodations, such as bicycle facilities and user-friendly bus and SMART train schedules, which allow for functional transfer between modes.

Policy C-6.a: Increase the number of bike racks around the study area, particularly at high volume bus stops, business districts, the Airport, and SMART train station.

Policy C-6.b: Provide room for bike storage on SMART trains, allowing users to continue multimodal transportation upon arrival at destination.

Policy C-6.c: Provide a bicycle rental service at the central transit station to make multimodal travel more convenient. Provide a monthly rental pass for employees of the study area who wish to utilize this service on a daily basis.

Policy C-6.d: Coordinate schedules between modes that minimize wait times and maximizes fluid connections between highest volume routes.

Policy C-6.e: Allow SMART and bus ticket stubs to be used interchangeably as transfer slips between modes.

Implementation Tools

(*Indicates Existing Tools/Programs)

Tool A: Federal Transit Administration (FTA)*

The FTA ensures that the nation's rail and bus systems are in a state of good repair. It provides assistance to newly starting projects, and focuses programs on implementing transit-oriented development. It also provides design and art in public transportation, as well as safety and security for its users.

Tool B: Surface Transportation Program (STP)*

STP grants improve both inter-city and intra-city bus terminals and facilities to create a connected and coordinated public transit network. Signal synchronization and intersection improvements ensure Levels of Service as high as possible.

Tool C: California Department of Transportation (Caltrans)*

Through state and local partnership, Caltrans maintains transportation facilities as well as street and road conditions. Roadway-railroad safety and relief of traffic congestion are the foremost concerns. The Federal Transportation Bill financially supports projects by Caltrans via the Transportation Equity Act for the 21st Century (TEA-21).

Tool D: Sonoma County Transit Authority (SCTA)*

As the local and regional transportation provider, SCTA will oversee the coordination of transportation modes including Sonoma County Transit, SMART, and bicycle/pedestrian routes. SCTA will also be responsible for bicycle facility enhancement, including a rental service, and auto parking management. This is paid for by funds collected by the agency through transportation fares.

Tool E: Regional Climate Protection Authority (RCPA)*

The RCPA provides secure grant funding for GHG reducing efforts such as public education programs emphasizing the value and community impacts of alternative transportation systems.

Tool F: Regional Transportation Program (RTP)*

RTP funding, supported by both state and federal gas tax, will aid in ensuring the long-term growth, connection, and coordination of the regional transportation network while promoting energy conservation, protecting and enhancing the environment, and improving the overall quality of life.

Tool G: Sonoma-Marín Area Rail Transit (SMART)

Funded by Sonoma and Marin County sales tax, SMART aims to centralize transportation around light rail by building centralized transit centers. A Class I bicycle path will run parallel to the tracks. SMART train cars will allow comfort for riders as well as provide accommodations for bicycle storage.

Tool H: Public Transportation Incentive Program (PTIP)

Employer-provided fare subsidies aim to reduce the overall cost of commuting to work via public transportation and ride sharing. Incentive programs aim to encourage environmentally conscious commuting by providing a monetary stipend.

Circulation Tool/Policy Matrix

Policy	Tool A	Tool B	Tool C	Tool D	Tool E	Tool F	Tool G	Tool H
C-1.a			•	•				
C-1.b				•				
C-1.c	•			•				
C-1.d		•				•		
C-1.e	•	•		•		•		
C-1.f				•				
C-1.g				•		•		
C-1.h	•	•				•		
C-2.a		•		•		•		
C-2.b		•		•		•		
C-2.c	•							•
C-3.a	•		•	•			•	
C-3.b	•			•			•	
C-3.c	•			•				
C-3.d							•	
C-4.a	•		•					
C-4.b		•				•		
C-4.c		•						
C-4.d		•	•					
C-5.a				•				•
C-5.b		•		•		•		
C-5.c		•						
C-6.a				•			•	
C-6.b							•	
C-6.c				•			•	
C-6.d		•		•		•		
C-6.e				•			•	

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CHARLES M. SCHULZ

SONOMA COUNTY AIRPORT



Sonoma County Airport

Michelle Astells
Holly Coffman
Jeff Winn

Introduction

The Charles M. Schulz—Sonoma County Airport is the geographic and economic center of the study area. However, the runways do not currently meet FAA regulations, and the current passenger terminal will only accommodate one-third of future anticipated demand. When the facility is updated to meet new FAA safety standards, it will present numerous economic and transportation opportunities for the study area. With the implementation of the Airport Master Plan by 2030, the Airport, along with the study area, will provide a solid base for the area's economy.

Existing Situation

The Sonoma County Airport is in a broad, flat valley, and occupies 1,047 acres. Much of the land in the airport property is undeveloped grassland. Redwood Creek, Airport Creek, and Ordinance Creek are all within airport boundaries. Most of the land surrounding the airport in the north, south, and western sections of the study area are made up of agricultural and rural residential uses. There are many office complexes and a business park on the east side of the airport.

The Airport is owned by the County of Sonoma and operated by the County of Sonoma Department of Transportation and Public Works. The Airport Land Use Commission for Sonoma County is responsible for the airport's land use compatibility, and the FAA is responsible for the airport's safety standards.

Currently, Alaska Airlines provides five daily flights to and from the airport. They offer two flights daily to Los Angeles International Airport (LAX), one daily to Seattle-Tacoma International Airport (SEA) (two daily from April-October), one to Portland International Airport (PDX), and one to McCarran International Airport in Las Vegas (LAS). Service to Las Vegas will cease in the summer of 2012. The type of aircraft that operate at the airport currently range from small single-engine

general aviation craft to corporate jets to commercial airliners. The airport has two runways with eleven taxiways that link independent airport facilities.

The buildings at the airport include a 15,000 square foot terminal, FAA air traffic control tower, 890 automobile parking spaces, 3 rental car facilities, offices, fixed base operation facilities, aircraft tie downs and storage hangers, transient aircraft parking, pilot's lounge, fuel storage, aircraft rescue and fire fighting equipment, and an aircraft wash station.

Expected Future Situation

When the Airport Master plan is fully implemented by 2030, the airport will be flourishing with increased passenger activity levels. Construction of the new passenger terminal will be complete and the airport activity level can be expected to rise. The airport will operate twenty-one commercial flights along with multiple personal craft flights per day. The aesthetics of the land surrounding the airport can be expected to improve with increased airport activity. New signs have been added on the roadways to indicate the presence of the airport and to direct travelers to its location. The business park near the Airport will also be doing well with increased activity levels and lower vacancy rates.

Without implementation of the Airport Master Plan, the airport can be expected to be visually unattractive and outdated because it does not meet FAA safety standards. Without the added activity levels of an expanded airport, the surrounding business park will struggle to get out of the economic slump from years earlier, and passenger travel will remain stagnant. Also, Airport Blvd. can be expected to suffer from neglect and congestion.

Problems

- The Airport lacks a modern, aesthetic appearance, and is anticipating increased passenger demand.
- Airport Boulevard is congested, especially during peak commute hours
- Residential development around the airport results in noise compatibility issues, which make those areas less desirable due to aircraft noise levels.
- Numerous vacant office and industrial buildings in the study area, especially on Airport Boulevard.
- Neighbors in the immediate vicinity of the airport consider the airport a nuisance.
- The Airport's runways currently do not meet FAA safety standards.

Constraints

- Federal and state statutes and regulations establish the basis for local development of airport plans, analysis of airport impacts, and enhancement of compatibility policies.
- The buyer awareness measure in the Business and Professions Code states that a realtor must tell a buyer if a house is within 2 statute miles of an airport.
- The FAA enforces the policy that no use of land or water that could attract birds and impact take offs or landings be used within the surrounding land of the airport.
- Runway safety is subject to the FAA's jurisdiction, limiting potential development.
- FAA guidelines for heliport zones 280 feet from approach and takeoff clear of objects and people.
- The State Education Code restricts schools from being within 2 miles of an airport.

- The State Aeronautics Act states that no structure or natural growth be of a height that will be hazardous to flight navigation.
- Airspace Protection is regulated by FAA standards.
- The FAA must be notified of any construction or natural growth, and they will determine any obstructions to navigable airspace.
- The FAA has no authority off airport property, but can ask sponsors to regulate land outside of airport boundaries.

Opportunities

- The SMART train tracks intersect Airport Boulevard, providing opportunity for a future train station.
- The Charles M. Schulz Airport offers general aviation and commercial services.
- Commercial carrier Alaska Airlines has an established presence, presenting an opportunity for increased flights and passenger activity.
- The Pacific Coast Air Museum.
- CAL FIRE Station serving northern California.

Airport Goal:

The Charles M. Schulz Airport is the foundation of a robust industrial and business center; and offers safe and convenient air travel for corporate, personal, and tourist travel.

Objective A-1: Develop a contemporary aesthetic look for the Charles M. Schulz Airport in order to make it more appealing and inviting to travelers.

Policy A-1.a: Create and construct a grand entryway for the airport.

Objective A-2: Expand passenger capacity at the airport while maintaining compatibility of the airport with the surrounding community.

Policy A-2.a: Build a new four-gate passenger terminal adjacent to the north side of the existing terminal (see *Appendix F*).

Policy A-2.b: Extend runways 14 and 19 and adjacent taxiways in order to meet FAA standards.

Objective A-3: Support and provide for local industrial and business transportation needs.

Policy A-3.a: Promote convenient cargo shipping options through the airport.

Policy A-3.b: Relocate the rental car facility to a new building that complements the newly constructed terminal.

Objective A-4: Improve accessibility to the airport.

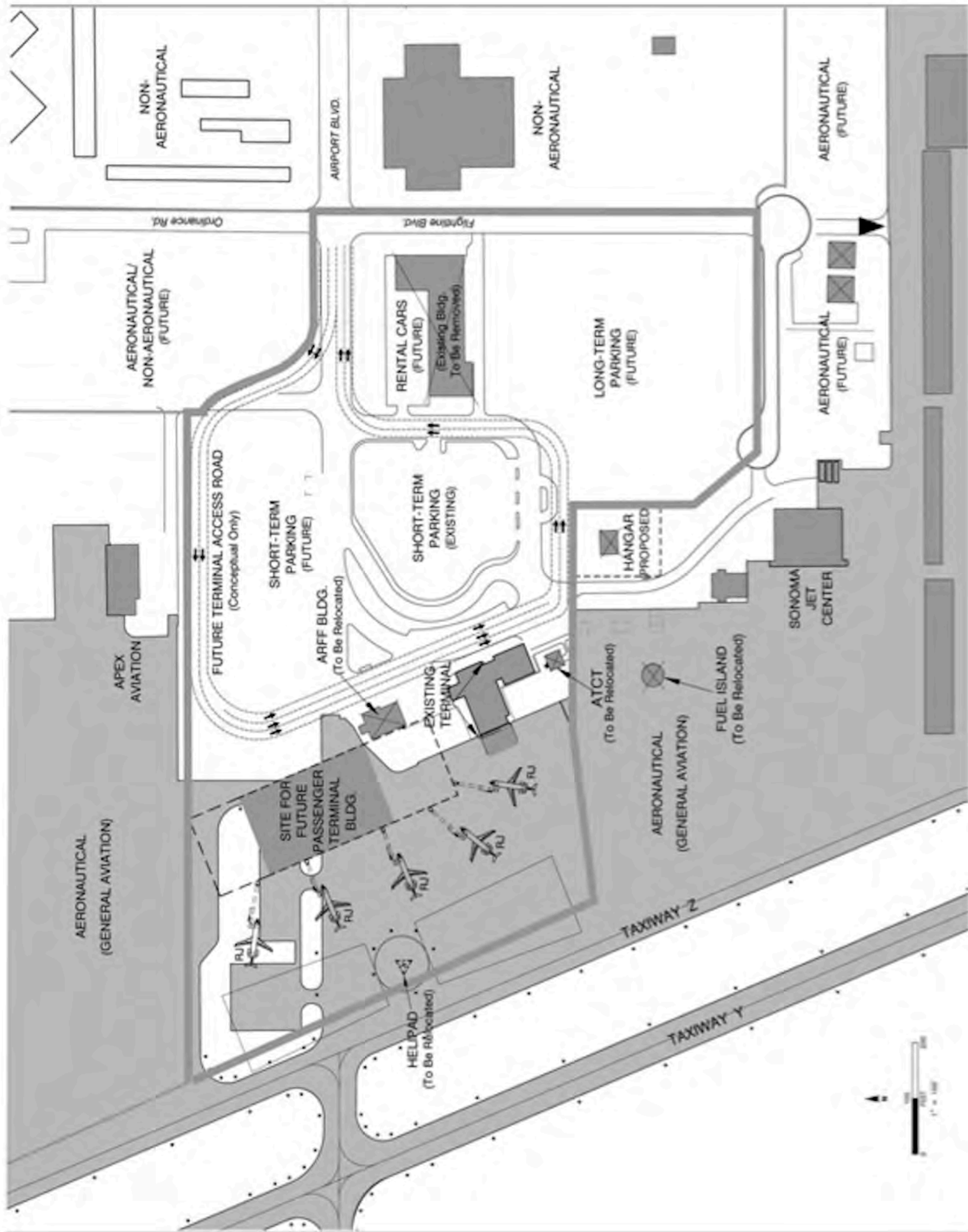
Policy A-4.a: Expand Airport Blvd to four lanes.

Policy A-4.b: Reroute the terminal access loop in conjunction with new terminal construction (see *Airport Diagram*).

Policy A-4.c: Expand short-term parking and construct new long-term parking lots (see *Airport Diagram*).

Policy A-4.d: When a SMART train station is constructed at Airport Blvd., Sonoma County shall provide shuttle service from the station to the airport.

Objective A-5: Preserve undeveloped land in the residential areas around the perimeter of the Airport in order to reduce noise complaints.



Policy A-5.a: Change the Housing Element of the Sonoma County General Plan to state "It shall be the policy of the Planning Commission to discourage any further residential development within the projected 2030 CNEL 60 contour."

Objective A-6: In the business and industrial park along Airport Boulevard, Sonoma County shall promote the use of vacant structures before unused properties are developed.

Policy A-6.a: Recruit tenants for vacant buildings adjacent to and on Airport Blvd.

Objective A-7: Develop and maintain regular communication between the Airport and its immediate neighbors.

Policy A-7.a: Publicize the existing Airport Complaint Line (707)544-4787; and create and maintain a web-based contact form to allow impacted neighbors to express concerns about other airport issues.

Objective A-8: Improve and maintain Airport safety and design.

Policy A-8.a: Design a new passenger terminal to meet or exceed all TSA/FAA requirements and standards.

Policy A-8.b: Perform an annual safety/emergency drill for the immediate neighbors of the airport.

Policy A-8.c: Relocate the air traffic control tower in order to meet FAA standards.

Policy A-8.d: Relocate the Aircraft Rescue and Fire Fighting building.

Policy A-8.e: Install solar panels in the unutilized fields around the airport.

Implementation Tools

(*Indicates Existing Tools/Programs)

Tool A: Federal Aviation Administration Grants*

The most common source of federal aid for airport facilities is the Airport Improvement Program (AIP) administered by the FAA.

Tool B: State Loan Program*

These funds will be allocated from the Caltrans Division of Aeronautics, which administers a revolving loan program. Loans are available to provide funds to match AIP grants or develop revenue-producing facilities such as aircraft storage hangars.

Tool C: Other Grant Programs

These funds will be allocated from a variety of federal and state programs, including: economic development, community development, and rural infrastructure.

Tool D: Bonds

These funds will be allocated for projects with a reliable revenue stream (e.g., paid parking lots and tenant space in the terminal) are the most likely candidates for bond funding. Where suitable projects exist, airports are sometimes able to participate in bonds being issued by county or regional agencies.

Tool E: Passenger Facility Charges*

These funds will be allocated for specific capital improvements that will: (1) preserve or enhance safety, capacity or security of the national air transportation system; (2) reduce noise; or (3) enhance competition between or among air carriers. The Airport is currently charging a PFC, for a variety of projects including:

passenger terminal renovation, security upgrades, safety equipment, and reimbursement of the local share of previous grants.

Tool F: Private Investment

At Sonoma County Airport, private funding is most likely to be used to construct aircraft storage hangars and fixed base operator facilities.

Tool G: Sonoma County General Plan 2020 Air Transportation Element*

Any proposed development shall be consistent with the Sonoma County Airport Master Plan and the Sonoma County General Plan 2020 Air Transportation Element.

Tool H: Comprehensive Airport Land Use Plan*

Any proposed development shall be consistent with the 2011 California Airport Land Use Planning Handbook.

Tool I: General Plan Amendment

Sonoma County shall amend the Sonoma County General Plan to discourage residential development within certain CNEP contours.

Airport Tool/Policy Matrix

Policy	Tool A	Tool B	Tool C	Tool D	Tool E	Tool F	Tool G	Tool H	Tool I
A-1.a					•		•	•	
A-2.a	•		•				•	•	
A-2.b	•		•				•	•	
A-3.a					•	•	•	•	
A-3.b				•			•	•	
A-4.a			•	•			•	•	
A-4.b	•		•				•	•	
A-4.c				•			•	•	
A-4.d		•	•	•			•	•	
A-5.a							•	•	•
A-6.a			•		•		•	•	
A-7.a					•		•	•	
A-8.a	•		•				•	•	
A-8.b					•		•	•	
A-8.c	•		•				•	•	
A-8.d	•	•			•		•	•	
A-8.e			•	•			•	•	



Environment

Fiona Day-Cofer
Katherine Ross

Introduction

The Environment Chapter concentrates on four of the State of California's General Plan mandatory elements: Conservation, Noise, Open Space and Public Safety. It also covers six other topics titled: Air Quality, Hydrology, Mineral Extraction, and Agriculture. Each topic will cover goals, objectives, and policies that will lead the Sonoma County Airport and environs study area to a bright and healthy future that can be enjoyed by people as well as other species.

Existing Conditions

The Sonoma County Airport has considerable natural beauty and resources. However, the surrounding area currently does not meet federal or state eight-hour standards for healthy levels of ozone, nor the 24-hour standards for particulate matter. The area relies on fossil fuels and other non-renewable energy sources to power residential and business buildings, as well as to operate cars and other modes of transportation. Sonoma County has a large economic base from agriculture, and is world-known for its wine growing region. Climate change could undermine this economic base, due to loss of growing regions. To address climate change and air quality related issues, the County of Sonoma General Services Department has developed a Climate Protection Action Plan and has made it a goal to reduce greenhouse gas emissions 25% below 1990 levels by the year 2015.

There are three types of noise in the Sonoma County Airport and surrounding area. These are construction-related noise, aircraft-related noise, and traffic-related noise. Sonoma County has adopted land use and noise compatibility policies to address existing and potential noise impacts on noise sensitive uses like residences and schools. Currently, the Charles Schulz-Sonoma County Airport is the most noticeable source of noise in the area. The northern section, where aircraft take off and land, is exposed to the most noise. There will be the addition of a SMART train station in the Sonoma

County Airport region which could also increase the noise level of the area. However, the SMART train is expected to be a more sustainable mode of transportation with regards to greenhouse gases if it proves attractive to automobile users.

The Healdsburg-Rodgers Creek Fault and the Maacama Fault are near the Sonoma County Airport and environs area and have potential to cause violent shaking. The San Andreas Fault is farther away but also has potential to cause strong shaking in the area. This could potentially harm residences and businesses due to infrastructure damage. The possible level of shaking is calculated to be between very strong to very violent (see *Appendix E for Earthquake Shaking Potential*).

Airport, Ordinance, Redwood, and Mark West Creeks surround the Sonoma County Airport. The Airport Vicinity Tributary and Watershed diagram identifies these creeks (see *Appendix E*). The FEMA Flood Plain diagram emphasizes these creeks as areas around the airport that are prone to flooding (see *Appendix E*). Also, the area surrounding the Russian River in the planning area is in a 100-year flood zone and may be reduced by proper siting of development and watershed management, retention basins, and similar measures to decrease runoff. Land uses that can sustain periodic flooding and that decrease flood hazards downstream are encouraged in floodplains. The peak flooding diagram shows the general extent of peak flooding expected during a 100-year flood for those streams which have been studied.

The area is also susceptible to fire hazards. Severity is shown in the California Department of Forestry diagram (see *Appendix E*). The highest hazards found in the study area are east of the Russian River, which consists of roughly 3,000 acres of residential lots and roughly 5,000 acres dedicated to agriculture. Santa Rosa Junior College operates Shone Farm a 365-acre teaching farm near the Russian River, which is also subject to a high wild fire hazard. Residences have increased the number of fires in hazardous rural areas, and 97% of the wild fires over 50 acres since 1989 were caused by human activities or facilities.

The Sonoma County Airport and environs study area is in the northern part of Santa Rosa Plain groundwater basin and contains approximately six miles of the Russian River Watershed. The Russian River Watershed is the water supply for the residents in the study area. Water supply in the Santa Rosa Plain is met by a combination of surface water delivery from the Russian River and groundwater from wells and aquifers. The Russian River supplies drinking water for over 600,000 people in the North Bay. Groundwater is extracted by each collector well from the alluvial aquifer adjacent to and beneath the Russian River. In California, there is no statewide process for regulating or permitting groundwater usage. The proposed Monitoring Plan for the Russian River will establish a baseline for tracking groundwater movement within the area. Groundwater is a common pool resource because many users extract water from single aquifers and multi-aquifer basins. If the combined rate of extraction exceeds the recharge, groundwater levels will decline. Groundwater planning and management programs integrate actions aimed to achieve the long-term sustainability of the resource, which is often of unknown quantity, quality, recharge and use.

The water quality in the area is suffering as described by the National Marine Fisheries Services Biological Opinion. They concluded that current summer minimum instream flows in the upper Russian River and Dry Creek are too high for optimal juvenile steelhead habitat. Without modifications to the instream flow requirements, the current high summertime flows will continue to jeopardize the recovery of Coho Salmon and Steelhead in the Russian River and its tributaries. National Marine Fisheries Services also determined that the conversion of the tidally-influenced Russian River estuary into a closed freshwater lagoon during the summer months would provide improved habitat for rearing juvenile Steelhead. The Sonoma County Water Agency, the North Coast Water Quality Control Board, the USGS, the National Marine Fisheries Services, and the Division of Water Rights have created a Monitoring Plan for the Russian River including a Temporary Urgency Change to reduce summertime flow.

The Syar Alexander Valley Instream Mining Project is within the study area. There is a lawsuit directed at this controversial issue. This operation has the potential for

destruction of Endangered Species Habitats, erosion of downstream residences, and decreasing water quality in the Russian River Watershed (see *Appendix E for gravel mining pit locations*).

The area supports and contains several federally protected species, including a unique genetic variation of the California Tiger Salamander, Burke's Goldfields, Sonoma sunshine, Sebastopol meadowfoam, and many-flowered navarretia which are federal and state-listed Endangered and Threatened Species. The Sonoma County Airport region contains two populations of papoose tarplant, a California Rare Plant. The Russian River Watershed contains federal and state Endangered and Threatened Species of Steelhead trout, Coho salmon, and Chinook salmon. Special status species are plant and animals that are listed or candidate species under the Federal or State Endangered Species Acts and other species considered rare enough to warrant special consideration.

Expected Conditions

In 2030, the Sonoma County Airport and environs can be expected to be experiencing some air quality problems despite the efforts of the Climate Protection Action Plan. Residents can be expected to continue traveling by cars or busses (many of which will continue to operate on fossil fuels) despite the completion of the SMART train in 2016. The Charles M. Schulz-Sonoma County Airport will continue to operate as an energy efficient facility, and therefore will mitigate some of the future non-renewable energy usage; however, flights will be increased and will impact air quality. Moreover, climate change is unavoidable and will affect the area in a presently unknown manner.

The noise from the Sonoma County Airport in the area is expected to increase, as the airport expansion should be completed by 2030 (see *Appendix E for Noise Contour diagram*). The construction of the expanded airport will cause disturbances as some of it will have to occur during nighttime. Also, the change in aircraft as well as the increased number of flights will cause the noise level to be higher than 2012 levels. The

SMART train can be expected to slightly increase the noise level of the study area; however, it is not a major concern.

Public safety in the study area is subject to potential seismic, fire or flood events. The current Sutter Hospital location suggests it could experience seismic damage. Also, buildings constructed before current seismic and fire building codes could undergo severe damage.

In the study area, population and development can be expected to continue growing, therefore, water quality and supply will continue to be depleted. Endangered and threatened species populations will decrease at a faster rate if more is not done to address the problem. However, special status animal and plant species will be protected through conservation and habitat plans as well as zoning.

Problems

- Greenhouse gas emission levels
- Automobile dependency
- Noise from the Sonoma County Airport and Highway 101
- Unsustainable consumption of non-renewable energy as a result of an insufficient supply of alternative renewable energy sources
- Current construction does not take full advantage of Green Building practices
- Liquefaction from earthquakes
- Possible contamination of surface and groundwater due to hazardous materials associated with airport activities
- Russian River supplies drinking water for over 600,000 people in the North Bay including over 12,000 permitted water wells in the basin
- No Groundwater Plan, and no state or local mandates to establish one
- The conversion of the tidally-influenced Russian River estuary into a closed freshwater lagoon during the summer months
- The availability of a long-term, reliable potable water supply and adequate wastewater treatment

- Destruction of Endangered and Threatened Species Habitat
- Erosion of downstream residences
- Degraded Water Quality
- Loss of State and Federally listed Threatened and Endangered Animals and Rare Plants
- Lack of open space in residential areas

Constraints

- Lack of funding
- Population and development will continue to grow; water supply and wastewater treatment shall be primary determinants in development
- Proximity to 100-year floodplain
- Proximity to Healdsburg-Rodgers Creek Fault, Maacama, and San Andreas Faults
- Syar Alexander Valley Instream Mining Project lawsuit could take years to resolve
- Human population and development will continue to increase
- Areas with a high or very high risk wildland fire hazards
- Residences have increased the number of fires in hazardous rural areas by 97%

Opportunities

- Future alternative mode of transportation called the SMART train
- Climate Protection Action Plan
- Plan future new construction that is designed to minimize risk from natural hazards
- Future locations of new subdivision lots and building envelopes can maximize access for emergency vehicles and minimize construction in steep or wooded areas
- It is possible to increase number of planes and pilots equipped and trained to fight fires

- Groundwater Mapping
- Water Conservation and Recycling Plan
- Syar Alexander Valley Instream Mining Project Lawsuit
- Protect Natural Habitats
- Protection of State and Federally listed Threatened and Endangered Animals and Rare Plants
- Implement new building and business standards including LEED and Green Building Programs

Air Quality & Noise Goal:

An environment in which people and land uses may function without the adverse effects from noise, air pollution and climate change.

Objective N-1: Protect the community from excessive noise exposure.

Policy N-1.a: Use vegetation and local terrain that has a height limit and attracts the least amount of birds to restrict the impact of sound around the Sonoma County Airport.

Policy N-1.b: Increase the number of trees along Highway 101, Airport Boulevard, and the future SMART train route and station to decrease noise levels.

Policy N-1.c: Use sound walls along Highway 101 to reduce the noise from traffic.

Policy N-1.d: Require new residential structures to include noise reduction designs in areas of higher noise levels such as near Highway 101 and the Sonoma County Airport.

Policy N-1.e: Require compliance with the Sonoma County General Plan 2020 Air Transportation Element CNEL; maximum noise exposure that shall be considered acceptable is the 55 dB CNEL, and conditionally acceptable between the 55 and 65 dB for development of new residential uses in areas surrounding a public-use airport (see *Appendix E for Noise Contour diagram*).

Objective AQ-1: Maintain or exceed all ambient air quality standards.

Policy AQ-1.a: Plant trees and other vegetation near areas of high non-point-source air pollution, including Airport Boulevard and Highway 101.

Policy AQ-1.b: Plant trees and other vegetation near areas of high point-source air pollution, including the Sonoma County Airport.

Policy AQ-1.c: Cooperate with the local air quality district to monitor air pollution and enforce mitigation in areas affected by emissions from fireplaces and wood-burning stoves.

Policy AQ-1.d: Require industrial uses and facilities such as the Sonoma County Airport to become energy efficient.

Policy AQ-1.e: Require new projects to incorporate green building techniques (see *Appendix F*).

Objective AQ-2: Encourage walking, carpooling and other modes of transportation in the study area to reduce vehicular traveling.

Policy AQ-2.a: Provide more bike paths near residential areas to encourage walking and/or biking (see *Circulation and Land Use/Economic Development Element*).

Policy AQ-2.b: Require Sonoma County to provide parking spaces designated for cars used in carpools in business office parking lots.

Policy AQ-2.c: Encourage the use of public transportation by requiring a fee for parking in large, business parking lots.

Policy AQ-2.d: Sonoma County shall provide electric vehicle plug-ins in large business parking lots such as the Sonoma County Airport parking lot.

Policy AQ-2.e: Require hybrid, electric, partial zero emission, or natural gas Sonoma County fleet vehicles when feasible.

Objective AQ-3: Prepare the Sonoma County Airport and environs study area for the potential impacts of global climate change.

Policy AQ-3.a: Encourage residents, businesses, or municipalities to decrease heat gain from pavement and other hard surfaces associated with new development in the study area.

Policy AQ-3.b: Enforce state requirements for cool roofs on non-residential re-roofing projects.

Objective AQ-4: Support and participate in the efforts to improve air quality.

Policy AQ-4.a: Educate the public about the problems, causes, and solutions to air quality related issues in the area.

Public Safety Goal:

The area is safe from human created and natural hazards.

Objective PS-1: Ensure that people and property are protected from human created and natural hazards.

Policy PS-1.a: Require inter-governmental coordination between state, federal and local government departments, in preparing for natural disasters and accidents related to hazardous materials.

Policy PS-1.b: Ensure power, water, and communication systems remain available to Sonoma County Airport and environs planning area businesses and residences in the event of an emergency.

Policy PS-1.c: Require all buildings within the Sonoma County Airport and environs planning area meet or exceed state, federal, or local government, earthquake and fire safety standards.

Policy PS-1.d: Update risks associated with soils, geology, and seismicity.

Objective PS-2: Protect the community from flood hazards.

Policy PS-2.a: Discourage damage from flooding with floodplain management techniques and storm water retention ponds in new developments and other facilities, in compliance with all local, state and federal regulations.

Policy PS-2.b: Develop flood control improvements and updates that are sensitive to wildlife habitat and open space preservation.

Hydrology Goal:

An adequate, safe water supply that supports conservation; reduces aquifer depletion and subsidence; and supports biotic and aquatic habitat protection.

Objective H-1: Ensure that people, biotic, and aquatic habitats have safe, high quality, and adequate water supplies.

Policy H-1.a: Establish a Groundwater Mapping and Comprehensive Groundwater Management Plan for the Sonoma County Airport and environs study area.

Policy H-1.b: Maintain a Monitoring Plan for the Russian River.

Policy H-1.c: Develop a Water Conservation and Recycling Plan for the Sonoma County Airport and environs study area.

Mineral Extraction Goal:

Manage Gravel Mining in the Russian River Watershed that supports conservation, ensures high quality water supply, and decreases erosion in the Russian River.

Objective ME-1: Sonoma County shall eliminate impacts of gravel mining in the Russian River Watershed.

Policy ME-1.a: Sonoma County shall phase out gravel mining in the Russian River Watershed.

Conservation Goal:

Protect and enhance the study area's Natural Habitats and diverse Plant and Animal Communities.

Objective C-1: Identify and protect native vegetation and wildlife, particularly Special Status Species, Sensitive Habitats, Connecting Habitat Corridors, Wetlands, Woodlands, and Sensitive Natural Communities.

Policy C-1.a: Designate as Biotic Habitat in the Conservation Element the known locations shown on the Biotic Habitat Map in Appendix E and identified

as Special Status Species Habitat, Marshes and Wetlands, Sensitive Natural Communities, and Habitat Connectivity Corridors.

Policy C-1.b: Designate to the Biotic Resources combining district all lands designated as Biotic Habitat Areas.

Policy C-1.c: Ensure that all discretionary and ministerial permit applicants are aware of possible requirements of federal and state regulatory agencies related to jurisdictional Wetlands or Special Status Species.

Policy C-1.d: Develop intergovernmental coordination with state federal and local agencies, landowners, and affected public land, to review Biotic Habitat area designations, and related policy issues periodically (at least every five years).

Policy C-1.e: In all areas outside of Urban Service Areas, encourage property owners to utilize wildlife friendly fencing and to minimize the use of outdoor lighting that could disrupt wildlife movement corridors.

Policy C-1.f: In areas within the Urban Service area ensure all property owners discourage practices that attract waterfowl and birds.

Open Space Goal:

Natural resources are protected and conserved and provide a source of beauty and enjoyment for residents and visitors.

Objective OS-1: Ensure the preservation, enhancement, and expansion of permanent open spaces in the study area.

Policy OS-1.a: All current 2012 open space properties that are district protected lands or other public or protected lands in the study area shall continue to be preserved.

Objective OS-2: Include and maintain open space in residential areas.

Policy OS-2.a: Residential areas in sites 1-4 shall include open space in the form of a community garden or a park (see *Form Based Codes in Appendix C*).

Policy OS-2.b: A minimum of ten percent of total square feet in residential areas shall be designated as local/neighborhood parks and a total of two percent shall be designated as garden space (see *Form Based Codes in Appendix C*).

Agriculture Goal:

Agricultural farmland is preserved and produces a healthy food supply for the study area.

Objective A-1: Avoid the conversion of agricultural lands to residential or nonagricultural commercial uses.

Policy A-1.a: Enforce the binding contracts to protect farmland within Sonoma County under the Williamson Act, the Sonoma County Right-to-Farm Ordinance, and the Sonoma County Agricultural Preserve and Open Space District.

Objective A-2: Encourage safe, convenient opportunities to purchase fresh fruits, vegetables and healthy foods through farmers' markets.

Policy A-2.a: Sonoma County shall encourage more partnerships between local merchants and farmland owners to increase the availability of healthy food choices in the Sonoma County Airport and environs study area.

IMPLEMENTATION TOOLS

(*Indicates Existing Tools/Programs)

Tool A: Noise Insulation Standards*

The State Noise Insulation Standards, Chapter 12, Section 1207 will be enforced by Sonoma County to protect inhabitants of apartments and other dwellings other than detached single-family dwellings from the effects of excessive noise, including, but not limited to, hearing loss or impairment and interference with speech and sleep. Sonoma County shall require the General Plan 2020 Air Transportation Element CNEL maximum noise exposure levels are used for all construction surrounding the Sonoma County Airport.

Tool B: CNEL

Sonoma County shall comply with the Sonoma County General Plan 2020 Air Transportation Element CNEL. The maximum noise exposure that shall be considered acceptable is 55 dB CNEL, and conditionally acceptable between the 55 and 65 dB CNEL range for development of new residential uses in areas surrounding a public-use airport.

Tool C: Vegetation Implementation

Sonoma County shall implement a program to address the sound and air quality related issues in the study area. The county shall plant trees and other vegetation around the locations that are affected the most such as the Sonoma County Airport, Highway 101, Airport Blvd., and the future SMART train route and station. The vegetation around the Sonoma County Airport will have height restrictions and will include plants and trees that attract the least amount of birds when feasible.

Tool D: Sound Wall Implementation

Sonoma County shall construct a sound wall along Highway 101 in the Sonoma County Airport and environs study area. This will prevent excessive noise from the highway and will provide a barrier between the highway and buildings.

Tool E: 2008 California Green Building Standards Code*

Sonoma County shall follow the 2008 California Green Building Standards code to increase air quality in the study area. The purpose of this code is to improve public health by enhancing the design and construction of buildings through the use of building concepts having a positive environmental impact and encouraging sustainable construction practices. This enforcement will improve the air quality in the study area.

Tool F: Climate Protection Action Plan*

The County of Sonoma General Services Department has developed a Climate Protection Action Plan and has made a goal to voluntarily reduce greenhouse gas emissions 25% below 1990 levels by the year 2015. In addition to practices already in place, Sonoma County shall use hybrid, electric, or partial zero emission Sonoma County Fleet Vehicles when feasible. Sonoma County shall also designate carpool parking spaces in business parking lots and require a fee to park in large business parking lots. The County shall introduce electric plug-ins for electric vehicles in the study area and shall encourage walking and biking by implementing bike paths near residential areas as indicated in the Land Use/Economic Development and Circulation sections.

Tool G: Monitoring Local Air Quality

Sonoma County shall monitor local air quality in the Sonoma County Airport region and determine the areas that are not improving as quickly as others under Sonoma County's Climate Protection Action Plan. The county shall then implement plans to address the problems.

Tool H: LEED*

The Leadership in Energy and Environmental Design (LEED) green building certification program shall be used by Sonoma County for new developments within the Sonoma County Airport region.

Tool I: The Smart Growth Manual*

The authors of *The Smart Growth Manual* organize the latest contributions of new urbanism, green design, and healthy communities into a comprehensive handbook, fully illustrated with the built work of the nation's leading practitioners. This manual

provides Sonoma County with an outline of various green design techniques, which the County should adopt.

Tool J: Urban Heat Island Mitigation Practices

San Joaquin Valley has adopted Heat Island Mitigation Practices to get residents, businesses, and municipalities involved in air quality improvements. An Urban Heat Island is pavement, dark-colored roofs, and similar surfaces that absorb sunlight, trap heat and increase local temperatures. Planting more trees, installing light-colored roofs, or installing a grass or gravel parking lot could reduce the temperatures in the Sonoma County Airport and environs study area. Sonoma County shall encourage the adoption of these practices.

Tool K: Title 24 Building Energy Efficiency Standards in California

This energy code includes prescriptive requirements for cool roofs. Cool roofs are highly reflective, highly emissive roofing materials that stay 50 to 60 degrees Fahrenheit cooler than a normal roof under the sun. Cool roofs can cut building owners' energy costs as they gain less heat than normal roofs and they reduce the need for air conditioning. Sonoma County shall enforce this code for new developments in the study area.

Tool L: Building Safety Ordinance

Sonoma County shall adopt a Building Safety Ordinance that establishes improving the safety of seismically hazardous buildings, and fire safety. The ordinance shall require structural and fire safety analysis inspection for all building permit requests when a building has not been inspected for over ten years, and prior to the issuance of a building permit, all requirements resulting from these inspections must be met. Systematically review potential hazardous structures. Buildings that are found to be seismically unsafe or a fire hazard shall be rehabilitated or demolished. Avoid siting Emergency Response Facilities in areas subject to a Modified Mercalli Index (MMI) Ground shaking Intensity Level of Very Violent, Violent, or Very Strong, (see *Appendix E*). All development must have adequate water available for fire suppression, whether from a hydrant and community system or from an on-site storage tank. The locations of subdivision lots and building envelopes must maximize access by emergency vehicles and minimize construction in steep or wooded areas.

Tool M: Flood Management*

Land uses that can sustain periodic flooding and that decrease flood hazards downstream are encouraged in floodplains. Stormwater detention or retention ponds in new development and other facilities in compliance with all necessary permits required for state, federal and local government jurisdictions to prevent flooding by surface water runoff. Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM) for all development. The Federal Emergency Management Agency (FEMA) produces Flood Insurance Rate Maps (FIRM) as part of the National Flood Insurance Program to define floodways and determine areas subject to inundation during flooding events.

Tool N: Fire Hazard Regulations*

Fire hazard regulations are intended to minimize on-site property damage and personal injury, avoid damage to adjacent properties, and reduce the cost of fire suppression services. All development must have adequate water available for fire suppression, whether from a hydrant and community system or from an on-site storage tank. The California Department of Forestry enforces requirements for fire fighting and prevention, works with landowners on controlled burns, and advises rural residents on fire prevention methods.

Tool O: Emergency Response Program*

Establish an Emergency Response Program that will educate the public; require inter-governmental coordination and cooperation between state, federal and local jurisdictions; provide emergency staff training and purchase necessary equipment. This would include establishment of emergency warning systems, emergency shelters, and evacuation routes to ensure community preparedness.

Tool P: Adopt a Watershed

Designate countywide awareness programs to highlight the importance of clean watersheds and issues to promote awareness.

Tool Q: Medication Take Back Programs and Household Toxics Facilities*
Designate Sonoma County Waste Management Agency's Household Toxics Facility and Russian River Watershed Association's Pharmaceutical Disposal Programs to raise awareness and keep medications and household toxins from being put down the drain.

Tool R: Groundwater Mapping and Comprehensive Groundwater Management Plan

Establish a Groundwater Management Plan for the Sonoma County Airport and environs study area using existing data from the Sonoma County Water Agency, North Coast Water Quality Control Board, USGS, National Marine Fisheries Services, and the Division of Water Rights Monitoring Plan for the Russian River.

Tool S: Water Conservation and Recycling Plan for the Planning Area*
Sonoma County shall establish a Water Conservation Plan and Recycling Plan, and offer incentives for both County and Townships for the use of water-conserving plumbing fixtures, and low-flow toilets and showerheads. The County shall also encourage drought-tolerant vegetation in landscaping, and water conserving techniques for agricultural irrigation.

Tool T: Water Assessment (SB 610)*

Requires that water suppliers provide a Water Supply Assessment (WSA) to planning agencies for any proposed projects which are subject to the California Environmental Quality Act (CEQA) and would demand an amount of water equivalent to or greater than the amount of water required by a 500 dwelling unit project.

Tool U: Wastewater Treatment, Storage & Disposal*

The Town of Windsor and Sonoma County shall modify the Master Plan to acknowledge the rate, amount, and location of development projects, and this must remain consistent with the General Plan.

Tool V: Conservation and Habitat Education

Develop countywide Conservation, Restoration, and Habitat Education Programs through Sonoma County Schools, Santa Rosa Junior College, Sonoma State University, and Community Education Programs. Notify all discretionary and ministerial permit

applicants of possible requirements of federal and state regulatory agencies related to jurisdictional Wetlands or Special Status Species.

Tool W: Implementation Committee*

Implement a Conservation Strategy comprised of local representatives from the Fish and Wildlife Service, CA Department of Fish and Game, agricultural, environmental and private landowner communities.

Tool X: Right to Farm Ordinance*

Sonoma County shall continue to implement the Right to Farm Ordinance which describes normal farm practices expected to occur in agricultural areas and ensures the right of the farmer to continue such practices subject to appropriate health and safety standards.

Tool Y: Williamson Act*

Sonoma County shall continue to enforce the Williamson Act in our study area that preserves land under the Agricultural Preserve Program.

Tool Z: Form Based Codes

The codes located within Appendix C of this proposal provide a description of how much park and garden space shall be included in residential areas.

Environment Tool/Policy Matrix

Tool	Policy	N-1.a	N-1.b	N-1.c	N-1.d	N-1.e	AQ-1.a	AQ-1.b	AQ-1.c	AQ-1.d	AQ-1.e	AQ-2.a	AQ-2.b	AQ-2.c	AQ-2.d	AQ-2.e	AQ-3.a
Tool Z																	
Tool Y																	
Tool X																	
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Tool F							•	•				•	•	•	•	•	
Tool E			•														
Tool D		•	•				•	•	•								
Tool C						•											
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Tool A											•						

Environment Tool/Policy Matrix

Tool Z			•	•		
Tool Y			•	•		
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Community Design

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Introduction

The purpose of this chapter is to influence connectivity of existing and future development in order to bring together members of the Sonoma County and environs study area, and to further enhance a sense of community through specific design features. The community design policies address how these natural and built elements visually create the identity of the study area, and how they contribute to the city's quality of life. It is important to preserve what makes the study area unique by utilizing attractive buildings, historic districts, and cultural landmarks. Developing a market center, community gardens, a theater, and improving the existing pedestrian and bicycle paths throughout the study area are examples of methods described in this element to create a sense of place. Preserving views of the surrounding mountains, rivers and vineyards is crucial to maintaining the aesthetic quality of the community. The information outlined in this chapter is intended to assist planners, government officials, developers, and the general public in making informed community design decisions.

Existing Situation

The major features that give the Sonoma County Airport and environs study area its visual character are the vineyards, the Russian River, Downtown Windsor, and the established suburban neighborhoods. The study area's historic structures also add to the uniqueness and identity of the study area.

These include the Laughlin house, the Pacific Coast Air Museum, and the Northwest Pacific Railroad tracks. Abundant open space and natural resources add to the beauty of the study area by providing a balance to the built environment. There is a split between the west and east sections in the study area. The west section is predominately open space, consisting of agricultural land and a recreational park area connected by unmaintained narrow



rural roads. The east section is overwhelmingly urbanized in comparison to the west. There are residential neighborhoods, commercial business centers, and wider, well-defined streets complete with lamps, sidewalks, and bike lanes.



There are many building vacancies in both business parks and centers that detract from the community character. There is an inconsistent assortment of signs throughout the study area that could cause confusion for both residents and visitors. The lack of bike lane designations and sidewalks along the intertwining streets establishes an unappealing and unsafe environment for bicyclists and pedestrians. There is no uniform or consistent type of architecture in place to help identify the area. The existing Windsor Town Green just north of Windsor River Rd. does provide a unique architecture style that provides a great example for future construction in the Sonoma County Airport and environs study area.

Expected Future Conditions

The study area can be expected to continue to be affected by the economic downturn, as well as by increasing greenhouse gas (GHG) emissions from extensive use of automobiles. Residents will continue to use personal automobiles for work as there is a lack of jobs in the study area. Vacant structures begin and continue to deteriorate the area. Vacancy rates will increase as businesses continue to leave the area. Public transportation can be expected to continue as a secondary source of transportation for those who live in the study area as well as those who visit the area. There will be a continued lack of consistency with signs, architecture, sidewalks, bike lanes and pathways. Property values will experience a decline due to



unmaintained landscape and roads hindering the safety of the study area. All these factors will continue to lead to a disconnected feeling throughout the study area.

Problems

- There are many vacant commercial and industrial areas
- As a whole, the public is uninvolved and uninformed
- There is a lack of funding to support projects in the area
- In navigating through the area, there is confusion and disorientation caused by inconsistent signs
- The Airport has no distinctive entrance, and drivers come upon it abruptly
- In the area, there is a lack of centralized location for recreation, entertainment, and community gathering centers
- A large amount of space is devoted to unused parking lots that could be developed in other ways

Constraints

- Lack of funding
- Zoning limits development opportunities
- Public resistance can create friction and impede development
- Possible environmental impacts on the Russian River

Opportunities

- Vacant business structures on Skylane Blvd. and Airport Blvd. could be converted and/or redeveloped
- Windsor has established a Bicycle and Pedestrian Plan
- There is potential within existing residential neighborhoods, and room for more homes
- The beauty of the vineyards and Russian River can be taken advantage of

Design Goal:

A visually pleasing and unified community with abundant business, social, and recreational opportunities that exist in harmony with nature.

Objective CD-1: Connect neighborhoods to encourage users and residents to use alternative modes of transportation.

Policy CD-1.a: Expand and improve the network of bike paths.

Policy CD-1.b: Improve consistency and safety of bike lanes throughout the study area (see *Circulation Policy C-1.a*).



Policy CD-1.c: Improve the consistency and safety of sidewalks in the area (see *Circulation Policy C-1.b*).

Policy CD-1.d: Create scenic pathways with trees and landscaping to make them appear safe and inviting throughout the urban environment.

Policy CD-1.e: Encourage more neighborhood centers to reduce travel time and distance for residents.

Policy CD-1.f: Install benches with overhangs to accommodate transit users for all weather conditions on all bus stops on the Sonoma County Transit routes



within the area.

Objective CD-2: Encourage members of the community to congregate after work and away from home in a social atmosphere.

Policy CD-2.a: Promote evening opportunities for socializing, and permit uses that shall include restaurants, nightclubs, theaters, and performing arts (see *Appendix D for Site Plans*).

Policy CD-2.b: Promote daytime opportunities for socializing and encourage community-gathering areas. Daytime activities can include retail shopping, pedestrian and bike paths, parks and open space, wine-related activities, and restaurants within the study area (see *Appendix D for Site Plans*).

Policy CD-2.c: Encourage and create opportunities for the creation and display of local art in community centers, schools, and on well-traveled pathways.

Policy CD-2.d: Provide locations for local farmers' markets.

Policy CD-2.e: Establish regular community projects or educational seminars (e.g., creek cleanups, bike safety seminars, Christmas caroling, etc).

Objective CD-3: Provide a sense of visual connectivity throughout the urban community.

Policy CD-3.a: Mandate aesthetically pleasing and culturally significant signs for both businesses and neighborhoods while maintaining consistency and manageable size.

Policy CD-3.b: Maintain consistency in the visual design of future development.

Policy CD-3.c: Sonoma County shall update the signs and lighting for the gateways in and out of town in order to define corridors and major urban pathways.

Policy CD-3.d: Promote lively streets through attractive building designs with street level activity and other landscaping elements that are aesthetically pleasing and pedestrian friendly.

Policy CD-3.e: Provide benches, trash bins, and recycling bins along both sides of the street along all interconnected pathways or corridors.





Objective CD-4: Promote green design and sustainable practices to reduce the potential impact on the environment.

Policy CD-4.a: Encourage green building and reward those who take part (see *Environmental Policies AQ-1.d, f*).

Policy CD-4.b: Encourage green practices within schools and other community facilities, as designated on the land use map.

Objective CD-5: Establish and maintain natural elements and buffers.

Policy CD-5.a: Protect and replace trees throughout the area.

Policy CD-5.b: Require landscaping with native plants and plants that need minimal irrigation in an effort to promote native flora and minimize upkeep costs and water usage.

Policy CD-5.c: Dedicate five percent in each new development to landscaped seating areas or a park to allow for public meetings and recreation activities (see *Node Maps for new development*).

Policy CD-5.d: Create community gardens within existing neighborhoods and mandate them in new housing developments.



Objective CD-6: Beautify Airport Boulevard to make the area more inviting to users of the Sonoma County Airport as a welcoming entrance to Sonoma County.

Policy CD-6.a: Calm traffic with a center median landscaped with trees, four narrow lanes of traffic, and bulbouts (see *Appendix F*).

Policy CD-6.b: Plant native trees to line the street when feasible and therefore create a closed-in feel while on the street (see *Appendix F*).

Policy CD-6.c: Install a visually pleasing gateway and signs at the airport entrance/exit to improve identification and provide a welcoming feel.

Implementation Tools

(* Indicates Existing Tools/Programs)

Tool A: National Gardening Association*

The National Gardening Association (NGA) awards more than 300 grants to youth projects. The grant consists of \$750 worth tools, seeds, manuals, and other gardening supplies. The provision of these grants to local youth would provide education on gardening practices and methodology, and could be used towards the development of community gardens.

Tool B: Donations

Labor, funding, and all other forms of donations towards projects will be acquired through private funding.

Tool C: Keep America Beautiful*

The Keep American Beautiful program partners scouts from local Boy Scouts of America with private sponsors from the community. This program gives scouts a project that will positively impact both their community and the environment (such as a community garden or creek clean up).

Tool D: Environmental Awareness Program

This program will serve to educate the public on environmental issues. It will also educate business owners and students on how to operate in a more environmentally friendly manner. This program shall hold public service days and assist in the maintenance of community gardens and establishment of a farmers' market.

Tool E: Zoning

Sonoma County zoning shall be updated to incorporate additional setbacks, landscaping standards, and requirements for public art. It will also change to allow for more recreational opportunities to make the area more vibrant.

Tool F: Sign Ordinance

Sonoma County shall require important signs to contain messages, symbols, and graphic designs to help pedestrians and vehicles easily navigate within the area without

distraction. Sign size limits, design consistency, and location requirements shall be established to promote clarity and avoid over-saturation of signs.

Tool G: Public Art Initiative

Allow the opportunity for local artists to donate their works of art for display in public places and community facilities.

Tool H: Buy-a-Brick-or-Bench Program

In building new development and making additions to the existing urban environment, residents are encouraged to leave their mark on the community. When benches and other fixtures are to be placed, community members will have the opportunity to sponsor the object, and be commemorated with a plaque on what they are sponsoring. Also, the development of parks, gardens, and the Airport gateway will include bricks, fence posts, and other building materials that will be available to be sponsored and engraved. This program will alleviate some of the funding issues within these projects.

TOOL I: Community Tree Program

Trees are a vital part of the community, as well as major contributors to the natural environment. Not only are trees visually pleasing, they are also environmentally functional. As in Tool H, community members will have the ability to sponsor a tree to be planted in the urban environment, further beautifying the study area. This program will also recruit people to help plant the trees.

TOOL J: Pedal Sonoma

In conjunction with the Bike Coalition and Bicycle Advisory Committee, this program aims to improve, maintain, and expand the network of bike paths, and promote their use. This program will put on informational seminars, organize community rides, and offer lessons to members of the community.

TOOL K: Beautiful Pathways

This program will aim to provide safe and walkable sidewalks. The initiative of this program ensures sufficient and attractive lighting, continuity in sidewalks, and inviting pathways throughout the study area to encourage pedestrian and bicycle traffic.

TOOL L: Have-A-Seat

Works in conjunction with Sonoma County Transit and the Town of Windsor to provide benches with non-permeable covers at bus stops and other benches throughout the study area. This will encourage members of the community to use transit in all weather situations.

TOOL M: Design Review Board*

Sonoma County shall require the Design Review Board to review design standards of future developments.

TOOL N: Gateway Initiative

Identifies the main gateways in and out of Windsor, as well as the entrance to the Sonoma County Airport. It also constructs and maintains attractive and inviting signs to cultivate a welcoming environment in the area.

Community Design Tool/Policy Matrix

Policy	Tool A	Tool B	Tool C	Tool D	Tool E	Tool F	Tool G	Tool H	Tool I	Tool J	Tool K	Tool L	Tool M	Tool N
CD-1.a		•								•	•			
CD-1.b										•	•			
CD-1.c											•			
CD-1.d	•								•		•			
CD-1.e					•									
CD-1.f								•				•		
CD-2.a					•									
CD-2.b					•									
CD-2.c							•							
CD-2.d	•			•										
CD-2.e	•		•	•			•	•	•					
CD-3.a						•	•							
CD-3.b													•	
CD-3.c			•	•				•			•			•
CD-3.d			•	•	•	•	•							
CD-3.e		•	•					•			•	•		
CD-4.a				•	•								•	
CD-4.b	•		•	•										
CD-5.a	•	•	•	•					•					
CD-5.b	•		•	•					•					
CD-5.c					•			•	•	•				
CD-5.d	•	•	•	•	•		•	•	•	•				
CD-6.a					•				•					
CD-6.b	•	•	•	•					•					
CD-6.c						•	•	•						•

Conclusion

This Sonoma County Airport and Environs Area Plan presents an ambitious vision of what our study area can be. We have used on-the-ground research, cutting-edge theories in the planning discipline, and creative proposals from our entire class in the preparation of this plan.

Our Land Use and Economic Development team has shown how the study area can be a thriving, innovative, and environmentally responsible center of housing and jobs. Leveraging the idea of Transit-Oriented Development, we envision the close proximity of residential developments and public transportation hubs anchored by the future presence of the SMART train. In response to the current economic downturn, which has affected local businesses especially hard, there are a number of tools proposed to revitalize existing companies and attract new ones.

The Circulation group's vision for the study area improves all modes of transportation: walking, bicycling, driving, and public transit. Bicycling is an especially important component of the future plan. The creation of more Class I and Class II bike lanes will complement the SMART train's ability to convey bicycles, thereby facilitating daily commuters. The reinvention of Airport Blvd. into a multimodal complete street dovetails nicely with the pending Airport expansion project. The proposals are respectful of the problem relating to GHG production, and many ways to reduce pollution have been suggested.

Much of the future economic activity of the study area will be influenced by or depend upon the Sonoma County Airport. The Sonoma County Board of Supervisors has recently approved a grand overhaul of the Airport. Beginning in the summer of 2012 and for the next 20 years, projects ranging from runway realignment to the construction of a new control tower and passenger terminal

will be undertaken. With a new, grand entryway to welcome passengers to the Airport, and a newly enlarged Boulevard to get them there, the Airport will have a contemporary, 21st century appearance. The number flights and destinations offered will increase steadily over the years. We also want to discourage any further residential development within the Community Noise Equivalent Level (CNEL) contour of 60 decibels (db) to reduce the number of noise complaints.

The Environment group has identified several actions that can be taken to improve the study area for its residents and visitors. Policies to reduce noise propagation, improve air quality, control flooding, and halt gravel mining on the Russian River are just a few of the proposals. Our study area benefits from an abundance of prime real estate, vineyards, endangered species, wetlands, and other sensitive habitats. In planning for the future, it is our goal to protect them all.

Finally, the Community Design group sees a variety of measures that will turn the study area into a desirable place to live and work. We envision community bonding through social events such as farmers' markets and popular after-work gatherings. We also advocate a deliberate program to create a consistent look for signs and streets. This will improve connectivity and provide a sense of place.

We recognize that our Area Plan contains some extravagant policies and enacting them will require political will and creative financing. However, we are confident that the Sonoma County Airport and environs study area can become a world-class destination, and a model for rural towns across the country. It has the promise of becoming a wonderful and unique *Blend of Sonoma County*.

--The SSU Planning Workshop Senior Class, 2011-2012

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Appendix A

References

Land Use & Economic Development

- Andrews, N. & Jacobson, T. (2010). *Healthy By Design: A Public Health and Land Use Planning Workbook*. Sonoma County Agricultural Preservation and Open Space District, Medical Association Alliance Foundation, Department Health Services.
- Association of Bay Area Governments & MTC (2012) *Jobs-Housing Connection Scenario (SCS)*. Oakland: ABAG.
- Board, E. D. (2011). *Local Economic Report Spring 2011*. Sonoma County: County of Sonoma
- Keegan & Coppin Company. (2011) *Sonoma County Vacancy Reports*. Santa Rosa, CA.
- Moore, T. Meck S. & Ebenhoh J. (2011) *An Economic Development Toolbox*. Chicago: American Planning Association.
- National Crime Prevention Association. (2001). "Strategy: Starting Neighborhood Watch Groups." *Ncpc.org*. Retrieved March 28, 2012, from <http://www.ncpc.org/topics/preparedness/strategies/strategy-starting-neighborhood-watch-groups>
- Newman, O. (2009, January 2). "Defensible Space." *Defensiblespace.com*. Retrieved March 14, 2012, from <http://www.defensiblespace.com/book.htm>
- Sonoma County Permits and Resource Management Department. (2008). *Sonoma County General Plan*. Retrieved March 18, 2012 from <http://www.sonomacounty.org/prmd/gp2020/index.html>
- State of California (2011). "Standardized Emergency Management System". *Calema.ca.gov*. Retrieved March 20, 2012, from <http://www.calema.ca.gov/PlanningandPreparedness/Pages/Standardized-Emergency-Management-System.aspx>
- The Center for Applied Transect Studies. "Center For Applied Transect Studies" *Transect.org*. Retrieved March 17, 2012, from <http://www.transect.org/index.html>
- Town of Windsor, (2011). *Town of Windsor General Plan*. Retrieved March 21, 2012, from <http://www.ci.windsor.ca.us/index.aspx?NID=385>
- U.S. Census Bureau. (2010) *American Factfinder 2*. Retrieved February 13th, 2012, from

<http://factfinder2.census.gov/main.html>

Wells, D. "Converted Buses Teach Sustainability." *Coolcalifornia.org*. Retrieved March 5, 2012, from <http://www.coolcalifornia.org/case-study/windsor-high-school>

Circulation

Assembly Bill 32. (n.d.). Air Resources Board. 2008 <http://www.arb.ca.gov>

Brown, V. (2012). *Sonoma County Transportation Authority*. Retrieved from sctainfo.org

DOT. (2012). *Department of transportation*. dot.ca.gov

Harkin, Tom. (2011, April 06). *Complete streets*. Retrieved from completestreets.org

SCT. (2012). *Sonoma county transit*. Retrieved General information from sctransit.com

SMART. (2012). *Sonoma Marin area rail transit*. Rail Stops, Area Plan sonomamarintrain.org

Update to the General Plan Guidelines: Complete Streets and the Circulation Element. (n.d.). Office of Planning and Research. December 15, 2010, <http://www.opr.ca.gov>

US DOT. (2011). *Federal transit authority*. Retrieved from fta.dot.gov

Windsor Bicycle & Pedestrian Master Plan. (n.d.). Town of Windsor. December 1, 2012, <http://www.ci.windsor.ca.us>

Sonoma County Airport

Mead and Hunt. *Charles M. Schulz? Charles M. Schulz? Sonoma County Airport Sonoma County Airport Master Plan Master Plan July 2011 Final Draft*. Rep. *Sonoma County Airport*. County of Sonoma, July 2011. Web. 23 Jan. 2012. <http://www.sonomacountyairport.org/master-plan-documents-2011>.

State of California Department of Transportation. *California Airport Land Use Planning Handbook*. Rep. 2011. *California Airport Land Use Planning Handbook*. Oct. 2011. Jan. 2012.

<http://www.dot.ca.gov/hq/planning/aeronaut/documents/AirportLandUsePlanningHandbook.pdf>

Environment

California Green Building Standards (2008)

http://www.documents.dgs.ca.gov/bsc/2009/part11_2008_calgreen_code.pdf

California Seismic Safety Commission. (2003) *Earthquake Shaking Potential*. Retrieved on November 28th, 2011 from

<http://gis.abag.ca.gov/Website/shakingpotential/index.html>

Charles M. Schulz- Sonoma County Airport

<http://www.sonomacountyairport.org/going-green>

Duany, A. Speck J. Lydon, M. (2010) *The Smart Growth Manual*. San Francisco, CA: McGraw-Hill.

Leadership in Energy and Environmental Design (LEED)

<http://www.usgbc.org/DisplayPage.aspx?CMSPageID=1988>

Russian Riverkeeper. (2010) *Gravel Mining Issues in the Russian River Watershed*. Retrieved March 21, 2012 from

<http://www.ci.windsor.ca.us/index.aspx?NID=385>

Seismic Hazards. (2007) Michigan Technological University, 1, March 2012

<http://www.geo.mtu.edu/UPSeis/hazards.html>

Sonoma County Agricultural Preservation and Open Space District

<http://www.sonomaopenspace.org/>

Sonoma County Permits and Resource Management Department. (2008) *Sonoma County General Plan*. Retrieved March 21, 2012 from

<http://www.sonomacounty.org/prmd/gp2020/index.html>

Sonoma County Water Agency. (2010) *Groundwater Primer for the Santa Rosa Plain*. Retrieved March 21, 2012, from

<http://www.ci.windsor.ca.us/index.aspx?NID=385>

Town of Windsor, (2011). *Town of Windsor General Plan*. Retrieved March 21, 2012 from <http://www.ci.windsor.ca.us/index.aspx?NID=385>

United States Geological Service, (2011) *Franciscan Complex*. Retrieved January 27, 2012 from <http://menlocampus.wr.usgs.gov/50years/accomplishments/fanciscan.html>

State and federally listed Endangered and Threatened animal of CA. Retrieved March 23, 2012 from <http://www.dfg.ca.gov/biogeodata/cnddb/pdfs/TEAnimals.pdf>

Community Design

Fleming, R. L. (2011). *The Art of Placemaking: Interpreting Community Through Public Art and Urban Design*. New York: Merrell Publishers.

Duany, A. Speck J. Lydon, M. (2010) *The Smart Growth Manual*. San Francisco, CA: McGraw-Hill.

Jacobs, A. B. (1999). *Great Streets*. Cambridge: MIT Press.

Oldenburg, R. (1991) *The Great Good Place: Cafés, coffee shops, community centers, and how they get you through the day*. New York: Paragon House.

Whyte, W. H. (1980) *The Social Life of Small Urban Spaces*. Washington D.C.: The Conservation Foundation.

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Appendix B

Glossary

Affordable Housing – A term used to describe dwelling units whose total housing costs are deemed affordable to those who have a median household income. Roughly speaking, when the monthly costs of a home exceed 30–35% of household income, then the housing is considered unaffordable for that household.

Aquifer – An aquifer is a saturated zone of sediment or rock with high enough permeability to transmit groundwater, and yielding economically significant quantities of water to wells and springs.

Assembly Bill 32 (AB32) – Global Warming Solutions Act of 2006 which set the 2020 greenhouse gas emissions reduction goal into law.

Bike Class Rights-of-Way – Divided into three different classes:

- Class I Bike Path: Completely separate from traffic.
- Class II Bike Lane: A lane set aside in city streets exclusively for bikes.
- Class III Bike Route: Shares roadway with vehicles.

Biodynamic Agriculture – Biodynamic agriculture is a “spiritual-ethical-ecological” approach to agriculture. The primary goals are to create a balanced ecosystem and to enhance the nutrition of food being grown.

Bulb-outs – Traffic calming measures, generally used to extend the sidewalk at intersections, reducing the crossing distance for pedestrians. Provides more safety space for pedestrians by reducing the space needed to walk across a street.

California State Endangered – Animal or plant is in serious danger of becoming extinct throughout all, or a significant portion, of their range due to one or more causes, including loss of habitat, over-exploitation, competition or disease.

California State Rare – Animal or plant, although not presently threatened with extinction, is in such small numbers throughout their range that they may become endangered if their present environment worsens.

California State Threatened – Animal or plant, although not presently threatened with extinction, is likely to become endangered in the foreseeable future without special protection and management efforts.

Capital Improvement Program (CIP) – A short-range plan, typically five years, which identifies capital projects and equipment purchases, provides a planning schedule, and identifies options for financing the plan. A way for local governments to finance and implement projects.

CEQA – The California Environmental Quality Act. Legislation signed by then California governor Ronald Reagan in 1970 requiring that certain projects be subject to an environmental review process. Stereotypically viewed as being responsible for pitting developers against environmentalists.

Cluster Industries – Geographic location of two or more firms that specialize in similar products or services that share specialized suppliers, service providers, or labor pools.

Cool Roofs – A cool roof is one that reflects the sun's heat and emits absorbed radiation back into the atmosphere. The two basic characteristics that determine the 'coolness' of a roof are solar reflectance and thermal emittance. Both properties are rated on a scale from 0 to 1, where 1 is the most reflective or emissive.

Community Design – The way the area as a whole is designed. Generally, all buildings and features will follow the same look and feel. This includes lines, contours, colors, and shapes that a community portrays.

Community-Enhancing – Features that contribute to the beauty and functionality of the community. These features can be parks, fountains, gardens, and other visually attractive elements.

Community Feeling – The way an area allows users to experience its beauty and functions. Generally, urban areas are more alive and busy, while rural areas are quiet and relaxing.

Community Garden – A shared piece of land that is cultivated by a group of individuals who live within the surrounding community and grow produce for community members consumption.

Community Noise Equivalent Level (CNEL) – A noise measurement system introduced by the state of California in the early 1970s. CNEL is a single number that is calculated from a weighted average of sound levels gathered throughout a 24-hour period. Penalties are added for noise which occurs during the evening and late at night.

Compact Commercial – Commercial development built in close proximity to one another utilizing party and mixed-use development.

Complete Streets – Roadways designed and operated to provide safe and comfortable access and travel to all users, including pedestrians, bicyclists, motorists, and public transit.

Connectivity – Density of connections in path or road networks, and the directness of links between neighborhoods and cities.

Conservation – The management of natural resources to prevent waste, depletion, destruction, or neglect.

Corridor – Is a 1/8 mile radius buffer running the length of specific streets in an effort to provide uniform development on key streets.

Downtown Feeling – The experience that an area impresses on those who use the area. This adds to the character that the area gives to its users.

Fault – A fracture in the earth's crust forming a boundary between rock masses that have shifted.

Federal Emergency Management Agency – FEMA coordinates the response to disasters that occur in the United States that overwhelm the resources of local and state authorities. The governor of the state in which the disaster occurs must declare a state of emergency and formally request assistance from the president.

Federal Endangered Species – The US Endangered Species Act (ESA) is Federal legislation that conserves the ecosystems upon which endangered and threatened species depend. The ESA protects plant and animal species, and is jointly administered by the US Fish & Wildlife Service and NOAA Fisheries. Its aim is twofold: to provide protection for species that are in danger of extinction, and to conserve the habitats on which those species depend.

Flood, 100-Year – The magnitude of a flood expected to occur on average every 100 years, based on historical data. A 100-year flood has a 1/100, or one percent, chance of occurring in any given year.

Form-Based Code – A means of regulating development to achieve a specific urban form. They are regulations, not mere guidelines, adopted into law. Form-based codes offer a powerful alternative to conventional zoning.

Goal – A general, overall, and ultimate purpose; an aim or end toward which a city will direct its efforts.

Green Building – A holistic approach to design, construction, and demolition that minimizes the building's impact on the environment, the occupants and the community.

Greenhouse Gases (GHG) – Gasses in the atmosphere that absorb and emit radiation within the thermal infrared range. This process is the fundamental cause of the greenhouse effect. The primary greenhouse gases in the Earth's atmosphere are water vapor, carbon dioxide, methane, nitrous oxide, and ozone.

Hazardous Uses – Any substance that contributes to the potential risk, harm, or damage of an individual and may cause adverse health effects.

Heat Island Effect – A phenomenon where urban and suburban temperatures are 2° to 10° F warmer than nearby rural areas.

High Skill Industries – Employment types that require employees with higher education, skills, and experience that inevitably result in higher pay and benefits.

Horizon Year – The future year to which a planning activity is directed.

Human Capital – The agglomeration of the labor pool within a particular economic region that is compounded by skill training or postsecondary education.

Level Of Service (LOS) – A term that grades the levels of traffic in a given roadway or intersection during a given time period. The levels range from LOS A (no traffic) to LOS F (extremely congested traffic).

Liquefaction – The transformation of loose, wet soil from a solid to a liquid state, usually as a result of ground shaking during an earthquake.

Mixed-Use – Properties on which various uses, such as office or commercial and residential, all combine in a single building or on a single site. Proper mixed-use will have major functional interrelationships and a coherent physical design.

Multimodal – Using two or more forms of transportation to get from origin to destination.

Neighborhood Watch Groups – A neighborhood surveillance program in which residents keep watch over one another's houses and patrol the community streets in an attempt to prevent crime.

Nodes – Are 1/4 mile radius buffers around specific intersections where mixed-use development will be located.

Noise Contour – A line drawn around a noise source indicating equal levels of noise exposure. CNEL is a typical metric used to describe annoyance due to noise, and to establish future land use planning criteria.

Open Space – Any parcel that is essentially unimproved and devoted to an open-space use for the purposes of the preservation of natural resources; the managed production of resources; outdoor recreation; or public health & safety.

Open Space District – A Special District formed by a vote of the citizens of Sonoma County in 1990. The voters chose to form the District to acquire and preserve agricultural and open space lands as a legacy for future generations.

Pareto Efficiency – A transaction or allocation of resources between two or more parties where all agents involved result in no net loss.

Policy – A specific statement of principles or guiding actions that imply clear commitment, but is not mandatory. A general direction that a city will follow in order to meet its goals and objectives by undertaking specific action programs.

Quality of Life – A term used to evaluate the general well-being of individuals within a community.

Ridership – Use of SMART train by transients and residents of the area.

Sense of Place – A term typically used in relation to those characteristics that make a place special or unique. Some communities have it, while others don't.

Smart Growth – Fosters community designs that are attractive, convenient, safe, and healthy through 10 distinguished principles.

SMART Train – The Sonoma-Marín Area Rail Transit train. Eventually, these passenger trains will run from Cloverdale in the north to Larkspur Landing (and the Ferry Terminal) in the south. An initial run from Santa Rosa to San Rafael will open in 2016, with additional service coming online as funding becomes available. SMART Directors voted in April 2012 to add a station on Airport Blvd. at an unspecified date in the future.

Sound Walls – An exterior structure designed as a method for mitigating noise sources in order to protect residents from noise and serve as a noise barrier.

Sustainability – That which meets our current needs without compromising the ability of future generations to meet their needs.

Sustainable Winemaking – Encompasses environmentally sound, economically feasible, and socially equitable practices that pursue sustainability. In California, wine growers can be certified by California Sustainable Winegrowing to obtain sustainable winemaking status.

Target Industries – Business sectors that have been established within a particular region that will help develop cluster industries as well as industries that are determined to have higher than average growth in employment and revenue.

Third Places – Places that give people a place to gather and connect with other people in the community. Often restaurants, cafes, bars, and pubs. Distinct from the two usual social environments of home and the workplace.

Tight-Knit Housing – Housing built in close proximity to one another utilizing party walls and two-story development.

Transit-Oriented Development (TOD) – Design to a mixed-use residential or commercial area that contains specific features to maximize access to public transportation and increase ridership, often characterized by a central transit facility.

Underutilized Sites – Parcels or sites within the Airport Industrial Park where no development is currently located, or sites within one quarter mile of the selected nodes and corridors that do not contain commercial or residential uses.

Urban Growth Boundary – An officially adopted and mapped line dividing land to be developed from land to be protected for natural or rural uses.

Visual Character – The visual aspects of the community that attract users and adds to the overall community character. These elements add to the overall feeling of a community being successful.

Volatile Organic Compounds (VOC) – Gases emitted from certain solids or liquids. Many VOCs are dangerous to human health or cause harm to the environment. Usually found in very low concentrations outdoors, and higher concentrations indoors.

Transit-Oriented Development (TOD) – Design for a mixed-use residential or commercial area that contains specific features to maximize access to public transportation and increase ridership, often characterized by a central transit facility.

Walkable Community – A community where people can walk safely and reach many destinations on foot.

Watershed – The total area above a given point on a watercourse that contributes water to its flow; the entire region drained by a waterway that drains into a lake or reservoir.

Williamson Act – The California Land Conservation Act of 1965, also known as the Williamson Act, is a law that provides property tax relief to owners of farmland in exchange for a ten-year agreement that the land will not be developed. Used for preserving land as agriculture or open space.

Xeriscaping – Drought-tolerant landscaping and gardening. From the Greek word “xeros” meaning dry. Xeriscape is a registered trademark of Denver Water, where the term originated.

Zoning – The division of a city or county by legislative regulations into areas, or zones, that specify allowable uses for real property and size restrictions for buildings within those areas.

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Appendix C

Form Based Codes:
Regulations that dictate
the relationship between
building facades and the
public realm.

1. Housing Standards
 - a. Housing Density shall not fall below 20 housing units for the entire parcel and not exceed 30 hu/acre.
 - i. Where current housing exists within the chosen sites, second housing units are permitted on housing units that are below 8 hu/acre and will be given permitting process priority above other projects within its respective jurisdiction.
 - b. Only Townhouses and multi-family houses are permitted. A mixture of housing types on each parcel is allowed and encouraged.
 - i. All townhouses must have porch/deck facing street and/or major walking thoroughfare.
 - ii. Multifamily units must have private balcony with capacity of 2 people facing either street or major walking thoroughfare.
 - iii. All residential projects may have a setback maximum of 10 feet.
 - c. Minimum of ten percent of total square feet devoted to housing must be provided in local/neighborhood park(s).
 - d. For every housing unit there must be at least 20 square feet of garden space.
 - e. Developments of 5 housing units or more must either have:
 - i. 20% for moderate income
 - ii. 15% for low income
 - iii. 10% for very low income
 - f. Maximum building height is four floors and must maintain community character and adhere to all airport land use regulations outlined in the California Airport Land Use Compatibility Handbook.
 - i. Community character determined at the discretion of the planning commission and/or design review board
2. Commercial Standards
 - a. Buildings may have setback up to 20 feet from street front. Setback distance must be landscaped with pedestrian friendly elements.
 - b. Floor area ratio (FAR) minimum of .85, maximum of 2.5.
 - i. Exceptions allowed at the discretion of design review board only but FAR may not fall below .65 and not exceed 3.
 - c. Maximum building height is four floors and must maintain community character and adhere to all airport land use regulations outlined in the California Airport Land Use Compatibility Handbook.
 - i. Community character determined at the discretion of the planning commission and/or design review board.
 - d. Where a commercial space is left with a tenant for over six months, it shall be eligible for adaptive reuse into residential lofts at market rate.
 - e. No single use may occupy more than 15,000 of ground floor of mix-use development.
3. Mixed-use Standards
 - a. Mixed-use developments must have either commercial or retail on bottom floor(s) and must be contiguous.
 - b. Minimum residential density on top floor(s) is $(1/\text{FAR of commercial}) \times 14$.
 - c. Floor Area Ratio of commercial/retail minimum is 0.65.

- d. No less than 70% of store front on first floor must be glass to create inviting, porous pedestrian front.
 - e. No single use may occupy more than 10,000 of ground floor of mix-use development.
 - f. No type of "diverse use" may occupy mix-use development where amount of retail/commercial space exceeds 25,000 square feet. The diversity of uses must be found sufficient by the planning commission and/or design review board.
 - i. Diverse Uses
 - 1. Food Stores (Supermarket, corner store)
 - 2. Restaurants (Drive thru not permitted)
 - 3. Business Services
 - 4. Health Services
 - 5. Personal Care
 - g. Maximum building height is four floors and must maintain community character and adhere to all airport land use regulations outlined in the California Airport Land Use compatibility handbook.
 - i. Community character determined at the discretion of the planning commission and/or design review board.
4. Work-Live Standards
- a. For every housing unit created for this land use designation, there must be only one place of business located beneath the housing unit.
 - b. Regular residential parking standards apply.
 - c.
5. Parking Standards
- a. Parking is not allowed to obstruct the building frontage with sidewalks and streets. It shall be located behind buildings out of view of pedestrians/motorists.
 - i. Exception applies to work-live units where single spot per unit may be located in front store.
 - b. Parking Maximums
 - i. Commercial: One spot per 225 office square feet.
 - ii. Industrial: one spot per 900 square feet (for employee parking).
 - iii. Retail: Four spots per 1000 square feet of retail space.
 - iv. Residential: 1.25 spots per housing unit
 - 1. One spot per housing unit required, additional spots shall be rented/sold separately from housing unit rent/mortgage at market rate.
 - v. Work-Live: One spot per working unit (doesn't include residential spot located behind store).
 - c. Parking spots square footage shall not exceed 150.
6. Corridor/Node Regulation
- a. The code listed above in this appendix is required of all parcels that transect one half mile of activity node or one quarter mile of vibrant corridor
 - i. Node Sites
 - 1. Airport Boulevard and SMART Train tracks

2. Skylane Boulevard and Shiloh Road
 3. Windsor River Road and Windsor Road (1/2 mile for this node)
- ii. Corridors
1. Airport Boulevard
 2. Skylane Boulevard
 3. Shiloh Boulevard
 4. Windsor River Road
- b. Industrial uses shall utilize the entire plot of land they are located on, mandating a Floor Area Ratio of 1.0.
- c. Land Use designations from this point forward are changed to respective designation as indicated in its Site Plan within this Area Plan.
- d. All current zoning code from both the County of Sonoma and the Town of Windsor still apply with the exception of conflict with this code. In such instances this appendix of form-based codes shall supersede conflicted requirements.

Appendix D

This Appendix outlines the four Site Plans chosen as incubator development sites throughout the study area.

Site Plan #1

Airport Boulevard and SMART Station



Vision

The Airport Boulevard and TOD Station Site Plan addresses the county's 2030 Regional Housing Needs Allocation problem while adhering to the County's General Plan Guidelines. This includes the Land Use Element goals LU-2 and LU-3 that mandate new housing development in the unincorporated county within current urban service areas and infill. The Site Plan also embellishes the current agglomeration of commercial land uses and skilled jobs with more office space. Currently industrial uses along the Airport Corridor have moved towards the south and west sections of the study area, away from vibrant, pedestrian paths and closer to the airport where noise is less of a

concern. While this corridor has historically dealt with the mono-locating of commercial use, the Site Plan attempts to create an enjoyable environment for the employees of this district. This area will be supplemented with the vibrancy of urban populations catered to the young, creative generation that wishes to live in diverse communities near where they work. It will also tame the enormous jobs to housing ratio and ultimately lower the vehicle miles traveled, reducing congestion. Another tool to accomplish these goals is the introduction of Live-Work units along Airport Boulevard that provide a working space for every housing unit provided at the same site. This type of housing is provided to adapt to the changing housing paradigm in which Millennials prefer to be entrepreneurs and start their own companies.

Description

Site Location	Parcel Number	Description
R.1	059-240-019	This site next to Airport Boulevard will locate 20 very low income housing units and increase the vibrancy of the pedestrian pathway along Airport Boulevard.
R.2	059-240-019	This parcel tangent to Regional Parkway will be the location of 60 very low income housing units.
R.3	059-350-103	This parcel north of Airport Blvd will house 25 units for the elderly and will fall under the qualification of low income due to diminishing income for the elderly.
R.4	059-240-009 059-240-008 059-240-038	This large parcel along the train tracks will be the largest development of housing in the Airport Business Park with 350 units divided into 50 for market rate pricing, 75 for moderate income housing, 75 for low income, and 150 for very low income
R.5	059_240-073	This small parcel next to the large housing subdivision of R.3 will be the location of 55 units, 20 of which will be for low income and 35 for very low income.
R.6	059-230-062 059-230-061	Site R.6 has good potential to develop housing with surrounding retail and other residential. This parcel specifically will hold 30 units at market rate, due to its proximity to highway 101 and should be sold at whatever rate that is desired at the time.
R.7	059-230-056	Similar to R.7, this site will house 50 units, which will be sold at market rates.

C.1	059-370-022 059-370-023 059-370-024	This new development for office space will complement the surrounding area of commercial real estate and provide 119,000 square feet of office space.
C.2	059-271-090	Another new development will further the commercial center of the Airport Business Park by adding 215,000 square feet of office space.
C.3	059-271-073	Similar to C.2, this development will add 215,000 square feet of office space and should be delayed in its development to be used as an incentive for emerging businesses aiming to locate in the County looking for a site that can be developed specifically to its needs.
C.4	059-250-003 059-250-030 059-250-031	The alteration of the site from an industrial wasteland will change into a commercial site housing 268,800 square feet of commercial space.
C.5	059-250-004	Another site that is changing its designation from industrial to commercial in a process moving industrial uses away from Airport Boulevard. This site will hold 218,039 square feet of office space.
C.6	059-250-032	Changing the parcel's land use designation to commercial will add 130,800 square feet of commercial space in the Airport Blvd corridor vicinity.
C.7	059-250-033	Similar to C.6, site C.7 will change from industrial to commercial, adding 130,800 square feet of office space.
I.1	059-370-026	This site, tangent to North Laughlin Road, will help house those industrial uses and wholesale trading locations that are too land inefficient for their location on Airport Blvd. This site will add 210,000 square feet of industrial use.
I.2	059-370-027	Similar to I.1 this site will accommodate the relocation of firms within the area adding 269,325 square feet of industrial uses.
I.3	059-370-028	This site should be built to suit a regional firm locating to the County for the first time aiding the national movement towards increasing importance on manufacturing by increasing industrial space by 276,600 square feet.
I.4	059-210-049 059-210-050	Toward the southern end of the urban service area, this undeveloped parcel shall help serve the increasing importance of manufacturing to a sustainable economy with 106,672 square feet of industrial space.
I.5	059-210-056	This large parcel for industrial uses will also help increase the presence of manufacturing in the Business Park, adding 194,560 square feet of industrial space.

I.6	059-210-055	Slightly smaller industrial parcel shall be tailored to specialty industrial uses such as machinery manufacturing to support critical agricultural industries in Sonoma County. Site will have 89,600 square feet of industry.
M.1	059-340-031	This mixed-use parcel will be subdivided from the rest of the parcel to the north due to the location of a creek and endangered species, Valley Oak trees. This smaller property will house 30 residential units at market rates and 85,000 square feet of office/retail uses.
M.2	059-250-051 059-250-052 059-250-053	This site is the largest parcel of mixed-use development within the Airport Business Park and shall be the location of 160 housing units, including 50 of very low income, 30 of low income, 25 of moderate income, and 55 at market rates. Along with this diverse mix of housing will be 367,436 square feet of office/retail uses to supplement the daily needs of the residents and further the commercial importance of this community.
M.3	059-360-008 059-360-007	This linear mix use development will help supplement the street frontage of Airport Boulevard while providing the retail and office space needs of both the residents and employees of this region. It will house 25 units at market rates with 57,375 square feet of new office/retail on the bottom floor(s).
M.4	059-240-018	This site will change from its currently underutilized condition to a mixed-use location with 40 market priced housing units and 100,000 square feet of retail commercial.
M.5	059-240-054	This critical site will be the location of the SMART train station and surrounding Transit Oriented Development (TOD). This parcel specifically will hold 40 housing units at market price and 120,000 square feet of office/retail space with the intention of creating an inviting community that SMART patrons will enjoy visiting along their journey up and down the County. A portion of this 120,000 square feet of commercial space will include plenty of restaurants including a rooftop wine bar providing tastings of wine produced throughout the Russian River wine appellation. This bar and tasting room will be the centerpiece around the creation of a "Wine Village" theme at the Airport Boulevard TOD.
M.6	059-240-069	This corner parcel along Airport Boulevard and Aviation Boulevard shall be the location of a mixed-use community holding 40 housing units at market rate accompanied by a neighborhood grocery store on the ground floor occupying no more than 20,000 square feet of the available 100,000 commercial/retail space.

M.7	059-350-107 059-350-107 059-350-016	Another large mixed-use parcel will help encompass a residential community around the TOD SMART station with 96 housing units divided between 30 very low, 16 low, 20 moderate, and 30 market priced units. This large site will also be the location of 210,870 square feet of commercial/office space on the bottom floor(s).
LW.1	059-250-040	This skinny site will hold 16 live-work units to embrace the changing economic conditions of the region and nation while increasing the urban ambiance of the Airport Boulevard Corridor.
LW.2	059-250-044	This site, perpendicular to Airport Boulevard, provides the optimal location for live-work units to house young, creative entrepreneurs who wish to start their own businesses.

Community Design

Airport Boulevard acts as both a major conduit connecting Highway 101 and Sonoma County Airport, and as an initial gateway welcoming visitors into the study area. The next stage of Airport Boulevard will incorporate an aesthetically pleasing, walkable, and healthy living design that will cater to all individuals and a variety of uses. Through this design process, we feel that Airport Boulevard will become a desirable place to shop, walk, and live.

Mixed-Use Parcels (M.1-M.7)

Mixed-use parcels will include a ground floor outdoor pedestrian walkway running through development when feasible. These walkways will act as pedestrian-only streets that will funnel walking traffic through commercial/retail spaces while at the same time maximizing window front square footage for shopkeepers. If the pathway does not fit the size of the parcel, then storefronts located along Airport Boulevard will include enough room for outdoor seating, landscaping, and awnings.

Walkway amenities will include planters/fountains with bench seating, outside tables/seating, overhead string-lit lighting, awnings, and easy access in and out of storefronts. This walkway not only gives pedestrians a safe and inviting experience, but

also maximizes the functionality of storefronts that will draw in commercial services looking for high foot-traffic locations.

Residents living above commercial spaces will have outdoor porches that look down upon the pedestrian pathway and provide visually stunning views of the distant mountains.

Outside parking lots for mixed-use developments shall be located so as not to disturb the above residential uses. Furthermore, mixed-use developments should separate parking facilities between the residential units and commercial visitors.

Residential Parcels (R.1-R.7)

These residential developments will include consistent building designs, attractive landscaping alongside both the internal and exterior streets, benches, trash/recycling bins, parks, public art, fountains, and community gardens.

Streetlights and trees will be placed along bike and pedestrian pathways throughout the development, creating a safe and inviting experience for residents.

The community park/gardens will include playgrounds for children, courts for team sports, benches, and fountains involving some form of public art.

Include sound walls along parcels (M.5-M.6, R.3-R.4) where the railroad shares one side of the development. This will help to diffuse some of the noise associated with the train. This sound wall will be designed with the collaboration of local artists in order to help create a sense of community.

The parking will be close to each individual unit and have accessible walkways that are gradual and easy to maneuver. The developments should also incorporate a community facility with a common room, outdoor game courts, and an assembly/multi-purpose room for meetings, classes, and workshops.

The multi-level housing developments will be designed with a series of community plazas that include fireplaces, seating, community garden space, and planters in order to achieve an inviting social atmosphere. Each residential unit, facing inward, will have access to a private balcony/patio with views of the plaza, which encourages neighbors to meet and interact. There will also be balconies for outward facing units, which will have a variety of views depending on the direction.

Housing parcels adjacent to each other will allow consistent exterior design, signage, continuous pathways, sidewalks, and bike paths.

Commercial Parcels (C.1-C.9)

The exterior design and amenities will remain consistent between the various commercial and residential developments along Airport Boulevard. The commercial developments located next to one another should include a joint pedestrian/bikeway pathway network, which will connect the various parcels together and allow for convenient access throughout the commercial district. There will also be adequate bike parking areas, preferably involving some form of public art, to encourage alternative modes of transportation.

Each parcel should also include a "third place" for socializing and gathering both during/after work hours.

Other amenities include a combination of plazas and courtyards decorated with trees, fountains, public art, and seating. These centrally located plazas will also be used for farmers' markets, further enhancing the community feel of the area and providing safe and healthy food in a shared nearby location.

Industrial Parcels (I.1-I-6)

All Industrial parcels will not lose sight of the industrial nature of their designated uses, but at the same time must allow for basic community design principles.

Sidewalks, benches, bike lanes, and bike parking areas shall remain consistent around these areas in order to provide a safe and alternative way to get to work and rest in the area.

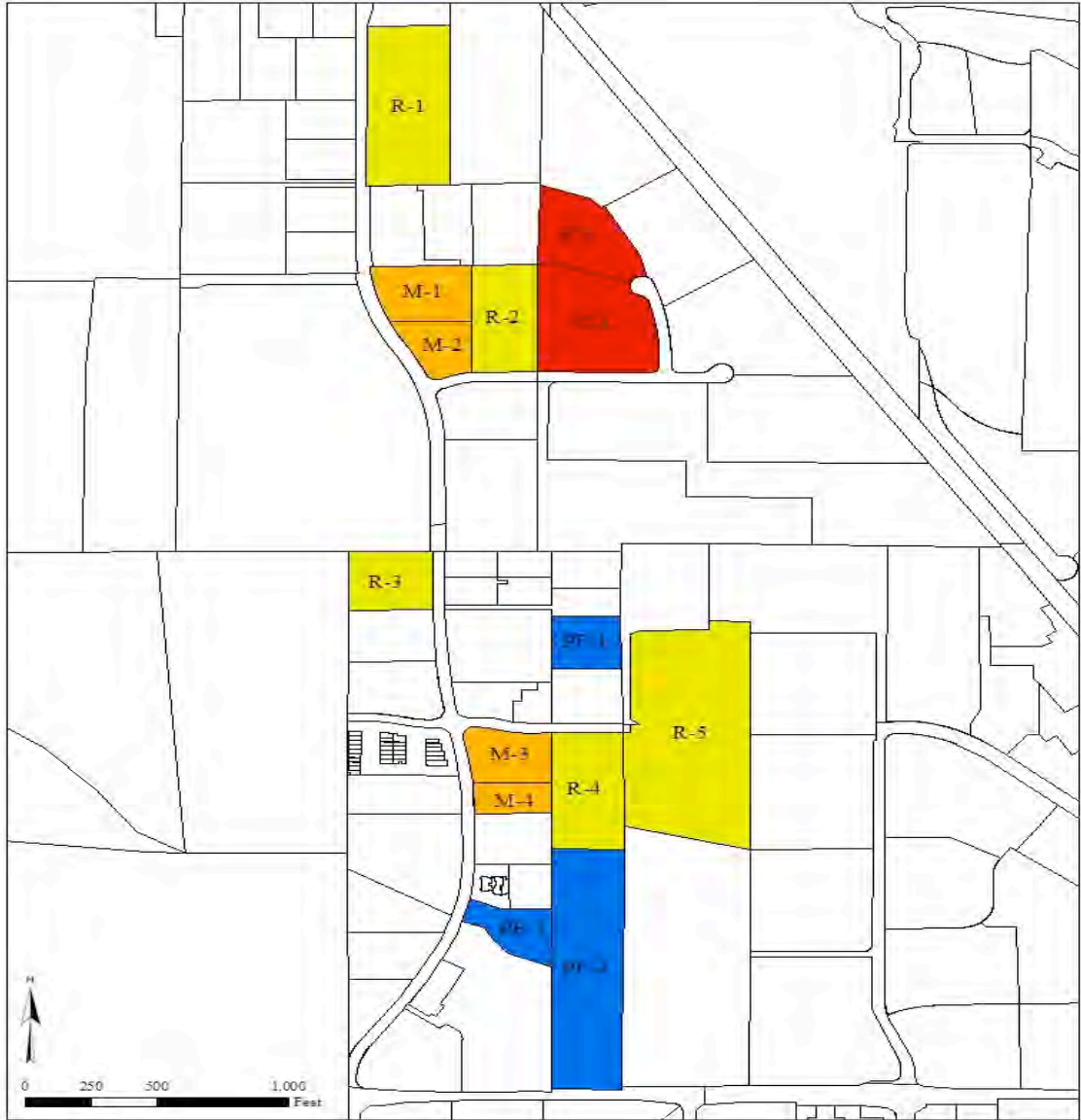
Close proximity industrial parcels will share a common outside rest area with awnings/umbrellas and bench seating in order to provide for necessary breaks and relaxation. When an industrial development is located close to residential parcels, sound walls and trees will be placed in order to counter unaesthetic eye-sores and avoid community disturbing noise.

Live Work (LW-1-LW.2)

The live-work developments will remain consistent with the exterior and streetscape design of nearby commercial/residential uses. The street side first floor of commercial/office uses will maintain a professional design with windows overlooking Airport Boulevard. Business signs will be allowed as long as the design and size is consistent with zoning and other nearby signs.

The rear side of the buildings will include a small private shared outdoor space to allow extra room for patio seating, barbeques, and nighttime activities. The above floors will incorporate patios with views of Sonoma County and Airport Boulevard.

Site Plan #2 Skylane Corridor



Vision

The Skyline corridor is emphasized as a housing corridor. The residential units will be classified as moderate-income, low-income, and very low-income housing. Mixed residential units line the boulevard to provide essential needs within walking distance for residents while keeping the current commercial buildings intact. Adaptive reuse of a current commercial building (R-3) adds to the diverse mixture of the corridor. The corridor also dedicates over 9 acres to recreational parks and Valley Oak mitigation sites within the 1/8 mile radius corridor extending out from Skyline Boulevard.

Description

Site Location	Parcel Number	Description
R.1	164-150-061	Subdivide parcel to equate 4 acres. On the 4 acres, 80 residential units of moderate-income housing shall be built. There will also be 1,600 square feet of garden space.
R.2	164-150-040	The parcel will have 78 units of very-low income housing units. It will also include 1,560 square feet of garden space.
R.3	059-340-005	This parcel will use the existing building on the parcel and adaptively reuse it for very-low income housing. The parcel will include 57 units and 1,140 square feet of garden space.
R.4	059-340-032	The parcel will be zoned residential and contain 88 low-income housing units and 1,760 square feet of garden space.
R.5	059-271-045	The parcel will be zoned residential and have 100 low-income units and 204 very-low income units. There shall also be 6,080 square feet dedicated to garden space.
M.1	164-150-038	The parcel will be zoned mix-use residential and commercial units. This will include 30 residential units of moderate-income housing and 91,476 square feet of commercial retail on the bottom floor.
M.2	164-150-039	The parcel will be zoned for mixed-use residential and commercial units. This will include 21 units of moderate-income housing and 52,000 square feet of commercial retail.

M.3	059-340-011	This parcel shall be zoned for mixed-use residential and shall include 36 moderate-income housing and 65,340 square feet of commercial retail on the bottom floor.
M.4	059-340-012	This parcel will be zoned mixed-use and will include 20 units of moderate-income residential housing and 43,560 square feet of commercial retail.
C.1	164-240-012	This parcel will be zone for commercial and will have 122,400 square feet available for commercial or retail use.
C.2	164-240-011	The parcel will be zoned for commercial uses and will have 206,470 square feet available for commercial or retail use.
PF.1	059-304-056	The parcel will be subdivided to allow for a park on the currently vacant land. This park can be used as a site for mitigation of Valley Oak.
PF.2	059-340-031	The parcel will be subdivided to allow for development along Airport Blvd. (see <i>Site Plan 1</i>). The parcel will then be used as a recreational par and a site for Valley Oak mitigation.
PF.3	059-340-035	The parcel will be used as a recreational park and a site for Valley Oak mitigation.

Community Design

Skylane Boulevard Corridor Specifics:

Just south of Shiloh Road at identifier R-1, we plan to divide the parcel into 4 acres. On these 4 acres, 80 residential units of moderate income housing will make up the space. The plan calls for designing the housing units as townhouses, single family homes, and apartments that create a healthy vibrant community. The remaining area of the parcel is devoted to open space. There will be 1,600 square feet for a community park and plaza. The project will have a community fountain feature, brick courtyard surrounded

by benches and tables for outdoor seating space. This community park will provide the residents of the new neighborhood with their own outdoor space with shade, seating, and places for public meetings.

The new housing will not follow typical suburban practices. Instead, the homes will have front porches and small front gardens to promote friendly neighborhood encounters with the residents, parking shall be located in the rear of the houses along small connecting alleys. By having the garages and parking in the back away from the main street, we can promote a healthier walking lifestyle by leaving more sidewalk and street space for the pedestrians and bikers. This will also take away from the automobile dominance of the visual environment.

Further down on Skylane Blvd off of Kittyhawk Boulevard at identifier R-2, the plan calls for developing 78 units of very low-income housing. The area will also include a 1,560 square foot area devoted to open space. The space shall be used as either a community garden for the housing units, or as a large open park for lying out and enjoying daytime sun. The park will be back from the main street for parents to feel safe letting their kids spend the day there. There will be plenty of trees involved in this development. Trees function to both physically enhance the area, and provide visual interest for those who live in the area. A development that we envision might look and feel like a smaller scale Jack London Square in Oakland, CA. Proximity to offices and regional connections like the SMART train and Charles M. Schulz—Sonoma County Airport will enhance public access and create a vibrant downtown community core.

This development is directly next to the outdoor mall and Main Street that is also being proposed, so the neighborhood behind the development will need to be separated from the rest of the parcels nearby. We propose to include thinner streets and wide sidewalks to slow down traffic. There will also be benches along the streets and trees along the edges to allow pedestrians the option to feel welcomed by the sidewalk. The idea is to have residents and users feel safe walking along their sidewalks in order to enjoy the development.

The next identifier that is located just south of KittyHawk Blvd, off of Skylane Blvd is R-3, will use the existing building on the parcel and adaptively reuse it for very low-income housing. The parcel will have to include 57 units and 1,140 square feet of garden space.

Further down Skylane Blvd, off of Aviation Blvd. identifier R-4. This parcel will have residential uses and contain 88 low income housing units and 1,760 square feet of garden space. Adjacent to this parcel is identifier R-5, which shall be zoned residential and have 100 low income units as well as 204 very low income housing units. There shall also be 6,080 square feet of dedicated garden space. We propose to create a connected walk between these parcels. The area would have a bike path as well as a pedestrian walking path to connect all of the surrounding parcels.

It is envisioned that several parcels will be used for this development. Local artists shall provide art for the paths; we propose to have stops along the walk for seating and admiring the art pieces. Native plants will mostly be used for the landscaping along the edges of the walkway, valley oaks shall be highlighted throughout the park.

The development of these parcels will be as recreational open space, will include some playing fields for local sports teams to use, 2 baseball fields, and one soccer field shall be located within R-5. These parks and open space will provide the community space to enjoy with their families and converse with neighbors. The goal of this space is to become a vibrant healthy community space for all those who live in the surrounding neighborhoods as well as those who visit the space.

Identifier M-1 shall be zoned for mixed-use residential and commercial units. This will include 30 residential units of moderate income housing and 52,420 square feet of commercial retail. This development will have a wide range of cafes, shops, and restaurants. This parcel lies directly next to identifier M-2; we propose to use these two adjacent parcels as a way to create an area within the corridor that is a vibrant urban area. This will resemble, on a smaller scale, Santana Row in San Jose, California. The development shall have a pedestrian only "street" between the buildings in either parcel to allow for pedestrians to be the highlight of the development and to allow for shops to

be highlighted. This development will have a similar flavor to that of Santana Row. In fact, there will be retail stores and cafes on the bottom floor, with businesses allowed to be up to the second floor, and have condos and apartments above the businesses below. The development could also take on the image of the Windsor Town Green.

Identifier M-3 shall be zoned mixed use and shall include 36 moderate income housing and have 65,340 square feet of commercial retail on the bottom floor. Identifier M-4, which borders M-3, shall be zoned mixed-use and will include 20 units of moderate income residential housing and 43,560 square feet of commercial retail. The development that is proposed for these two parcels shall serve as an area to attract restaurants and bars and concert goers as some of the public open space located in R-4, R-5, and PF-3 shall be devoted to providing space for local community concerts.

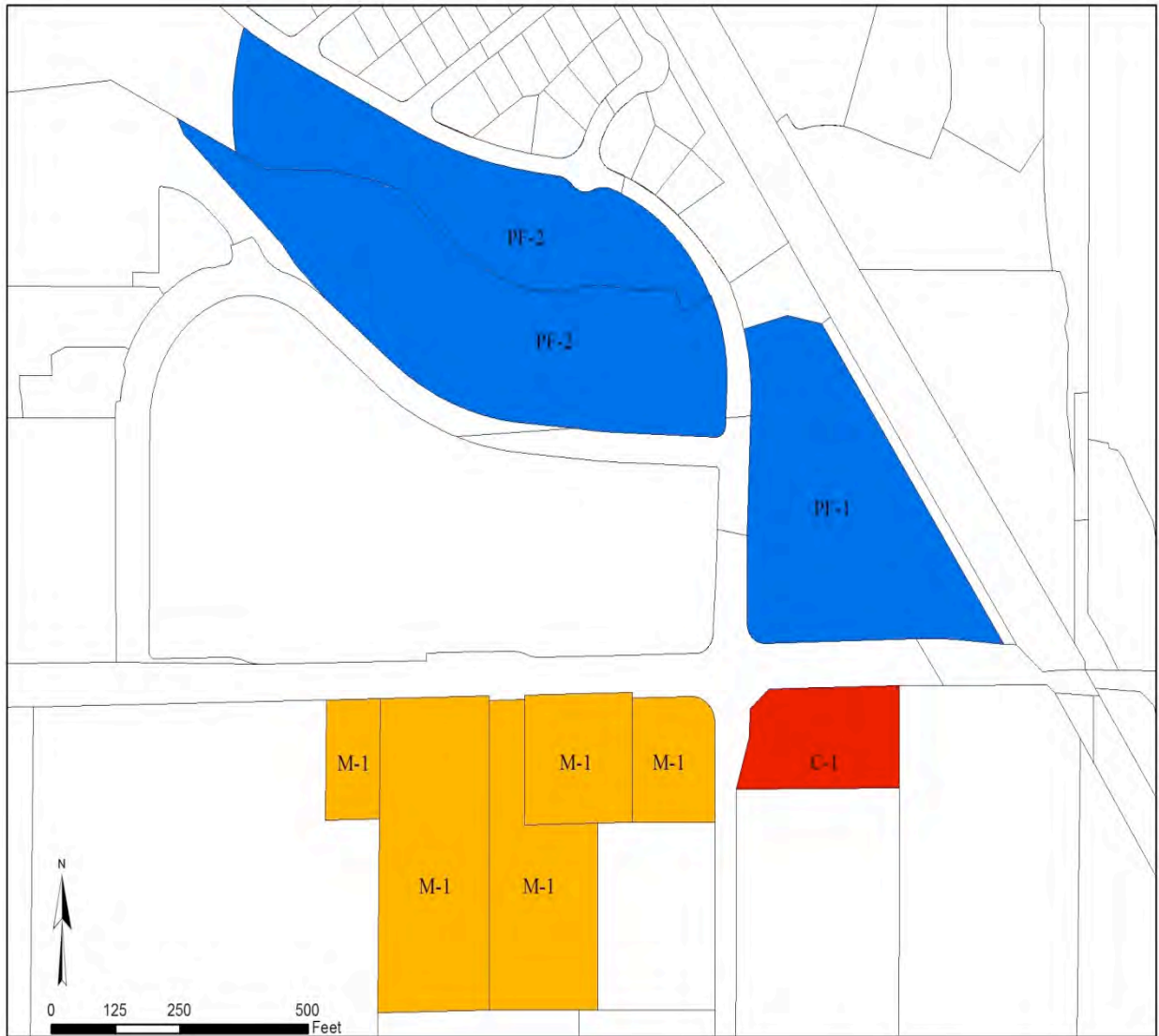
Tree-lined sidewalks are proposed with ample room for window shoppers and outdoor diners. There will be a large plaza devoted to community functions. This shall act as a neighborhood "living-room" for the area. Decorative light strands will be used along the trees and building frontages.

Identifier C-1 will be zoned commercial, and will have 122,403 square feet available for commercial or retail use. Identifier C-2 will consist of commercial uses and will have 206,474 square feet available for commercial or retail use. These two parcels will be used as an outdoor mall to bring residents of the area, as well as visitors to a central place for all of their daily needs. The space will be filled with many activities ranging from shops, cafes, and bars, to open space. This space is intended to be used in a way that promotes a walking lifestyle between neighborhoods within this corridor.

The overall development reflects the style and form of Stanford's outdoor mall in Palo Alto, California. This space will be the retail core of this corridor and serve as a meeting place and recreational area for many of the study areas users and residents.

Site Plan #3

Shiloh Road Node and Corridor



Vision

The Shiloh Road node and corridor should have a small downtown feel that creates a sense of community and a place to gather. The node will reflect a small commercial/residential (M-1) area in which people can get their everyday needs locally and within walking distance. The node will also contain a beer garden and brewery restaurant (C-1) that will bring more restaurant options as well as a source of entertainment to the area. The node will contain a community facility that will enhance the area by bringing the community together and offer a gathering place. In both the node and corridor there will be an agricultural habitat restoration (A-1) where people will be able to enjoy the natural habitat of the study area and at the same time take pride in protecting our natural landscapes.

Description:

Site Location	Parcel Number	Description
M-1	164-150-009 164-150-010 164-150-050 164-150-012 163-150-064	These parcels will be zoned mixed-use in which commercial and residential will be combined. The first floor will be composed of retail, small restaurants, and a marketplace. The second and third stories will be composed of residential units.
PF-2	164-350-008 164-350-011	This parcel will be zoned for an Agricultural Preserve to help preserve the natural environment.
C-1	164-150-065	This parcel will be zoned commercial use for a beer garden/brewery.
PF-1	164-350-001	This parcel will be zoned for a community facility.

Community Design

The Shiloh Road node and corridor will be a vibrant community space. The open land closest to the golf course will be a lush green area for habitat restoration where community members can volunteer to help native species grow. There will not be much public access to the area as it needs to be protected from outside disruption.

Across the street to the east near the railroad tracks there will be a community park, "Shiloh Railway Community Park," with a railroad theme to tie in the new proposed SMART train. There will be a large play structure in the shape of a railcar made from fully recycled material, bike racks, multiple picnic benches, composting area and an information board on the new nearby habitat restoration and ways to achieve a sustainably green landscape. The "Shiloh Railway Community Park" will be complete with a surrounding boundary of green landscape practices and several trees to create a safe, inviting, family-friendly environment.

South of the "Shiloh Railway Community Park" will be a new trendy beer garden called "A BREW of Sonoma," where all the local breweries can come and collectively sell and share their product. The beer garden will set back from the street behind the main entrance and store front, with parking access in the back from Skylane Blvd. to maintain safety for the users of "Shiloh Railway Community Park."

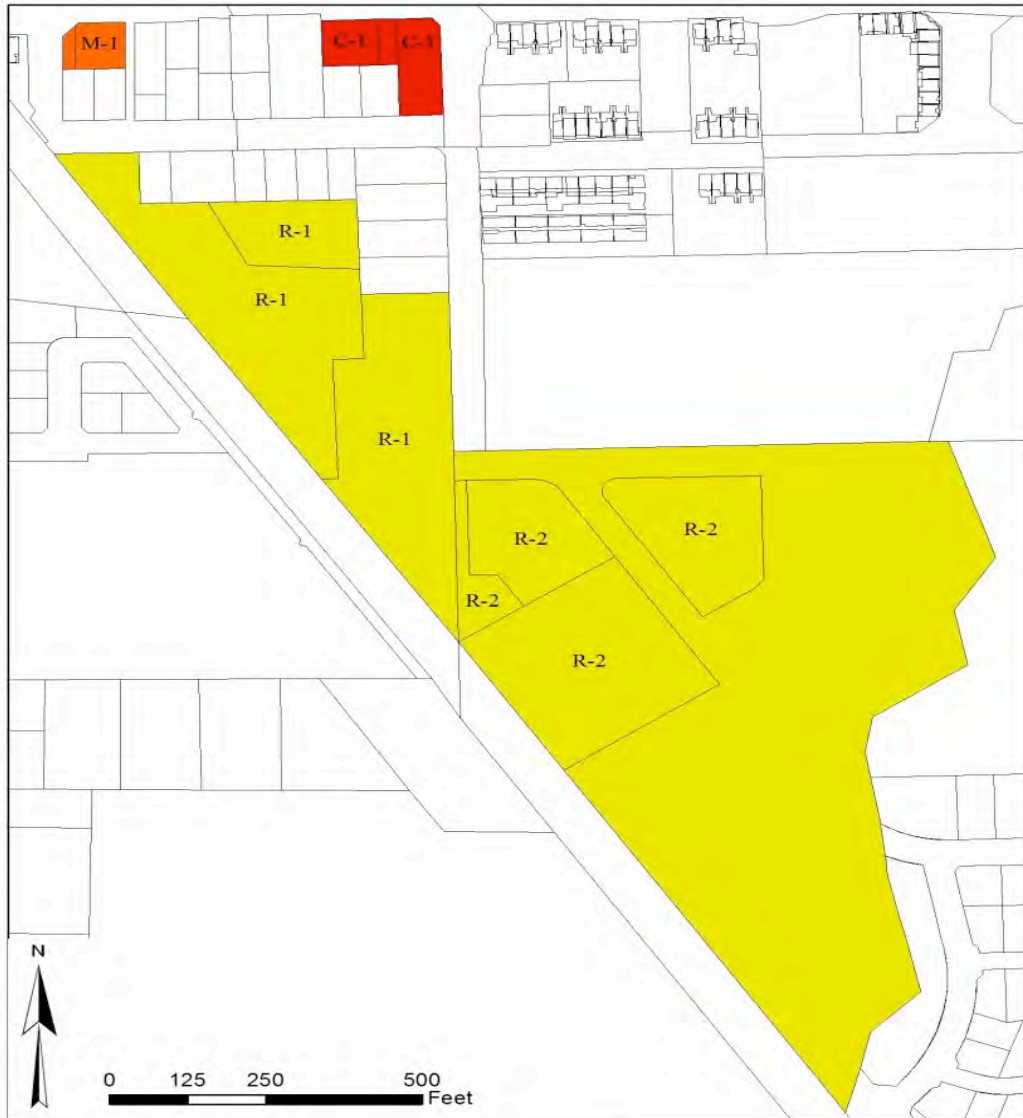
The beer garden will be full of recycled wood picnic tables, small shrubs and a place for local bands to perform creating the perfect after-work drink environment to relax with coworkers, friends or family with just the right combination of the natural and built environment. To the west of the beer garden will be a wonderful area of mixed-use with commercial retail and offices on the bottom floor and small residential condos above.

There will be four two-story structures in a square shape with an interior walkable courtyard. All parking will be on the outside of the mixed-use structures to ensure safety of pedestrians using the walkable courtyard. The new buildings will comply with

LEED green building standards. There will be bike racks in the mixed-use area to promote healthy lifestyle and decrease the need for automobiles. Sidewalks and sustainable landscaping will surround the structures to create an inviting atmosphere. These four different uses fall on the intersection of Shiloh Road and Skylane Blvd. which will increase pedestrian and bicyclist use. The intersection will have distinguished crosswalks, extended wide sidewalks, and chirping "please walk" lighted signs to assure safety.

Site Plan #4

Windsor River Road Corridor



Vision

The Windsor River Road Corridor accents the vibrant and lively downtown feel that the Windsor Town Green projects onto the surrounding area. This corridor will have a concentrated emphasis on creating affordable residential housing as it will contain 450 total housing units. The residential units that will be developed within this corridor (R1 and R2) will be categorized as moderate-income, low-income, and very low-income. The development of these residential housing units, located to the east of the train tracks, will enhance the vitality of the downtown area by providing local amenities and entertainment opportunities, all of which will be located within walking distance for the residents. Also enhancing the downtown Windsor atmosphere and boosting entertainment opportunity for nearby residents is a commercial unit (C1), which will serve as a multiuse venue, both for cinema and concert usage, in addition to a mixed-use development (M1). The existing parks within this corridor will be kept to ensure adequate public gathering facilities to serve the neighborhood.

Description

Site Location	Parcel Number	Description
R-1	066-170-013 066-170-033 164-010-020	These parcels will be zoned residential to comprise 115 affordable elderly units broken down as follows: 34% very low with 38 units, 33% low with 38 units and 33% moderate with 38 units.

R-2	164-020-041, 164-020-005 164-020-006 164-020-007 164-020-008	These parcels will be zoned residential to comprise 335 units of affordable housing broken down as follows: 50% very low with 167 units, 25% low with 84 units, and 25% moderate with 84 units.
C-1	164-010-009 164-010-010 164-010-051	These parcels will be zoned commercial in which to construct a multiuse venue for both cinema and concerts.
M-1	066-081-088 066-081-089	These parcels will be zoned mixed-use.

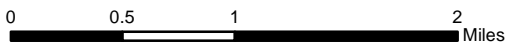
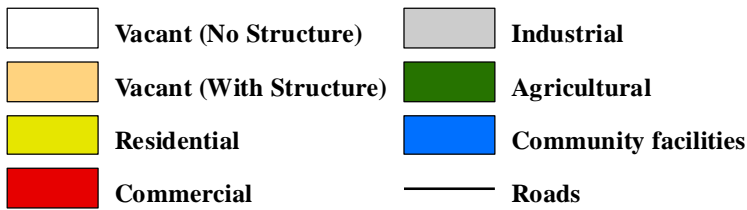
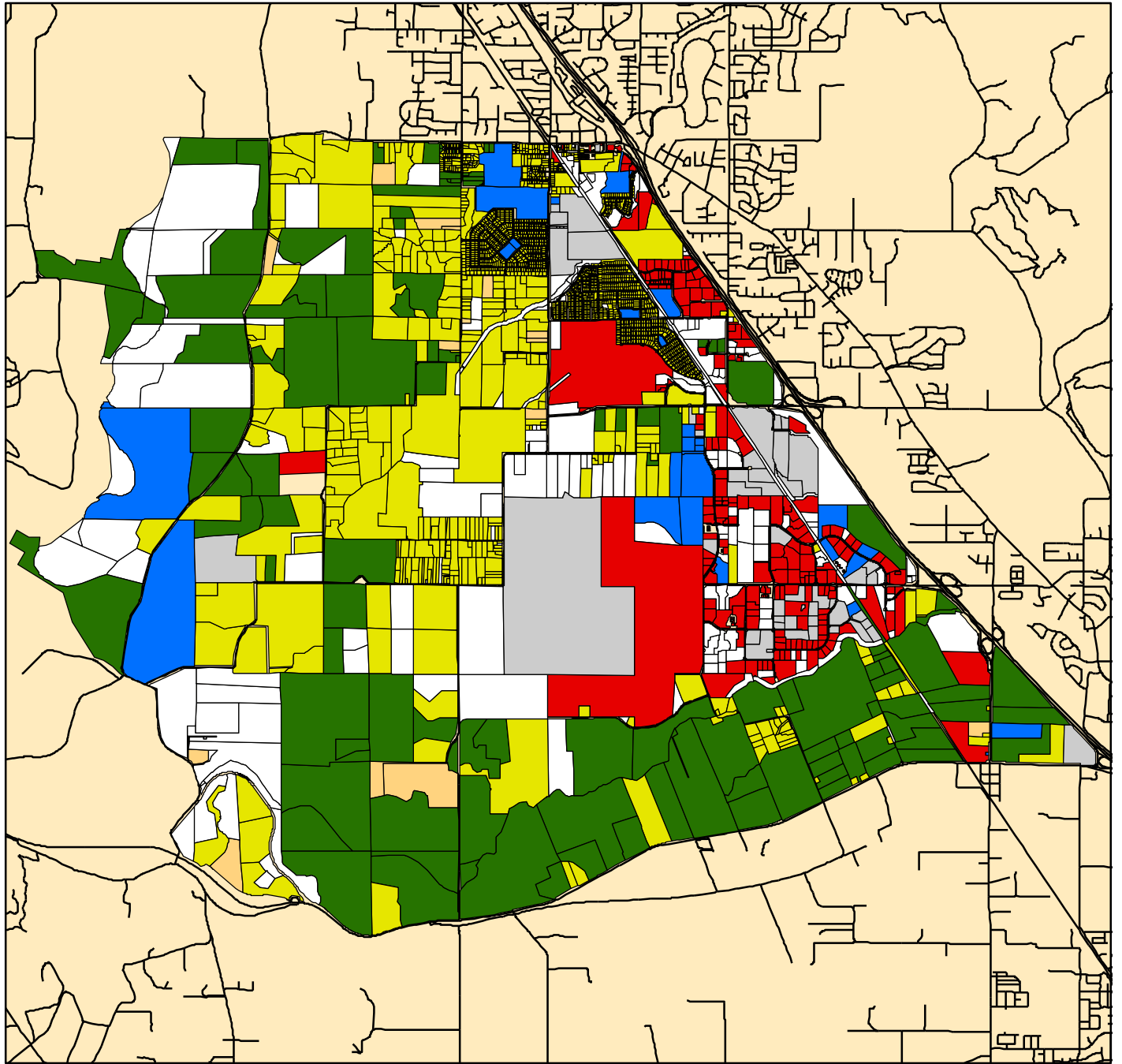
Community Design

The Windsor River Road Corridor is an extension of the Windsor Town Green. The mixed-use development (M1) will reflect architecture similar to that of the Town Green, and have shops downstairs, and living units above. The commercial unit (C1) will be built in the style of an old-time theater with a vibrant marquee, but with modern touches and amenities similar to that of the Town Green. The commercial unit will also contain a small café and an intimate, upscale restaurant. Off to one side of the commercial unit will be a well-landscaped courtyard with a fountain, picnic tables, and benches to be used as a community gathering place. The elderly housing (R1) will contain mostly flat, wide sidewalks for easy mobility. Both the elderly housing and the low-income housing (R2) will be landscaped with plentiful native trees and fruit trees. The residential areas will also have community gardens. These gardens and fruit trees will promote healthy lifestyles and provide recreation. Traffic calming measures will be taken in the neighborhoods to promote residents to get out and walk or ride bikes. Bike paths will connect the neighborhoods to the Town Green.

Appendix E

Maps

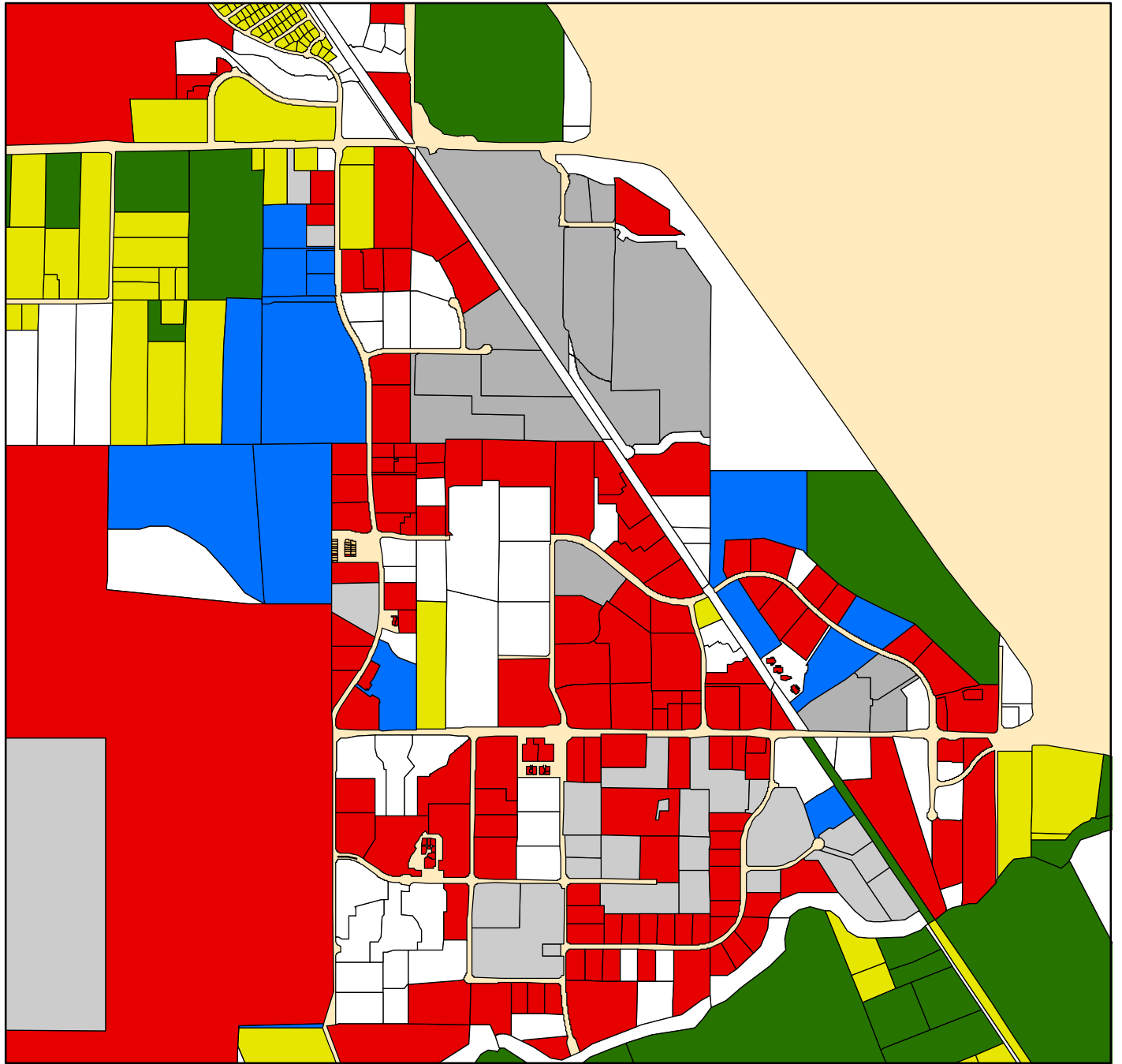
Existing Land Use











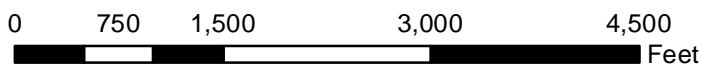
Area Plan
2011-2012



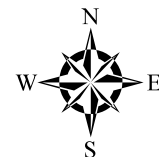
Existing Land Use Sites 1, 2 and 3



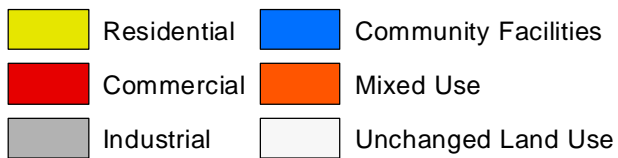
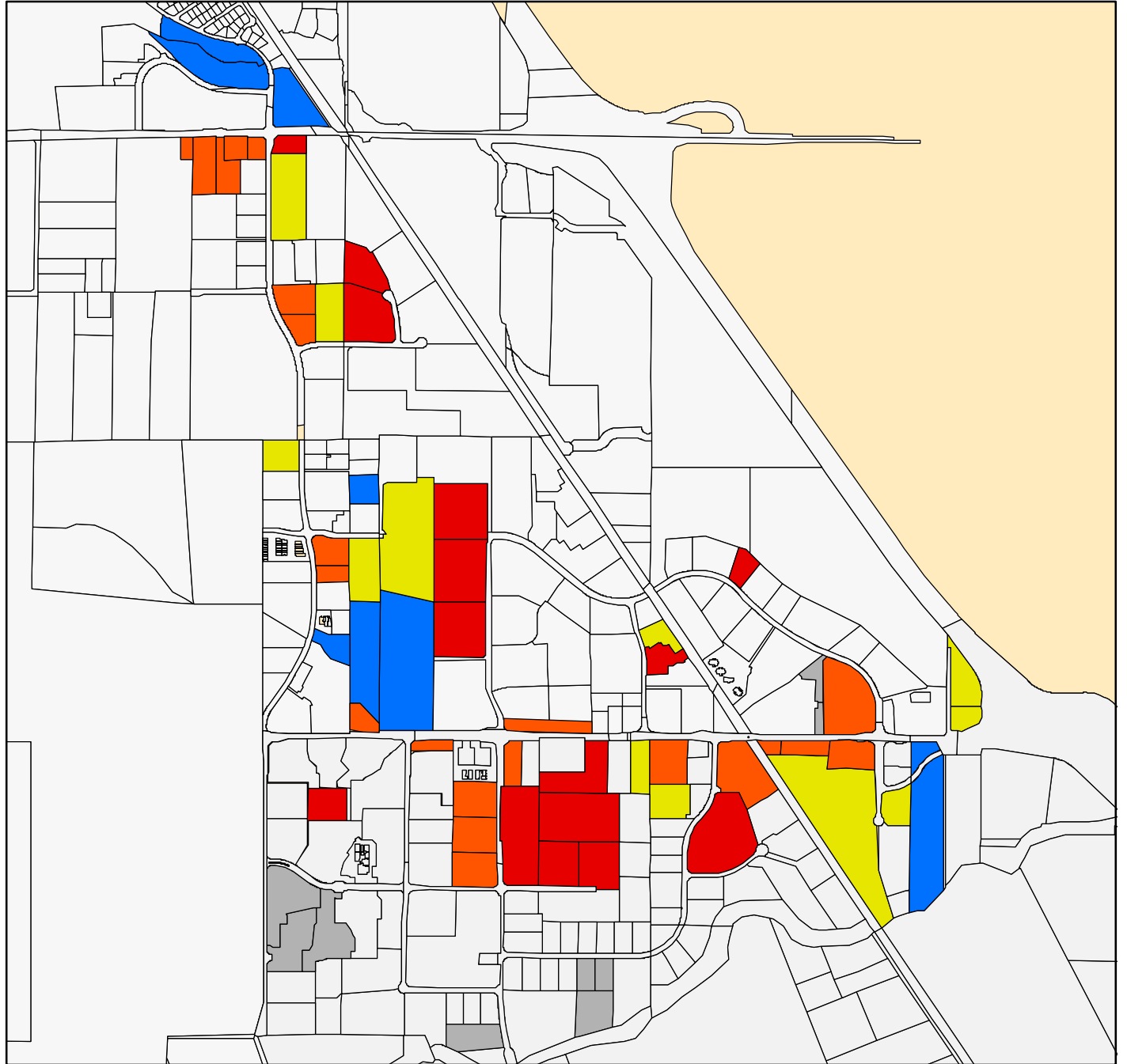
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|---|--|
|  Vacant (No Structure) |  Industrial |
|  Vacant (With Structure) |  Agricultural |
|  Residential |  Community Facilities |
|  Commercial |  Mixed Use |



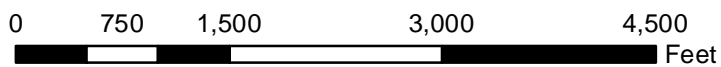
Area Plan
2011-2012



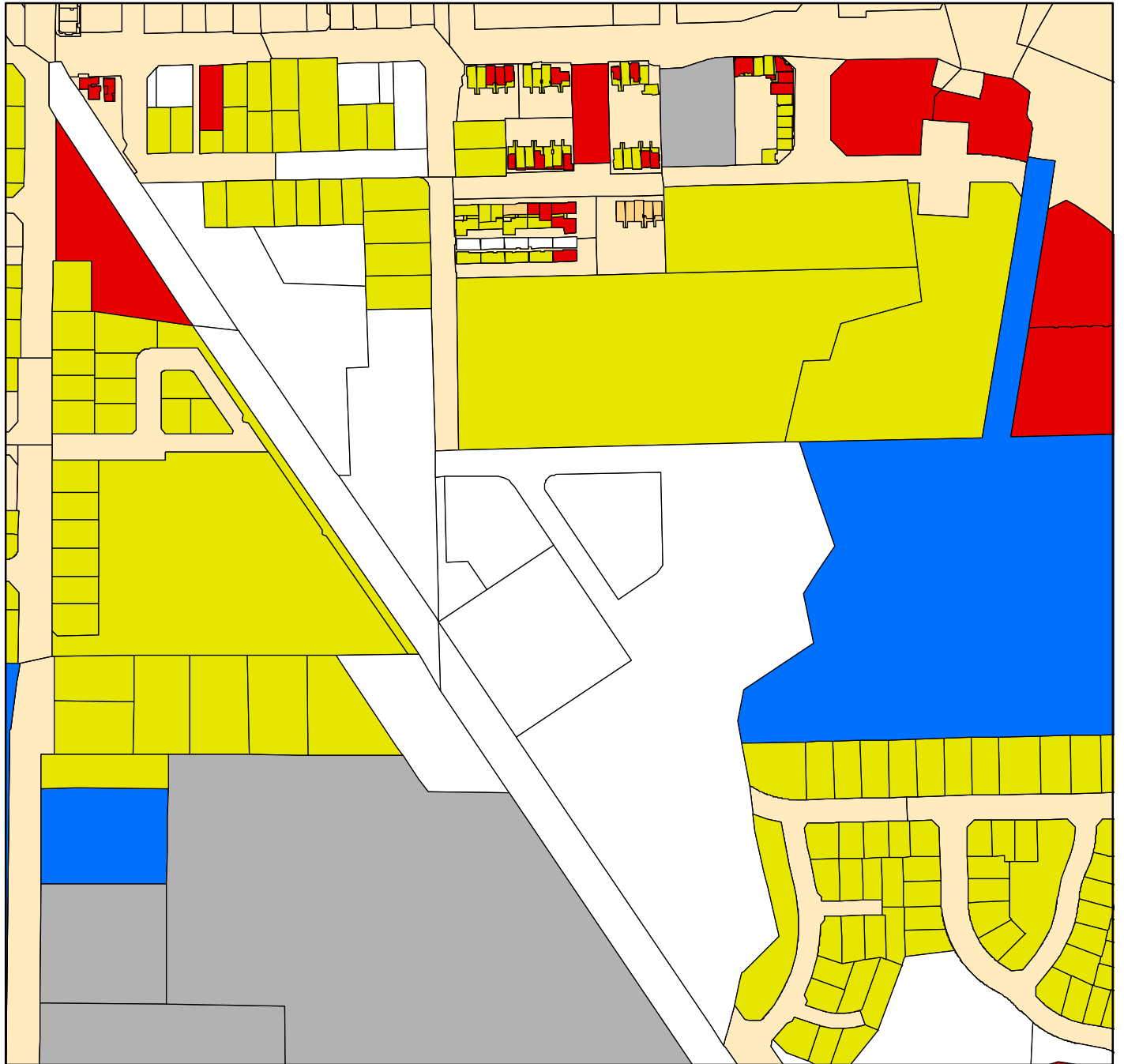
Proposed Land Use Sites 1, 2 and 3











Area Plan
2011-2012

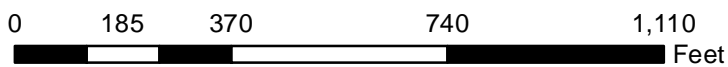


Existing Land Use Site 4



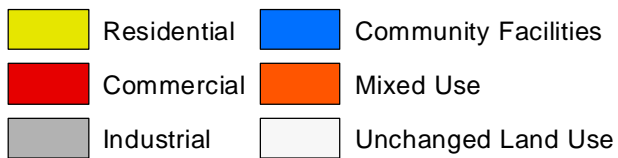
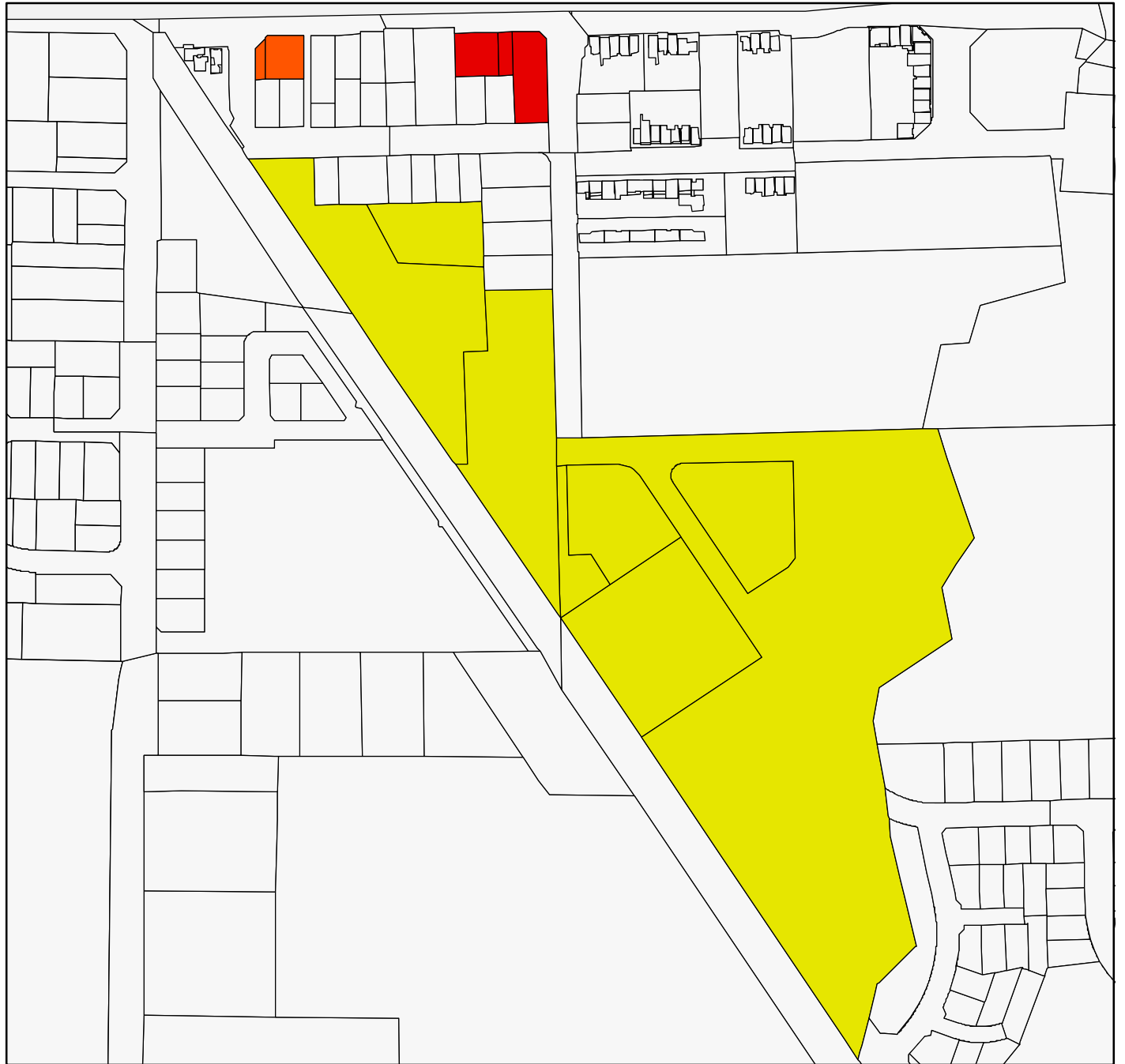
- | | |
|---|--|
|  Vacant (No Structure) |  Industrial |
|  Vacant (With Structure) |  Agricultural |
|  Residential |  Community Facilities |
|  Commercial |  Mixed Use |

Area Plan
2011-2012

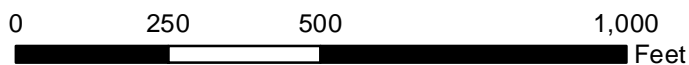


Proposed Land Use

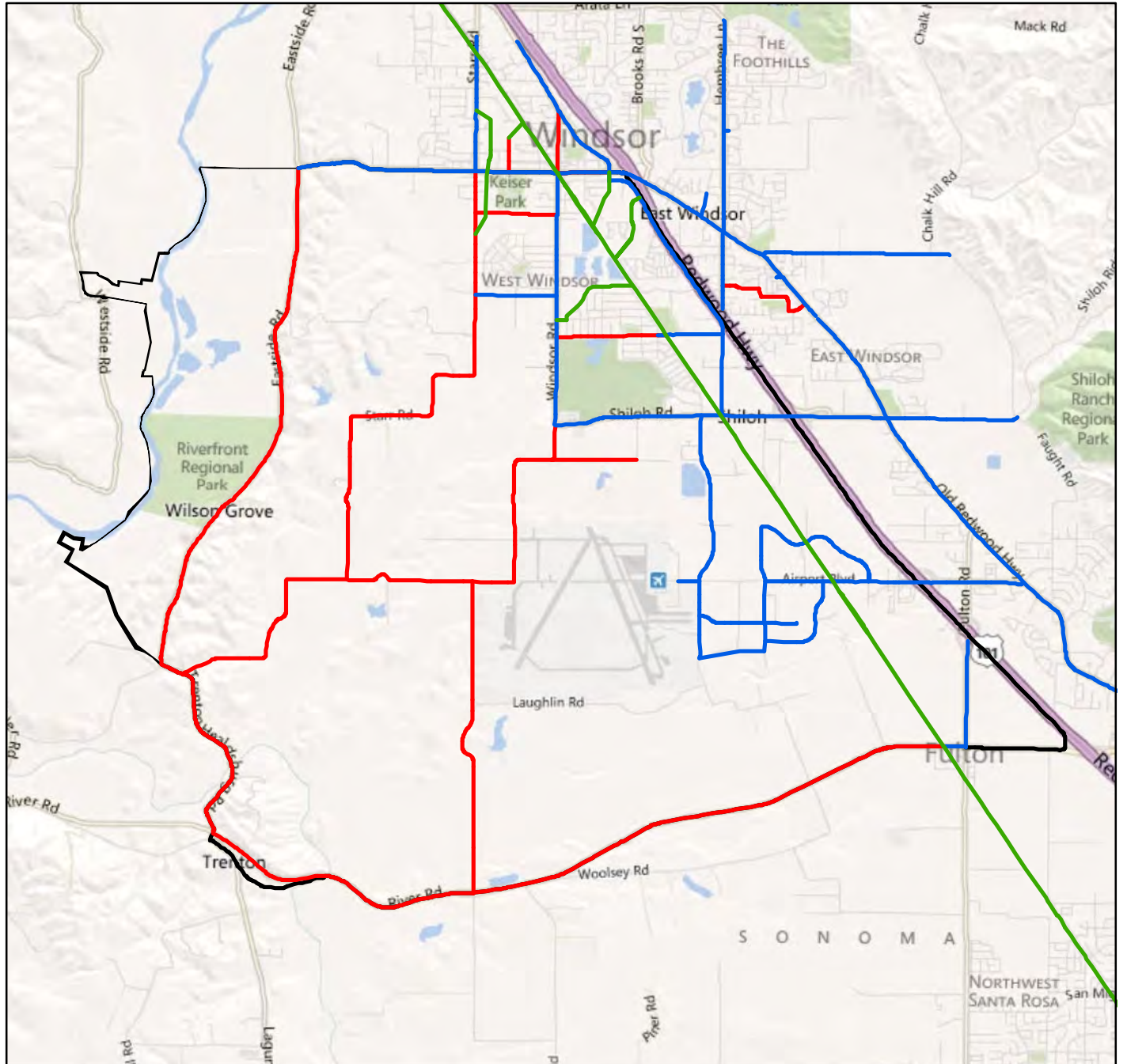
Site 4



Area Plan
2011-2012

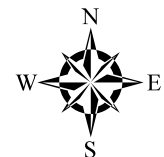


Bicycle Paths



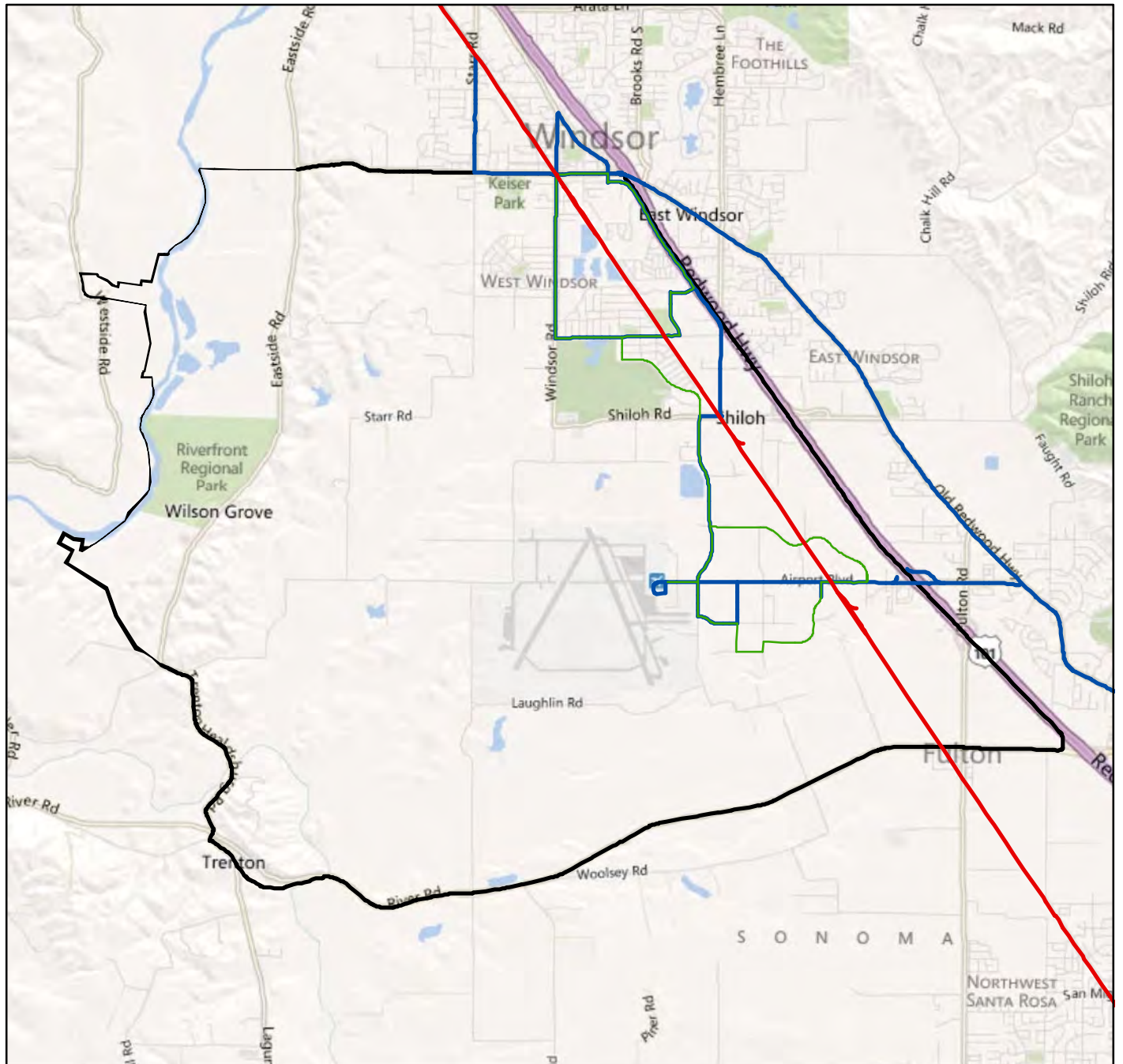
-  Class I
-  Class II
-  Class III
-  Study Area





Area Plan
2011-2012



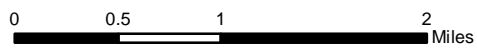
0 0.5 1 2 Miles

Public Transit

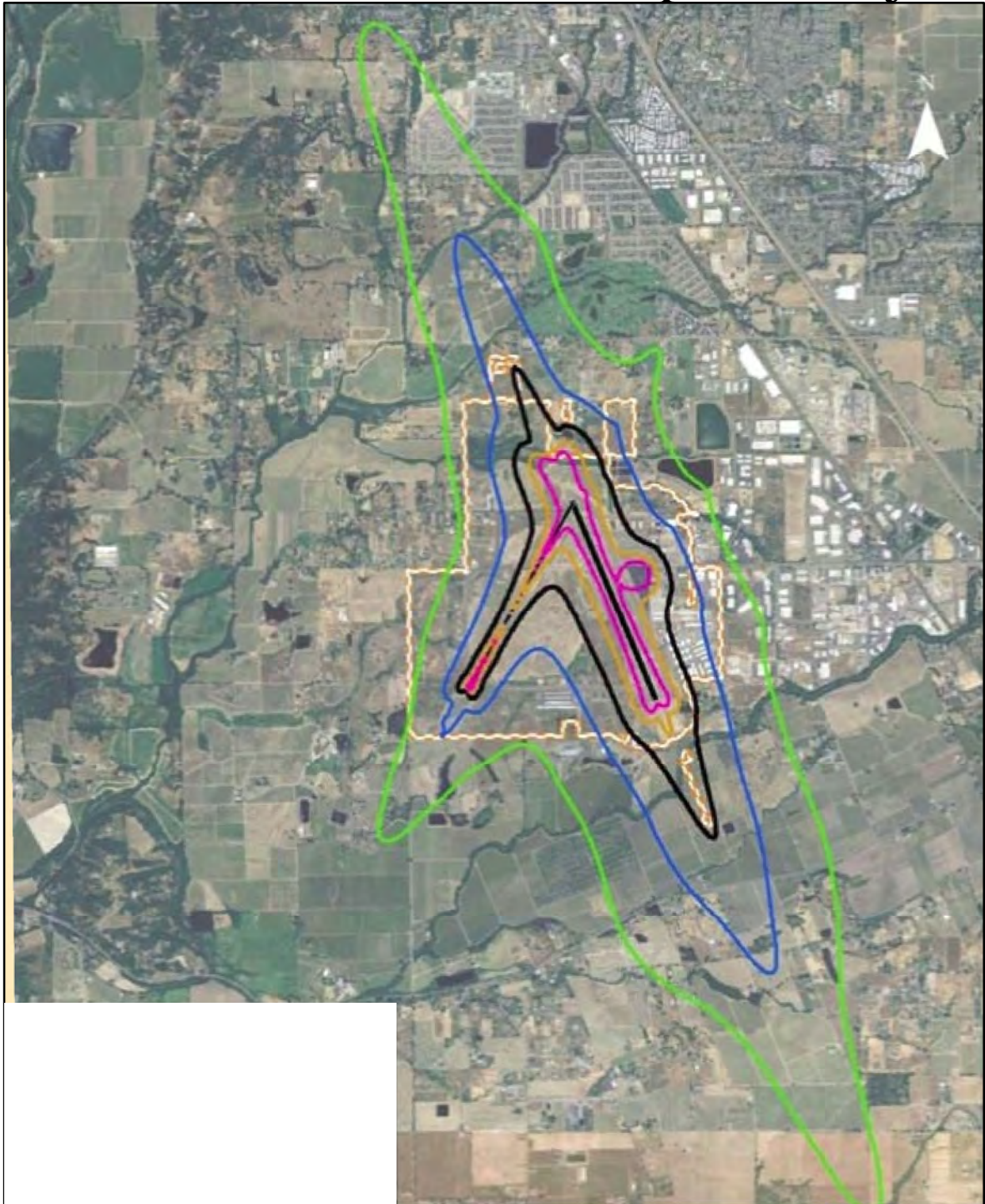




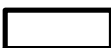


-  Tracks
-  Shuttle Route
-  Bus Route
-  Study Area

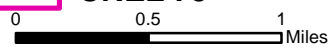
Area Plan
2011-2012



2030 CNEL Contours with Proposed Project



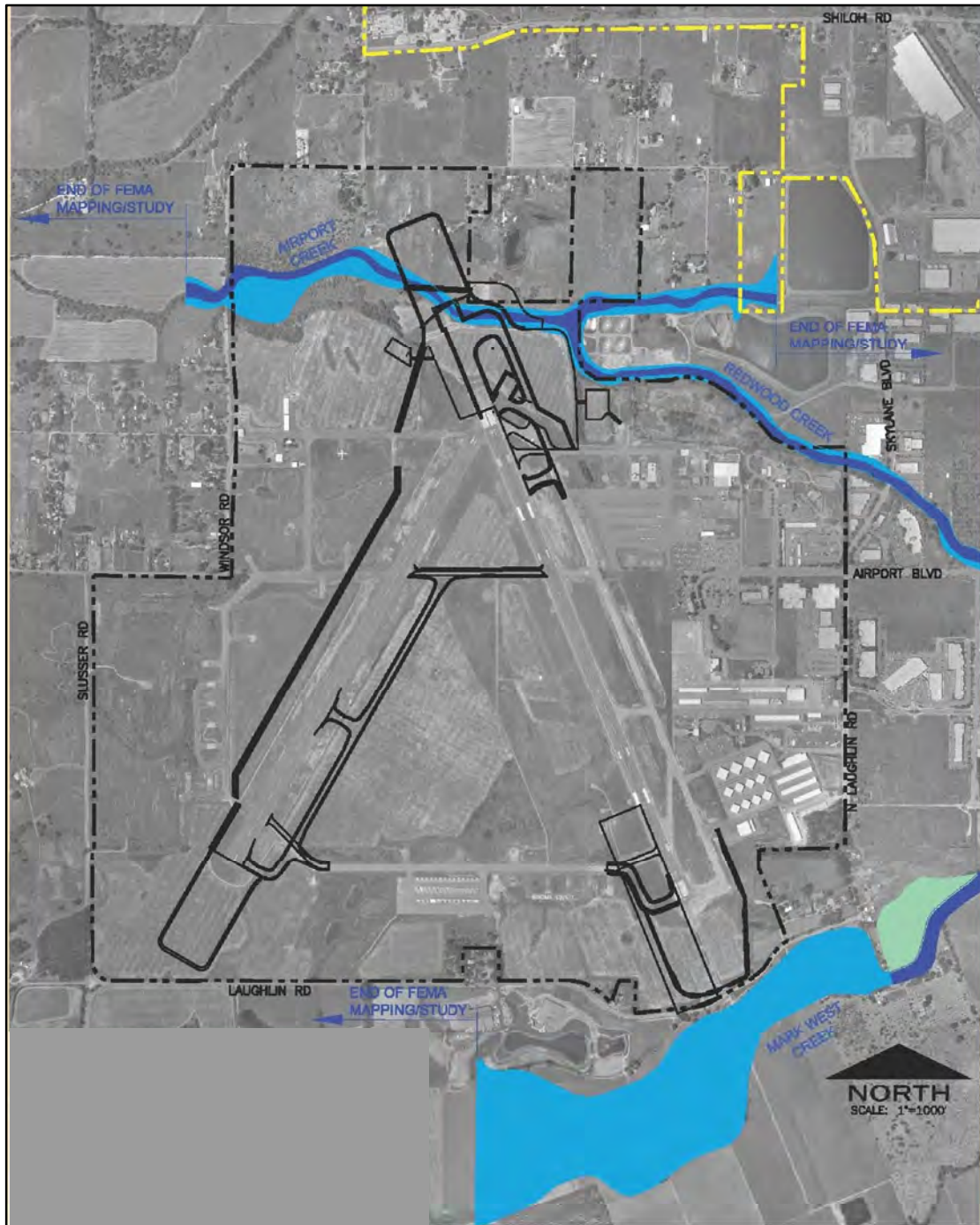
-  CNEL 55
-  CNEL 60
-  CNEL 65
-  CNEL 70
-  CNEL 75






Area Plan
2011-2012



FEMA Floodplain of Sonoma County Airport



-  - Areas subject to inundation by 1-percent annual chance Shallow Flooding
-  - Floodway
-  - Areas subject to inundation by the 1-percent annual chance flood event determined by detailed methods

0 0.3 0.6 Miles

Area Plan
2011-2012

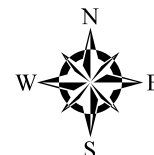


Figure PS-1d
 Areas Subject to Safety Policies
 Russian River Area

Base Map Data

- Parcels
- Highways
- Roads

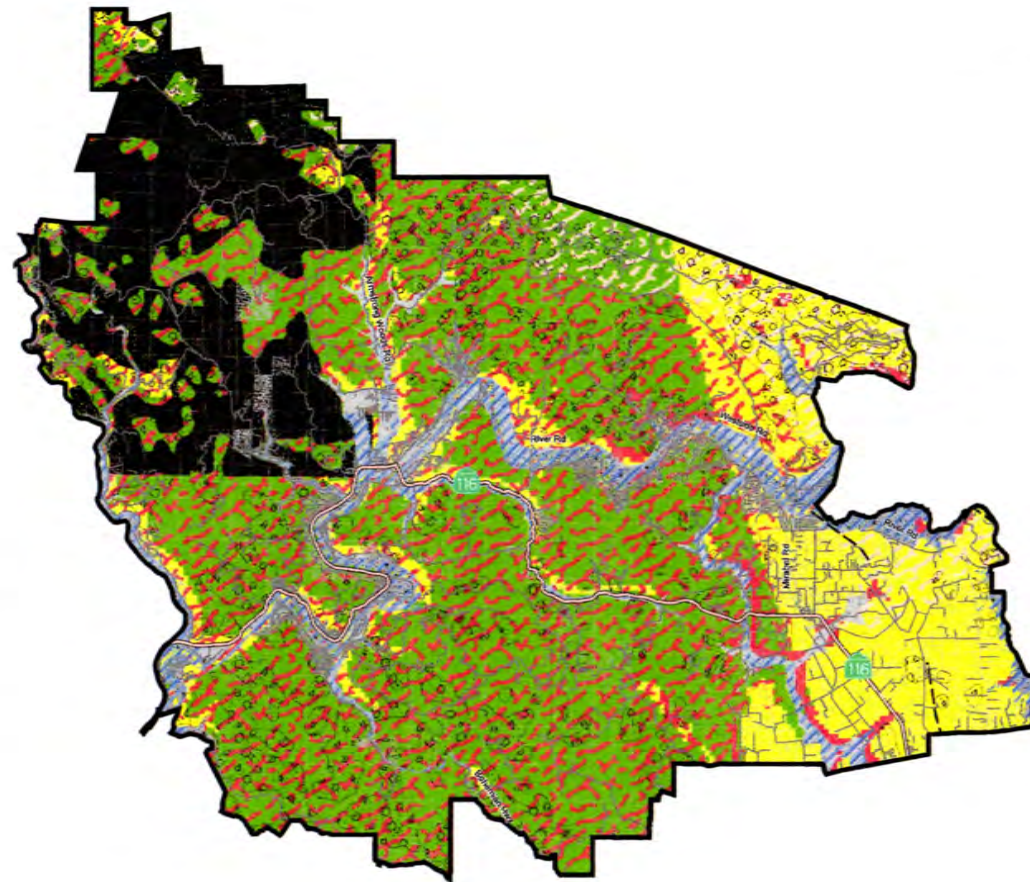
Planning Areas



- Planning Area 1 Sonoma Coast / Qualain Basin
- Planning Area 2 Cloverdale / N.E. County
- Planning Area 3 Healdsburg and Environs
- Planning Area 4 Russian River Area
- Planning Area 5 Santa Rosa and Environs
- Planning Area 6 Sebastopol and Environs
- Planning Area 7 Rohnert Park - Cotati and Environs
- Planning Area 8 Petaluma and Environs
- Planning Area 9 Sonoma Valley

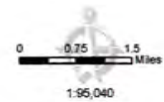
Note:
 Map Scale and Reproduction methods limit precision in physical features displayed.

Author: P1960 Cartography 11/16/10 File Number: 11602-04-737P1960-2020P1960 Department Project Completion/Planning/General Plan 2020/GP Item: PS-1d.mxd Date: 10/22/2018



Safety Hazard Type

- Fault
- High Wildland Fire Hazard
- Very High Wildland Fire Hazard
- 100 Year Flood Zone
- High Liquefaction
- Very High Liquefaction
- High Landslide
- Very High Landslide
- Shaking Severity Magnitude 7.1
 - VIII Very Strong
 - VII Strong
 - VI Moderate



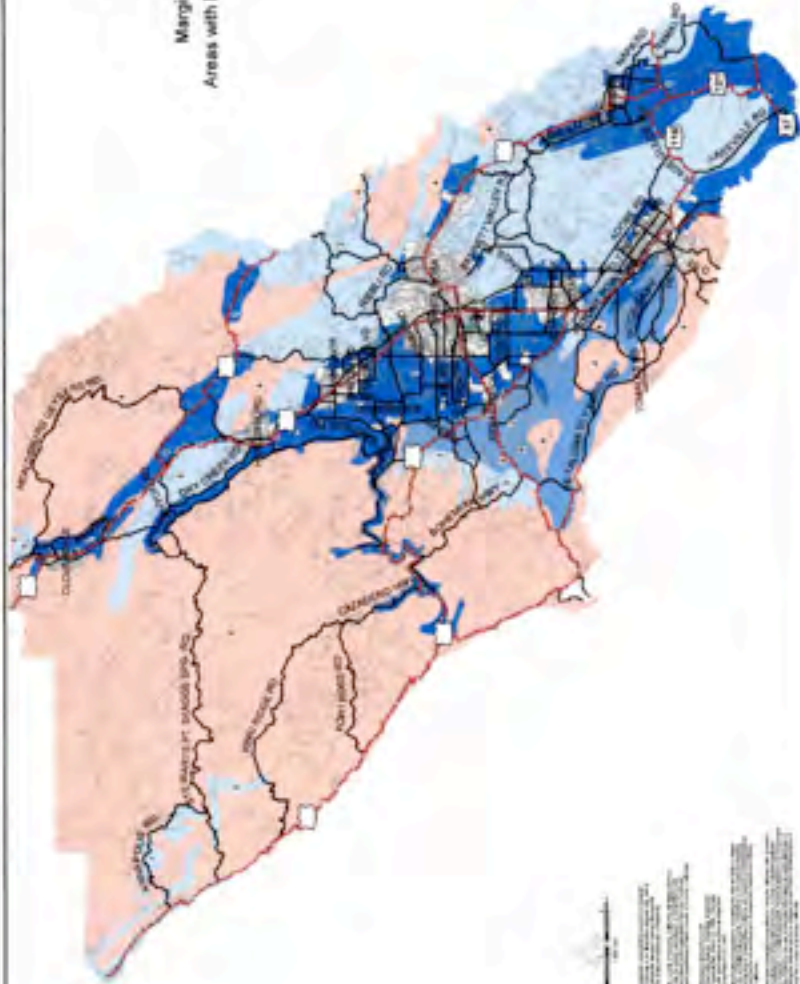
Sonoma County General Plan 2020
 Public Safety Element

Permit and Resource Management Department
 2550 Ventures Avenue, Santa Rosa, California 95403
 707-585-1900 FAX 707-585-1102



Groundwater Availability

- Legend**
- Groundwater Availability Classifications**
- Major groundwater basin (Zone 1)
 - Major natural recharge area (Zone 2)
 - Marginal groundwater availability area (Zone 3)
 - Areas with low or highly variable water yield (Zone 4)
- Base Map Data**
- City Boundaries
 - Major Roads
 - Highways
 - Streets



Scale: 1 inch = 10 miles

North Arrow

Map Date: 10/15/2010

Map Author: [illegible]

Map Title: Groundwater Availability

Map File: [illegible]

Map Path: [illegible]

Map Projection: [illegible]

Map Units: [illegible]

Map Scale: [illegible]

Map Status: [illegible]

Map Version: [illegible]

Map Description: [illegible]


Map Contact: [illegible]

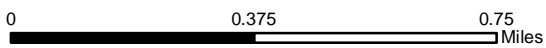
Map Copyright: [illegible]



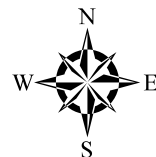
Airport Vicinity Tributary and Watershed Map



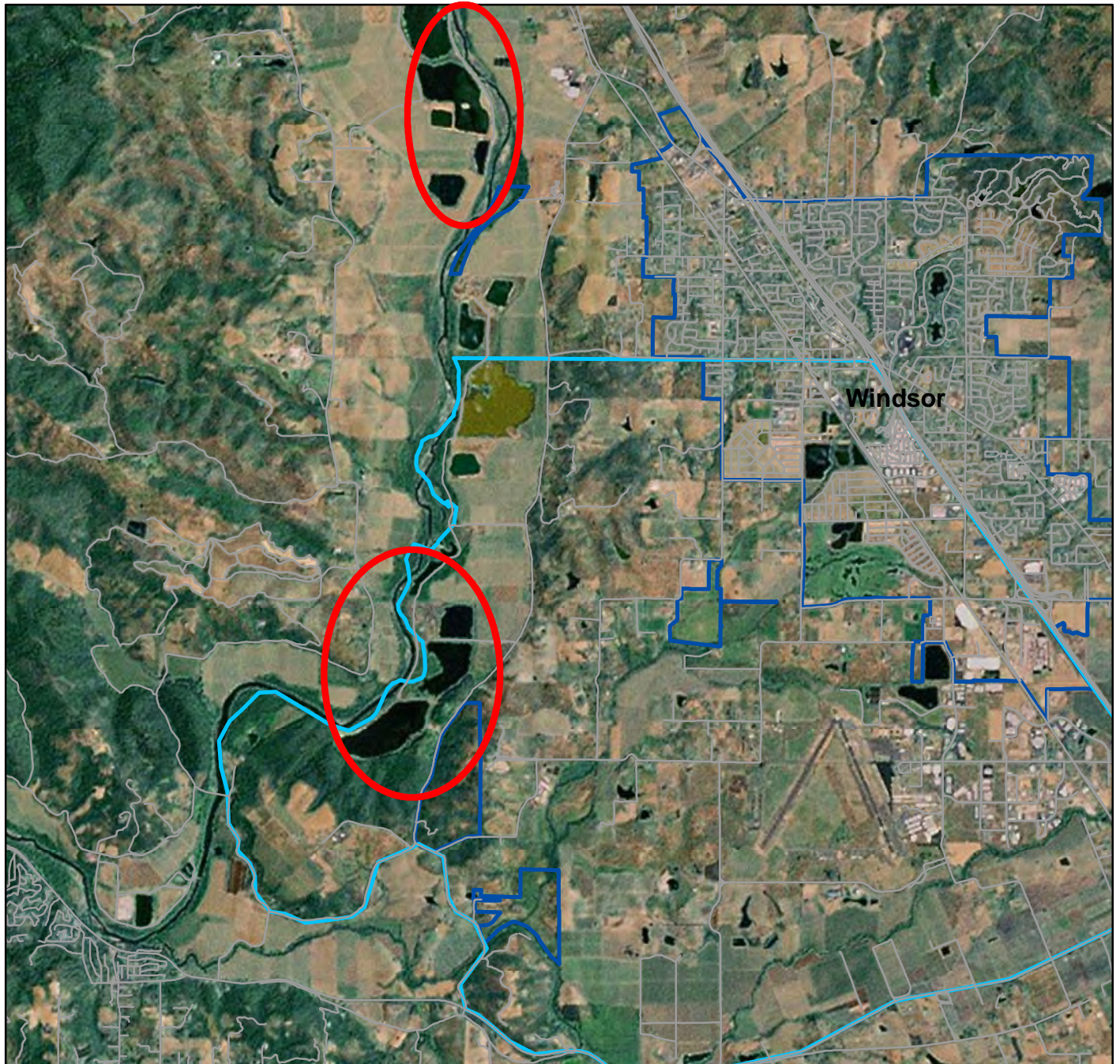
-  Study Area
-  City Limits




Area Plan
2011-2012



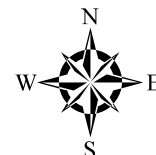
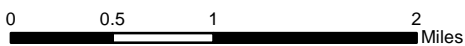
Russian River Pitmines



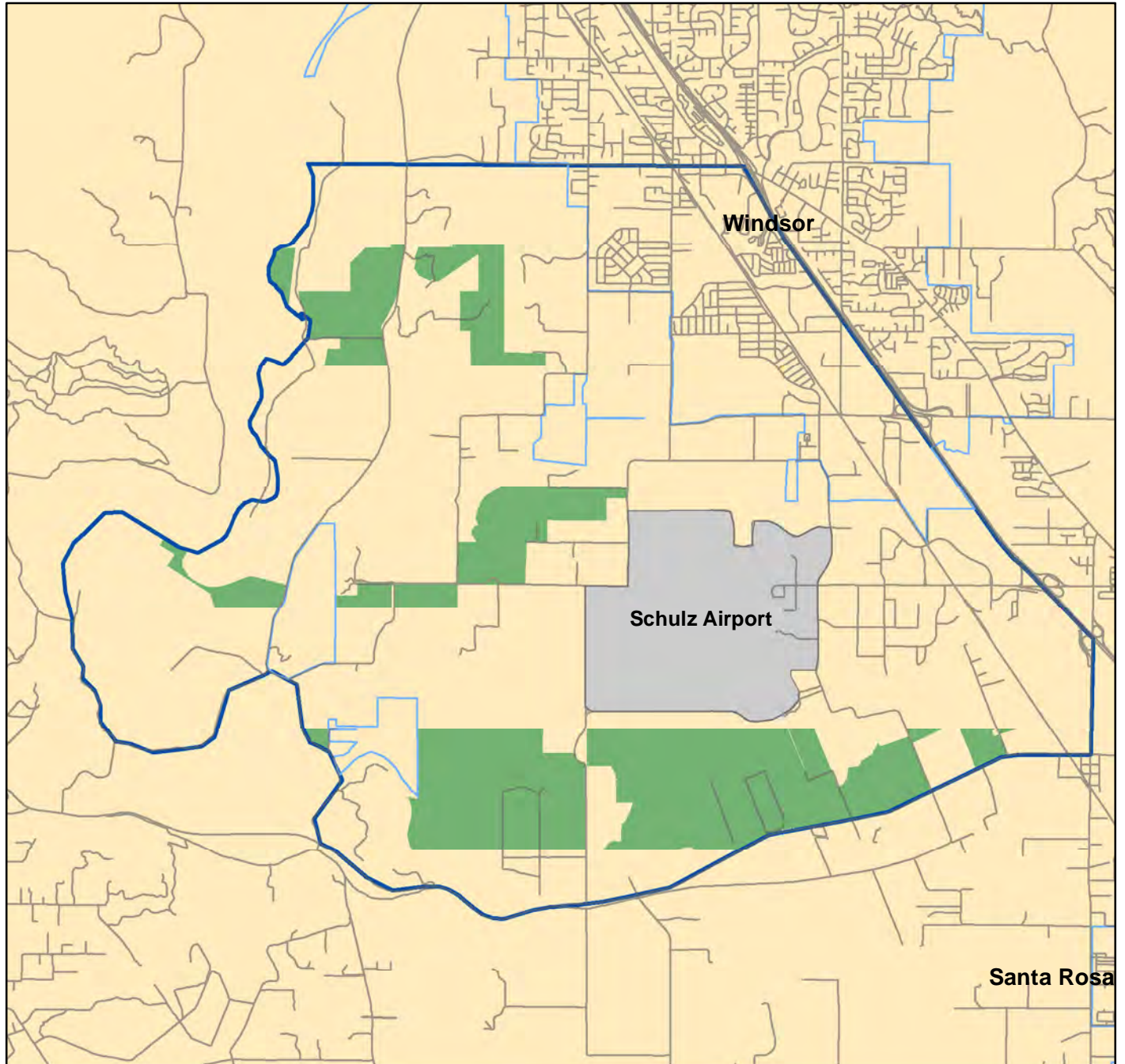
-  Study Area
-  City Limits

Aerial shows the Middle Reach of the Russian River below Healdsburg and the extent of Open Pitmines. The three southern pits are in the study area, and include Riverfront Regional park which contain two former gravel

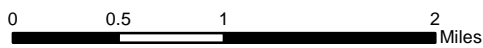
Area Plan
2011-2012



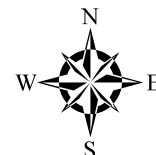
Williamson Act Land



- Streets
- City Limits
- zone limits
- Schulz Airport
- Study Area Boundaries
- Williamson Act Land



Area Plan
2011-2012



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Appendix F

This Appendix explains one of the critical policies from each of the elements within this Area Plan.

Land Use and Economic Development (LUED):

Highlighted Policy: BD-3.c

A Revolving Loan Fund (RLF) is specifically designed to encourage an entrepreneurial atmosphere within the County and to support suffering, high potential companies that need temporary assistance to maintain employees and liquidity. Specifically, these loans are aimed at businesses that have little or no access to bank loans due to the current economic climate. Loan principals of between \$5,000-\$25,000 will be given at a 4-6% adjustable interest rate with a five year term. An administration fee of 4% will be charged upon disbursement of the loans. Loans will be considered up to \$50,000, but only for businesses with two or more years of operation and will be under more stringent review.

In the application, all businesses must indicate how this loan will create or retain one full-time job, preferably made available for low/moderate income individuals. Priority of loans will be granted to targeted industries and based on the strength of their business plans and future outlook. This loan must be the secondary source of income for the firm, and the owner's equity must amount to at least 20 percent of the requested loan amount.

Loans may be used for the following uses:

- Working Capital
- Inventory Purchase
- Equipment & Machinery
- Startup Costs
- Leasehold Improvements

The efficacy of the Revolving Loan Fund will be felt heavily in a region like Sonoma County where small business is encouraged and used by the residents. Windsor would like to embellish their tourism industry which is mainly dependent on the small business environment such as wineries, restaurants, and boutiques. In current financial

conditions it is near impossible for these start-ups to receive affordable loans from financial institutions. Similarly, Sonoma County in general would like to improve its entrepreneurial atmosphere, and this RLF program will enable new technology and research firms to locate here.

Circulation



Policy C-3.a:

Build a central transit facility at the intersection of Airport Boulevard and Regional Parkway (Northwest Regional Industrial Park), which houses the SMART train station and provides service stops for both local and regional public transit routes.

- Design the transit center to be open and spacious so the many modes of transportation being utilized as well as associated accommodations are available to be viewed.

- Allow convenient and organized access for both local and regional transit routes, therefore allowing the transfer between buses or modes to be simple and fluid.
- Provide a bulletin board with posted routes, transit news and ride sharing information.
- Add a stop to the SMART train line at the transit center in order to diversify regional transportation alternatives.
- Accommodate pedestrians and cyclists by connecting routes to the transit center and constructing storage facilities on the premises.
- Offer a bicycle rental service on location, allowing users who arrive at the transit center via alternative modes of transportation a practical and convenient way to circulate the area.

The construction of a transit center within the Sonoma County and environs study area is essential for bridging the gap between local and regional methods of transportation. All modes come together to represent the network as a compilation of four distinct parts that make one integrated transportation system. There will be access to the center via walking, biking, taking the bus or riding the SMART train, on safe and efficient routes. Transferring between modes of transportation poses no recognizable inconveniences because ample storage facilities for bicycles are available at the transit center as well as on the busses and trains. The hub will act as a resource center where members of the community can discuss ride sharing, route information can be accessed, and general transportation-related news will be displayed.

The center will be constructed on the vacant lot at the intersection of Airport Boulevard and Regional Parkway along the pre-existing railroad tracks. This is an ideal location because it is on Airport Boulevard, a high automobile volume thoroughway, and is in close proximity to Highway 101, simplifying access for regional transit routes. Space for an adjacent parking structure is also available which will allow for the parking along Airport Boulevard to be removed and used for expanding the roadway and sidewalks, while centralizing parking for the area in one distinct accessible location.

The success of a transportation system is dependent on the number of users it can accommodate and corridors it provides access to. Having a central transit center allows for connection between more routes and a greater number of people whose needs can be covered by existing services. In addition to connecting multimodal routes, the transit center will promote alternative methods of transportation as being just as convenient as the conventional personal automobile that dominates the roadway today.

Sonoma County Airport

Policy A-2.a:

With construction set to begin in the summer of 2012 on Sonoma County Airport's runway expansion and realignment, the existing passenger terminal's shortcomings will become more apparent. In addition to aesthetic considerations, the terminal's small size will make it difficult to accommodate increased passenger demand. Our policy supporting the construction of a new terminal addresses both pragmatic needs and aesthetic ideals.

The Airport Master Plan proposes several different size options for a new terminal. The current terminal is about 15,000 square feet. Our policy supports a new three-gate terminal of 45,000 square feet. This mid-range size will allow ample space for passengers; administrative and TSA security offices; and community meeting and conference rooms, and it will be substantially cheaper than the proposed 78,000 square foot terminal. There will be space for an expanded Sky Lounge Steakhouse & Sushi Bar from the old terminal.

As seen in the Airport Plan Diagram, the new terminal would be located adjacent to the north side of the existing terminal (*see Airport Chapter for Airport Plan Diagram*). The existing terminal will continue to be open and accessible during construction of the

new terminal. The current terminal access road will be enlarged and rerouted in front of the new terminal.

Funding for construction of the new terminal will come primarily from Federal Aviation Administration grants, with the remaining balance coming from the County of Sonoma and the Airport itself.

Environment

Policy AQ-1.e:

Increasing building's efficiency is not just switching out light bulbs or buying new appliances – it is approaching a building as a complete system. Older buildings tend to lose heat through heat and air conditioning ducting; older style windows; and lack of insulation in attics, walls, and floors. This leads to high utility bills and inefficient energy use. By contrast, "Green" buildings are oriented and designed to maximize solar access and provide operable windows for natural light. The landscaping that goes along with "green" design is used to take full advantage of shade trees. Moreover, in dryer climates such as California, xeriscaping is substituted for conventional lawns to save water. Also, using light-colored materials when constructing minimizes heat islands. Green buildings conserve energy and resources through an efficient design and the use of sustainable building products. Green buildings use simple construction materials that are easy to obtain to promote easy progression, repair, and limit construction waste. Furthermore, they are designed to ensure healthy indoor air quality by using building materials that do not contain Volatile Organic Compounds (VOCs).

In addition to "green" building techniques, the Leadership in Energy and Environmental Design (LEED) certification was developed because buildings can be green without a single standard being applied to it. Green rating systems do offer a way to measure how green a building is and can supply recognition and validation of that level of commitment. Rating systems, standards, and guidelines can be classified into two groups: those that relate to specific building components, and those that relate to the

building as a whole entity. They range from those that assess specific properties of individual building materials or assembly standards from established trade organizations, to those that assess the entire building's overall environmental performance from more recently formed environmentally-minded organizations.

In the Sonoma County Airport and environs study area, this policy will require Sonoma County to follow the "green" building techniques through LEED, the 2008 California Green Building Standards Code, and Title 24: Building Energy Efficiency Standards in California. These implementation tools will improve the public health by enhancing the design and construction of buildings through the use of building concepts having a positive environmental impact and encouraging sustainable construction practices. This policy will improve the air quality as well as the study area as a whole.

Community Design

Policy CD-6.a/CD-6.b:

Airport Boulevard is the first aspect visitors to the study area see when they leave the Sonoma County Airport. These policies create a better first impression than the current state of Airport Boulevard, while also improving pedestrian and bicycle safety. Street trees contribute to the safety and beauty of the pedestrian realm and improve the environmental quality of the area. Street trees improve safety by defining the edge of the road, which helps drivers guide their movements and assess their speeds and results in speed reduction. Additionally, street trees act as a buffer between pedestrians and vehicles and improve the pedestrian environment by providing shade and contributing to lower summer temperatures. Street trees also improve the health of the environment by filtering pollutants from the air, reducing greenhouse gases and absorbing precipitation, which would otherwise become stormwater runoff. We recommend using *Ginkgo biloba* and *Pistacia chinensis* as street trees along Airport Boulevard. The Ginkgo trees have a narrow shape and typically grow to between 35-50 feet tall. Ginkgo

trees are recommended for the landscaped center median. Only male Ginkgo trees should be planted, as the female trees produce a messy, ill-smelling fruit. Pistacia trees are recommended as the sidewalk street tree along the corridor. Pistacia trees grow to between 30-60 feet tall and tolerate a wide range of conditions, which makes it a reliable tree for streetscape plantings. The foliage of Pistacia trees turns a bright orange to red color in the fall.

Policies CD-6.a and CD-6.b incorporate traffic calming techniques, such as narrowed traffic lanes, a central landscaped median, new street trees, and bulbouts. Limiting the width of the traffic lanes from 12 feet, to 10 – 11 feet reduces drivers' speeds because they feel constrained by the limited lane width. The addition of street trees within the landscaped median and along the sidewalk reduces a driver's perceived width of the street, thereby discouraging speeding. Bulbouts also limit a driver's perceived width of the street by extending the curb and tree plantings into the street right-of-way, further limiting the perceived width of the street. These improvements will beautify the area, making it more inviting, while also making it safer.

Appendix G

Public Opinion
Survey

Residential/Users Survey (with Results)

1. Age:

- a. 18- 24 18.9%
- b. 25- 34 14%
- c. 34-44 21.9%
- d. 45-54 15.8%
- e. 55-59 12.3%
- f. 60-64 10.1%
- g. 65-74 5.3%
- h. 75-84 3%
- i. 85 and older 1.8%

2. Sex:

- a. Male 53%
- b. Female 47%

3. Job Status:

- a. Full time 57%
- b. Part time 16%
- c. Unemployed 5%
- d. Retired 17%
- e. Disabled 2%
- f. Other 3%

4. Income Range (Annual Gross Income)?

- a. < \$10,000 14%
- b. \$10,000 - \$14,999 6%
- c. \$15,000 - \$24,999 4%
- d. \$25,000 - \$34,999 8%
- e. \$35,000 - \$49,999 11%
- f. \$50,000 - \$74,999 17%
- g. \$75,000 - \$99,999 14%
- h. \$100,000 or more 9%
- i. Decline to state 17%

5. Ethnicity:

- a. White 75%
- b. Black or African American 6%
- c. Native American or Native Alaskan 1%
- d. Asian 4%
- e. Hawaiian Native or Pacific Islander 1%
- f. Other/Latino 13%

6. Relationship to the Study Area (circle all that apply):

- a. Live in the study area 64%
- b. Work in the study area 22%
- c. User of the study area 27%
- d. No relationship to the study area 3%
- e. Other 1%

Some respondents selected more than one relationship, percentages indicate what percentage of surveys each appeared on.

7. Do you rent or own your current residence?

- a. Rent 60%
- b. Own 36%
- c. Other: 4%

8. How long have you resided in your current residence? Average 9.35 years

9. Number of people per residence? 2.1 # of adults 0.7 # of children (<18)

10. What aspect of the study area do you value the most? (Please Circle One)

- a. Airport 22% b. Theater 18.5% c. Wineries 14% d. Golf Course 5%
e. Residential Area 18.5% f. Riverfront Regional Park 9%
g. Geographic Location 8% h. Other: 4%

11. What do you feel are the most important issues in the study area? (list 1-7, 1 being most important and 7 least important; please use each ranking only ONCE)

- a. 1 Traffic
b. 5 Open Space
c. 2 Noise
d. 4 Agriculture
e. 6 Public Transportation
f. 3 Environmental Pollution
g. 7 Airport Expansion

12. What goods and services would you like to see more of in the study area? (circle all that apply)

- a. Shopping 22% b. Food 22% c. Entertainment 21% d. Business 13%
e. Health Services 11% f. Transportation Stops 9% g. Other 1%

13. Which airport do you fly out of?

- a. Charles M. Schulz Sonoma County Airport 27%
b. Healdsburg Municipal Airport 1%
c. Oakland International Airport 41%
d. San Francisco International Airport 51%
e. None of the above/ Other: 5%
f. Do not use airports 13%

Some respondents selected more than one airport, percentages indicate what percentage of surveys each airport appeared on.

14. How many times a year do you use an airport?

- a. 0 13%
b. 1-2 54%
c. 3-4 22%
d. 5+ 11%

15. Are you aware of the proposed expansion of the Charles M. Schulz Sonoma County Airport?

a. Yes 60%

b. No 40%

16. Do you feel the expansion of the Charles M. Schulz Sonoma County Airport would benefit the designated study area?

a. Yes 63%

b. No 19%

c. No Opinion 18%

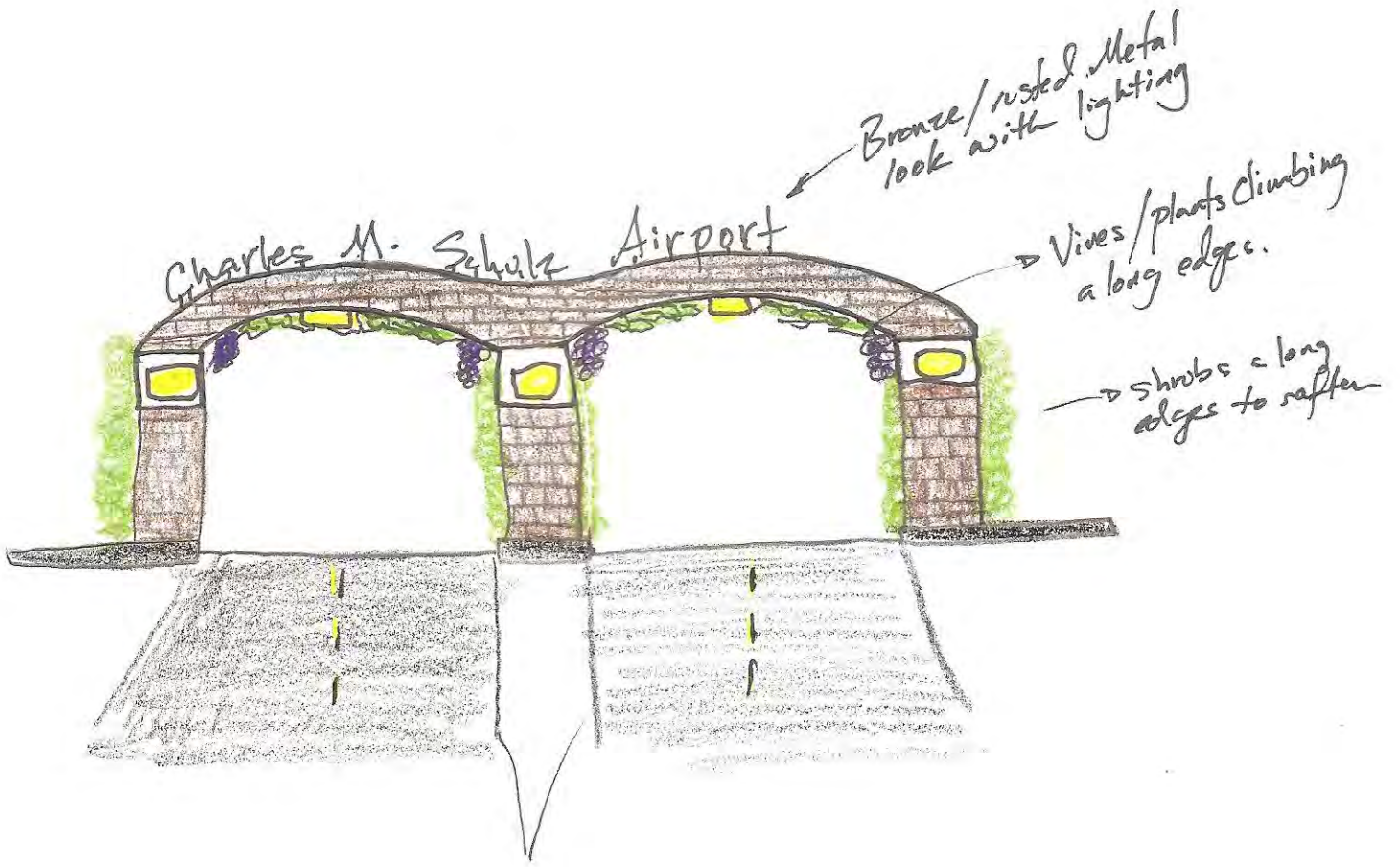
Appendix H

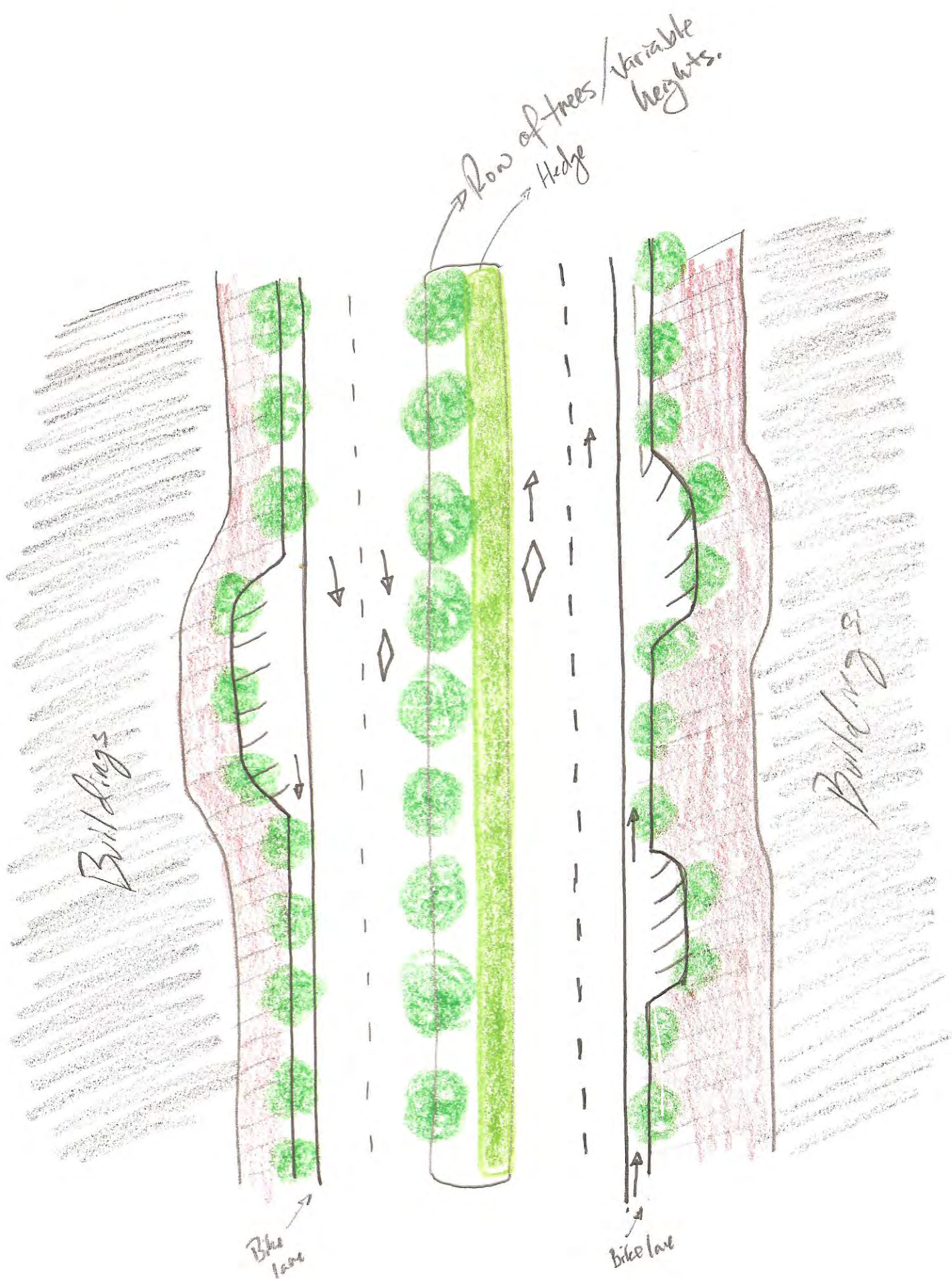
These drawings were drafted in order to allow the community design group to add to the proposed identity that we envisioned for the study area. They were all hand drawn and reflect the ideas that all of the groups came up with. Ranging from street design to gateway design for the airport entrance, these pictures act as a way for readers to gain a sense of what we as planners have developed. There are two designs for a possible formal entrance for the Charles M Schulz Airport. Also there is a proposed street update for Airport Boulevard to calm traffic and create a sense of place for the study area.

Community Design Sketches

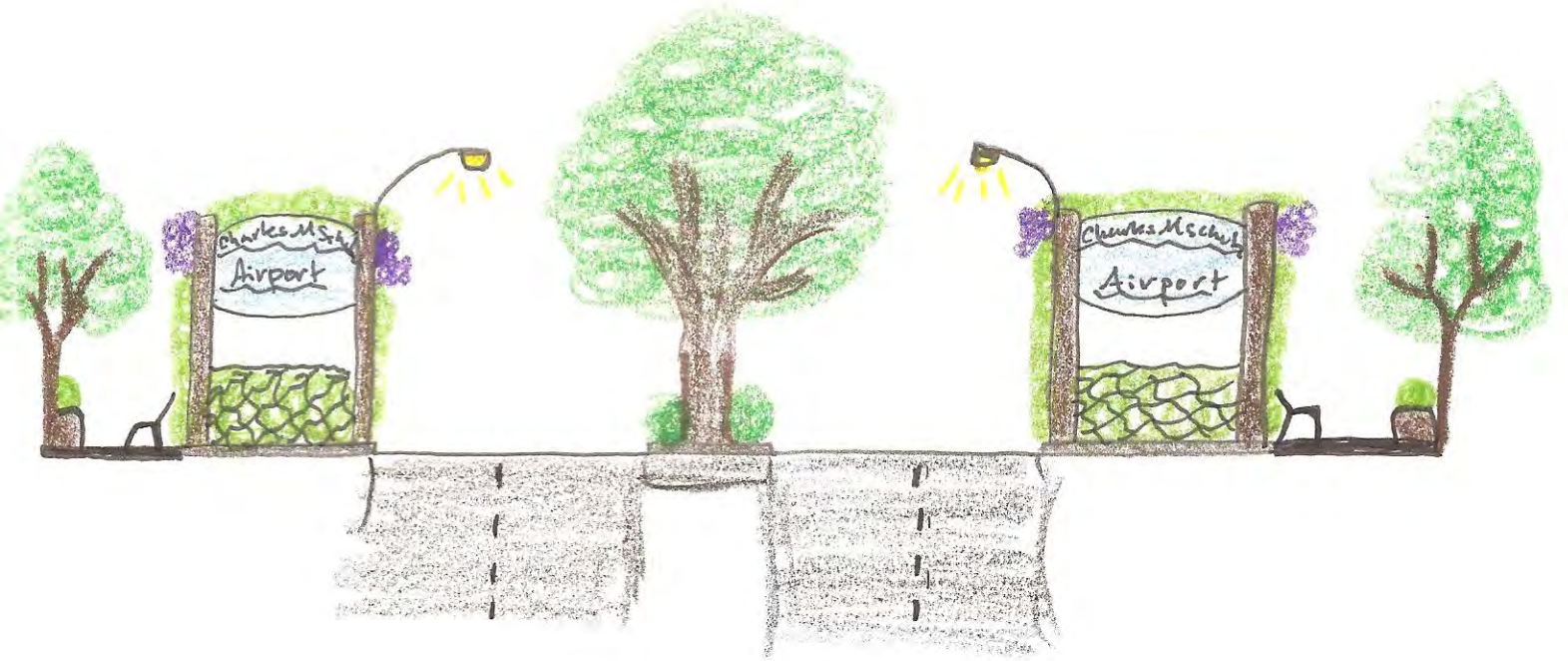
Gateway for Airport: Airport Blvd.
Proposed #1

Charles. M. Schulz Airport





Gateway: #2



- * minimization of the roadway to accommodate traffic flow, transferring excess vehicle space to the pedestrian
- * Pedestrian Amenities: for placemaking such as street furniture and human scale street lighting.
- * Pedestrian safety features such as curb extensions or "bulb outs" at corners or mid-block to widen the sidewalk and make crossing easier, visible sidewalks, raised sidewalks, and raised intersections.
- * environmentally-inspired landscaping, like permeable paving, bio-swales, ~~and~~ stormwater recapture in tree pits and planters, water sensitive plants.



- * "shared Streets": low speed, curbless roadways where possible
- * Medians: provide refuge to ~~street~~ crossing pedestrians and add landscaping to the street space. Also widen street space, can tend to lead to increased speeds.
however