TEGUAYO COMMUNITY PLAN

APRIL, 2010

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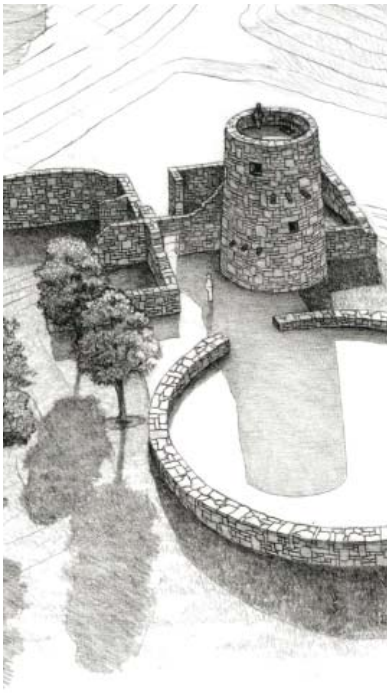
TEGUAYO COMMUNITY PLAN



PURPOSE

The purpose of the document is to articulate the vision for Teguayo and establish general development objectives and deign principles. This document is designed to be a tool for Saratoga Springs City Staff, City Council and Planning Commission to:

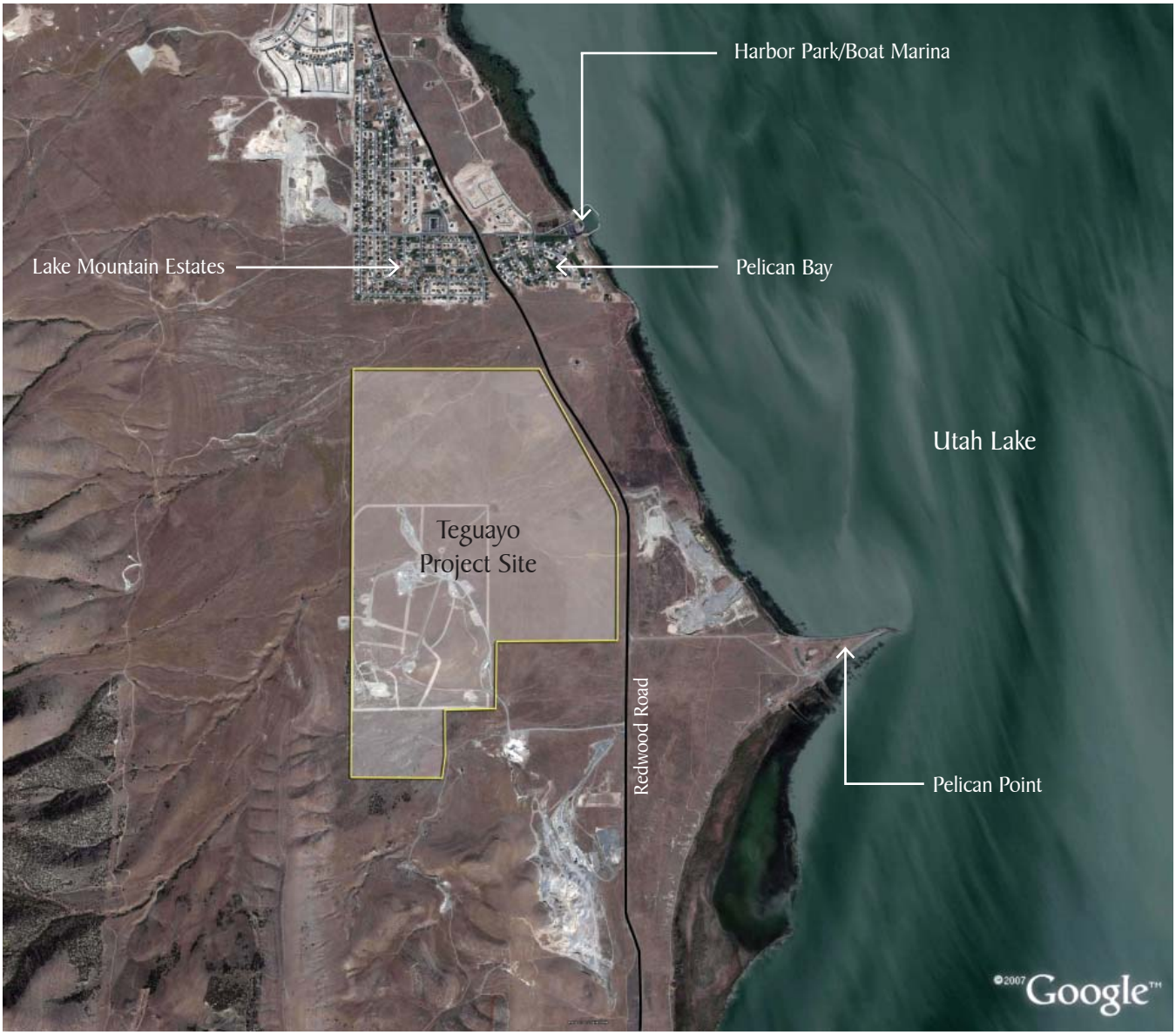
1) establish a zoning level concept, and
2) be used as a tool to evaluate future and more detailed development proposals.

HOW THIS DOCUMENT WORKS

This document is comprised of 3 sections. The first section discusses the overall planning philosophy for Teguayo and establish a series of planning principle and a vision for the project. The second section contains a conceptual land use plan and statistical summary. The third section prescribes detailed guidance regarding:

1) Village Core
2) Mixed Use District
3) Main Street Living
4) Compact Living
5) Amenity Living
6) Knoll Living
7) Open Space - Recreation Network
8) Open Space - Parks and Trails
9) Urban Design - Public Spaces
10) Urban Design - Community Theme
11) Urban Design - Architecture
12) Urban Design - Signage
13) Urban Design - Lighting
14) Landscape Philosophy
15) Landscape - Fencing
16) Landscape - Entry Monumentation

LOCATION MAP



LOCATION

Teguayo is located in unincorporated Utah County approximately 35 miles south of Salt Lake City and 12 miles west of Provo. The project is nestled in foothills west of Utah Lake with sweeping views of the lake and Mt. Timpanogos. The project boundary is contiguous with the existing southern municipal boundary of Saratoga Springs along the north and east with public land controlled by the Bureau of Land Management to the south and west. Teguayo's location in northern Utah affords future residents access to bustling urban areas, world-class ski resorts, remote wilderness areas and high mountain lakes.

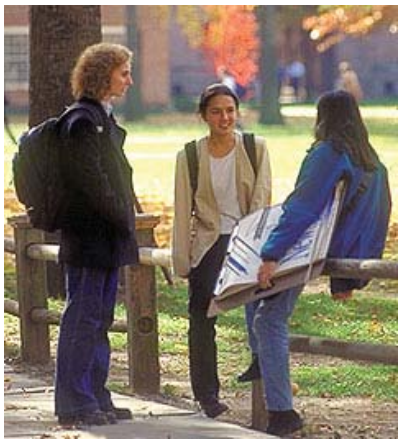
PHILOSOPHY

The design philosophy for Teguayo is founded upon the notion that physical and contextual site characteristics play a significant role in the determination of use. As a result, the design for Teguayo is predicated upon the idea of "listening to the land". Therefore, the first planning principle for Teguayo is "allow the land to dictate community structure and intensity of land use". The development of Teguayo should be based upon a commitment to sustainable practices.

In terms of arriving at development program and understanding the carrying capacity of the land our approach to the plan was based upon the question

"How does it live?"

We have found that by considering the question "how does it live?" we are able to design places that are unique; places that listen to the land. Striving to understanding how a community will be experienced by its residents alters the design process. Linkage and connectivity become more important. Access to employment, education, worship, and recreation is critical. The right program elements are arranged in a way that maximizes their use and ensures long-term sustainability. Human systems and natural systems can co-exist. Beauty, and artful expression within the built environment are not forgotten.



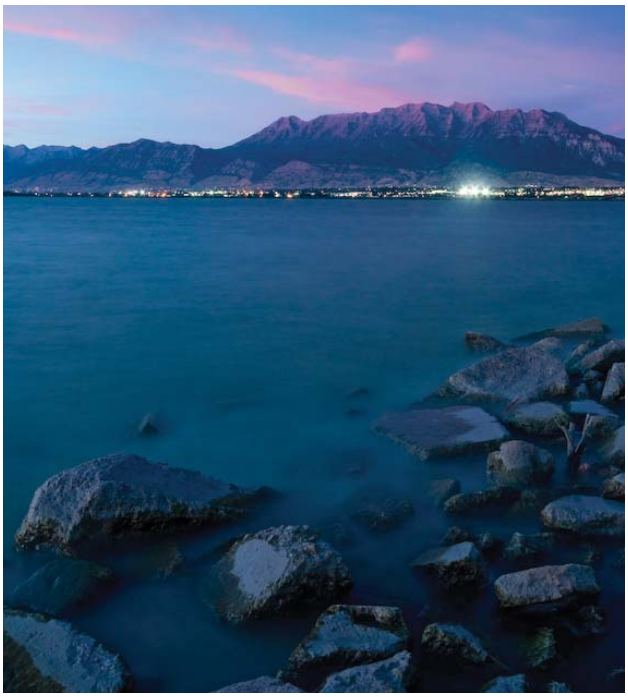


Photo: Courtesy Ivan M.

PLANNING PRINCIPLES

1) Allow the land to dictate community structure and intensity of land use.

2) Preserve natural drainage corridors and respect natural systems.

3) A community should be compact, pedestrian-friendly, and contain a mix of uses.

4) Many activities of daily living should occur within walking distance. Interconnected networks of streets and trails should be designed to encourage walking, reduce the number and length of automobile trips, and conserve energy.

5) Within neighborhoods a broad range of housing types and price levels should be offered to bring people of diverse ages and incomes into daily interaction, strengthening the personal and civic bonds essential to an authentic community.

6) Concentrations of civic, institutional, recreational and community amenities should be embedded in neighborhoods.

7) A range of parks from tot-lots and village greens to ballfields and community gardens, should be placed within neighborhoods. Conservation areas and open lands should be used to define and connect different neighborhoods and living areas.

8) Development will adequately accommodate automobiles, however, it should do so in ways that respect the pedestrian and public space.

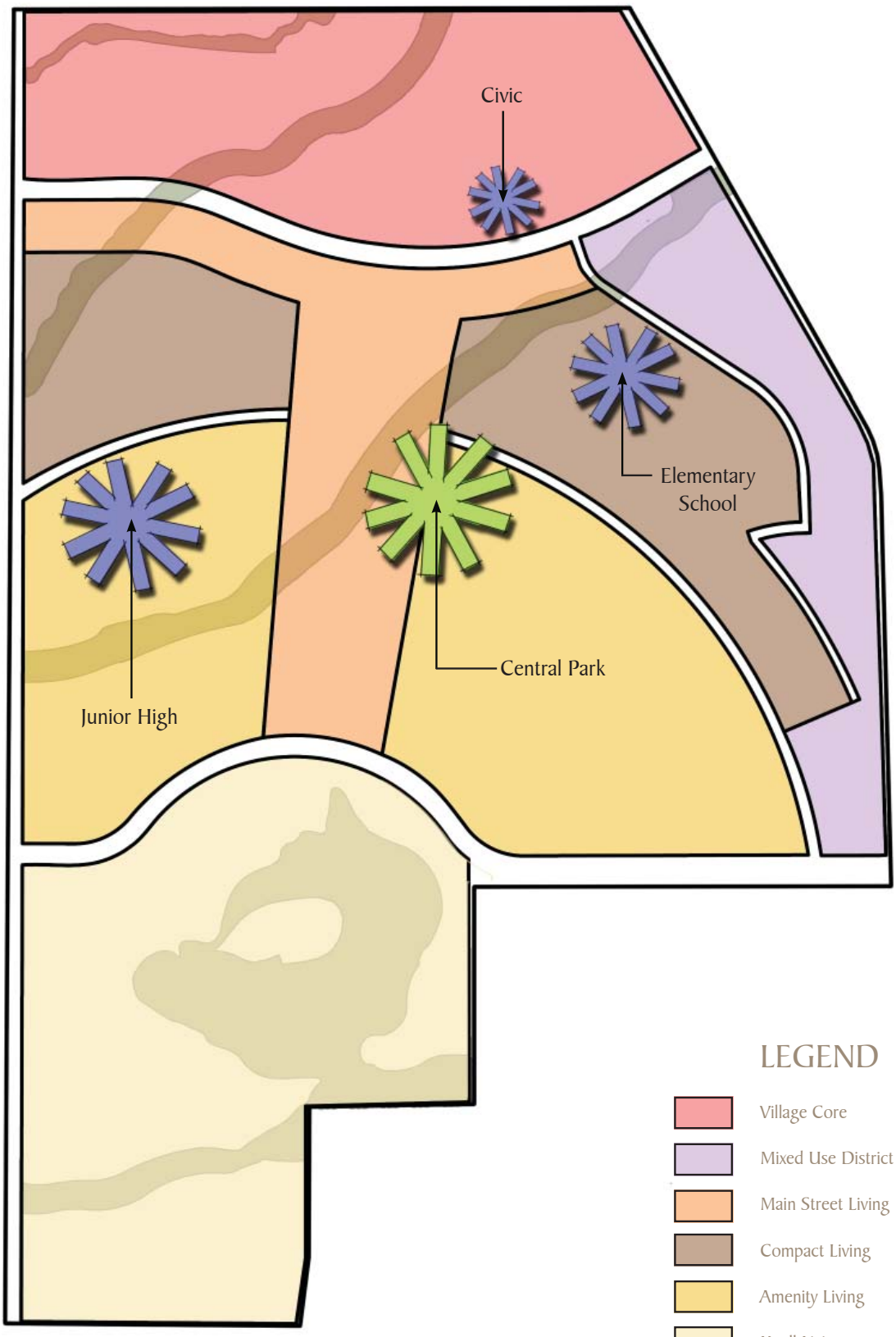
9) Be based upon on a commitment to sustainable practices.

VISION STATEMENT

Winston Churchill once said, "We shape our buildings, and afterwards our buildings shape us." In that light the vision statement for Teguayo is as follows:

> "Embracing the picturesque Utah Lake and Mount Timpanogos, Teguayo is a new multi-use master planned community of distinctive villages and human-scale neighborhoods linked by extensive pedestrian networks, focused around community amenities, and infused with innovative green technologies to enable residents to honor the past, thrive in the present, and confidently greet the future."

CONCEPTUAL LAND USE PLAN



LEGEND

- Village Core
- Mixed Use District
- Main Street Living
- Compact Living
- Amenity Living
- Knoll Living

TEGUAYO PLAN

LAND USE - COMMUNITY OVERVIEW

TABLE 1: STATISTICAL SUMMARY

MAXIMUM BUILDOUT: 4,360 ERU

RESIDENTIAL

DISTRICTS	UNITS	POPULATION
Village Core:	800 - 1,200	1700 - 2000
Mixed Use:	130 - 300	300 - 600
Main Street Living:	500 - 750	1300 -2000
Compact Living:	500 - 800	1400 - 2100
Amenity Living:	350 - 700	1000 - 2000
Knoll Living:	200 - 400	700 - 1500

Maximum Residential Dwellings:
3,695 units 10,200 people

NON-RESIDENTIAL

	SQUARE FEET	EMPLOYEES
Retail/Office/Lt ind:	280,000 s.f.	772
Public/Institutional:	34,000 s.f.	8
Schools:	245,000 s.f.	169
Churches:	113,000 s.f.	6

Maximum Non-Residential Building:
672,000 s.f. 955 jobs

Minimum Open Space:
221.24 acres
(30% total project area)

* Steep slopes and natural drainage corridors are indicated as background shadows on the Community Plan map. The acreage for these preserved open space features has not been removed from each land use category. Therefore, the total acres for each category contains an inherent un-quantified open space component. The minimum open space calculation (30%) will governed by the criteria set forth in Section 19.26.060.5 of the Planned Community Zone.

Teguayo is a 731.596 acre master planned community located adjacent to the southern municipal boundary of the City of Saratoga Springs, Utah. Teguayo is a balanced community and should contain non-residential uses scaled to support the eventual population of the project.

The plan calls for a maximum of 4,360 Equivalent Residential Units (ERU). Of the 4,360 ERU's a maximum of 3,695 are residential dwelling units, and 672,000 square feet of commercial/non-residential building. See Statistical Summary (Table 1).

Since buildout of the Teguayo Community Plan will occur over many years, flexibility is built into the plan to respond to market conditions yet maintain the character of the Community Plan. The following general provisions shall govern the transfer of residential units and non-residential square footage within Teguayo. More detailed transfer provisions may be developed for each Village Plan but must be consistent with these provisions:

1) Residential units and non-residential square footage transfers are permitted; however, the total maximum number of 4,360 Equivalent Residential Units shall not be exceeded.

2) Residential units and non-residential square footage transfers are permitted from a less intense to a more intense District; however, the maximum number of Equivalent Residential Units shall not exceed those listed on Table 1 for each District.

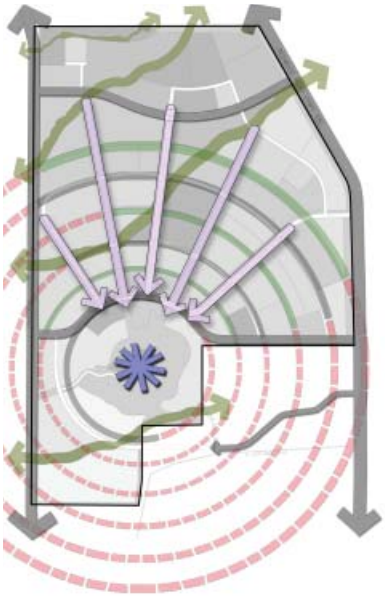
3) Residential units and non-residential square footage may not be transferred into any open space, park, or school unless said use is replaced elsewhere within the same district.

4) The maximum residential density noted within each District may not be exceeded without prior approval by the Planning Commission.

DEVELOPMENT CRITERIA -	VILLAGE CORE	MIXED USE	MAIN STREET LIVING	COMPACT LIVING	AMENITY LIVING	KNOLL LIVING
ACRES:	109 ac	49 ac	77 ac	102 ac	173 ac	166 ac
PERCENT OF TOTAL ACREAGE:	14.8%	6.8%	10.5%	13.9%	23.6%	22.6%
DENSITY RANGE:	12-30 du/ac	10-16 du/ac	8-12 du/ac	8-12 du/ac	4-8 du/ac	2-4 du/ac
BUILDING FUNCTION						
RESIDENTIAL	Permitted	Permitted	Permitted	Permitted	Permitted	Permitted
LODGING	Permitted	Permitted	Limited	Restricted	Restricted	Restricted
OFFICE	Permitted	Permitted	Limited	Restricted	Restricted	Restricted
RETAIL	Permitted	Limited	Limited	Restricted	Restricted	Restricted
BUILDING CONFIGURATION						
PRINCIPAL BUILDING	4 Stories max.	3 Stories max.	3 Stories max.	3 Stories max.	2 Stories max.	2 Stories max.
OUTBUILDING	N/A	N/A	2 Stories max.	2 Stories max.	2 Stories max.	2 Stories max.
LOT OCCUPATION						
MAXIMUM COVERAGE*	65%	60%	50%	50%	40%	35%
LOT WIDTH	N/A	N/A	N/A	N/A.	40 ft. min.	60 ft. min.
SETBACKS - PRINCIPAL BUILDING						
FRONT - PRINCIPAL (a.1)	2 ft. min.	5 ft. min.	8 ft. min.	10 ft. min.	15 ft. min.	20 ft. min.
FRONT - SECONDARY (a.2)	0 ft. min.	5 ft. min.	5 ft. min.	8 ft. min.	10 ft. min.	15 ft. min.
SIDE (a.3)	0 ft. min.	0 ft. min.	5 ft. min.	5 ft. min.	10% width of lot	10% width of lot
REAR (a.4)	5 ft.	10 ft. min.	15 ft. min.	15 ft. min.	15 ft. min.	20 ft. min.
SETBACKS - OUTBUILDING						
FRONT - PRINCIPAL (b.1)	N/A	N/A	10 ft. min. + bldg. setback	10 ft. min. + bldg. setback	10 ft. min. + bldg. setback	15 ft. min. + bldg. setback
FRONT - SECONDARY (b.2)	N/A	N/A	6 ft. min.	6 ft. min.	6 ft. min.	5 ft. min. or 8 ft. at corner
SIDE (b.3)	N/A	N/A	3 ft. min.	3 ft. min.	3 ft. min.	5 ft. min.
REAR (b.4)	N/A	N/A	15 ft. min. from center line of alley	15 ft. min. from center line of alley	3 ft. min.	5 ft. min.
BUILDING PLACEMENT						
BUILDING SEPARATION (front to front)	60% of building height min.	60% of building height min.	N/A	N/A	N/A	N/A
BUILDING SEPARATION (garage to garage)	26 ft. min.	26 ft. min.	N/A	N/A	N/A	N/A
BUILDING SEPARATION (side to side or side to rear)	40% of building height min.	40% of building height min.	N/A	N/A	N/A	N/A
BUILDING SEPARATION (rear to rear)	50% of building height min	50% of building height min	N/A	N/A	N/A	N/A
*COMMUNITY AMENITIES						
LARGE QUALIFYING AMENITIES (L.Q.A.)	1 L.Q.A./200 units	1 L.Q.A./200 units	1 L.Q.A./200 units	1 L.Q.A./200 units	1 L.Q.A./200 units	1 L.Q.A./200 units
QUAILIFYING AMENITIES (Q.A.)	1 Q.A./100 units	1 Q.A./100 units	1 Q.A./100 units	1 Q.A./100 units	1 Q.A./100 units	1 Q.A./100 units

* Community amenities are calculated by applying the formula for both L.Q.A and Q.A. to the total units in each Village Plan. (For example a 400 unit development will be responsible for improvement and/or fair share of funding for 2 L.Q.A's and 4 Q.A's.)

LAND USE OBJECTIVES



LAND USE - COMMUNITY OVERVIEW

OBJECTIVE:

Teguayo is a 732 acre planned community located at the southern end of the City of Saratoga Springs, Utah. This community is nestled into the foothills overlooking Utah Lake with distant views of Mount Timpanogos and the Wasatch Mountains.

On this property Dyno Nobel has created a master planned community that emphasizes a variety of residential housing types and reflects the aesthetic charm of small human-scale neighborhoods reminiscent early twentieth-century historic Utah architecture. Teguayo is envisioned to provided a variety of land uses which support the resident population and take advantage of the natural setting.

Open space elements include the surrounding foothills to the west, the landscape buffer zones to the north and south, the drainage corridors, steep slopes around the knoll, a large central community park, a variety of small neighborhood parks, pocket parks, linear parks, landscaped medians and parkways, and the trail system that links neighborhoods and community amenities together.

STRATEGIES:

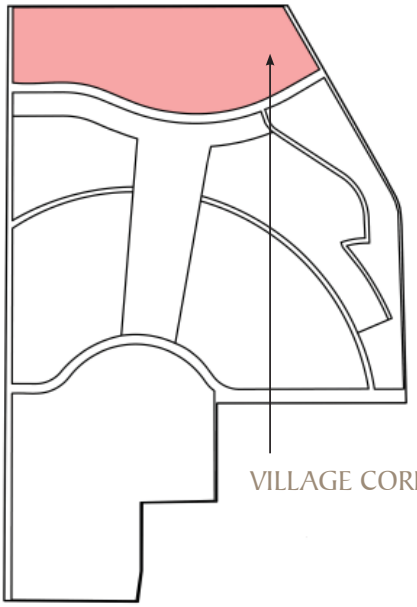
1) Develop a balanced planned community with enough vitality and land use intensity and to serve as a secondary city center in the southern end of Saratoga Spring.

2) Create a hierarchy of intensities, including a village core, a mixed use neighborhood, a commercial shopping district, and other distinct lifestyle neighborhoods that create character and diversity of living opportunities.

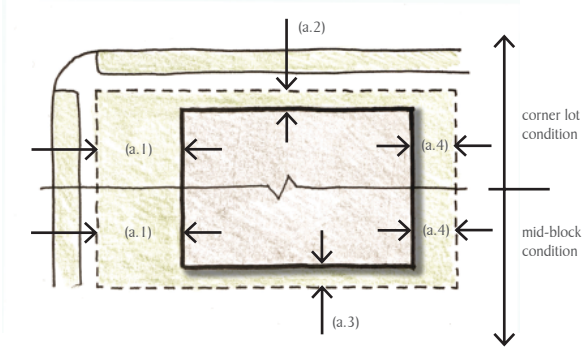
3) Provide sites for civic uses, schools, recreation centers, parks, and other community amenities that are scaled to support the population of Teguayo at buildout.

4) Compact pattern to foster convenient access, social interaction, familiarity, etc...

5) Wide range of housing types including: stacked flats, lofts, condos, townhomes, apartments, row houses, podium townhomes, live-work, internal motor court, senior/age restricted, age targeted. duplex, triplex, mansion townhomes, big house, detached greencourt homes, paseo homes, cottage homes (garden & court), small lot single family detached, Cottage homes, larger single family detached, executive living, and estate homes.



SETBACKS - PRINCIPAL BLDG.



BUILDING PLACEMENT

DEVELOPMENT CRITERIA - VILLAGE CORE	
ACRES:	109 ac
PERCENT OF TOTAL ACREAGE:	14.8%
DENSITY RANGE:	12-30 du/ac
BUILDING FUNCTION	
RESIDENTIAL	Permitted
LODGING	Permitted
OFFICE	Permitted
RETAIL	Permitted
BUILDING CONFIGURATION	
PRINCIPAL BUILDING	4 Stories max.
OUTBUILDING	N/A
LOT OCCUPATION	
MAXIMUM COVERAGE*	65%
LOT WIDTH	N/A
SETBACKS - PRINCIPAL BUILDING	
FRONT - PRINCIPAL (a.1)	2 ft. min.
FRONT - SECONDARY (a.2)	0 ft. min.
SIDE (a.3)	0 ft. min.
REAR (a.4)	5 ft. min.
BUILDING PLACEMENT	
BUILDING SEPARATION (front to front)	60% of building height min.
BUILDING SEPARATION (garage to garage)	26 ft. min.
BUILDING SEPARATION (side to side or side to rear)	40% of building height min.
BUILDING SEPARATION (rear to rear)	50% of building height min
**COMMUNITY AMENITIES	
LARGE QUALIFYING AMENITIES (L.Q.A.)	1 L.Q.A./200 units
QUAILIFYING AMENITIES (Q.A.)	1 Q.A./100 units

* Lot coverage includes the building footprint and any automobile related impervious surface

** Community amenities are calculated by applying the formula for both L.Q.A and Q.A. to the total units in each Village Plan. (For example a 400 unit development will be responsible for improvement and/or fair share of funding for 2 L.Q.A's and 4 Q.A's.)

LAND USE - VILLAGE CORE

OBJECTIVE:

Create a vibrant Village Core through the integration of commercial retail, office, and a wide range of high density residential product types. The Village Core is a high intensity area with commercial retail, office, and high density residential uses between 12 to 30 dwelling units per acre. The Village Core has an urban character with sidewalk adjacent, pedestrian oriented buildings between 1 and 4 stories, wide sidewalks, outdoor dining and pedestrian amenities. Other uses encouraged in the Village Core include a community center, civic buildings (police and fire station), public gathering spaces and plazas.

STRATEGIES:

1) Create a hierarchy of public spaces that are oriented toward the lake and views of Timpanogos. The richness of public gathering space is a critical component for Teguayo's success as a lifestyle community.

2) Building massing should be brought up to the street and parking provided on-street and internal to sites.

3) Commercial uses are encouraged to achieve a minimum 0.35 floor area ratio.

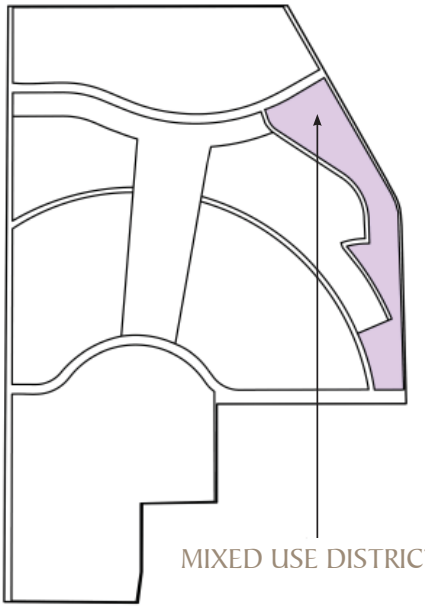
4) Buildings should not exceed 4 stories.

5) Builders should incorporate architectural variety in the elevations for each product type. The exterior facade of identical adjacent footprints should vary in color scheme, material, and fenestration pattern.

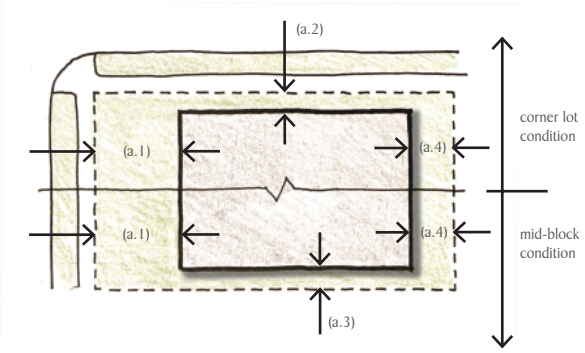
6) Create a hierarchy of pedestrian spaces interconnected by trails and/or sidewalks. Neighborhood trails and amenity paths should connect development parcels and community amenities to the community trail network. Connectivity to each development parcel should be abundant.

KEY ELEMENTS:

Commercial retail, office, incubator industrial, public/semi public spaces and recreation/open space uses, stacked flats, lofts, condos, townhomes, apartments, row houses, podium townhomes, live-work, internal motor court, senior/age restricted, age targeted.



SETBACKS - PRINCIPAL BLDG.

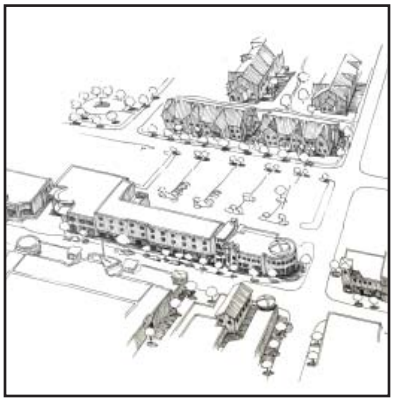


BUILDING PLACEMENT

DEVELOPMENT CRITERIA - MIXED USE	
ACRES:	49 ac
PERCENT OF TOTAL ACREAGE:	6.8%
DENSITY RANGE:	10-16 du/ac
BUILDING FUNCTION	
RESIDENTIAL	Permitted
LODGING	Permitted
OFFICE	Permitted
RETAIL	Limited
BUILDING CONFIGURATION	
PRINCIPAL BUILDING	3 Stories max.
OUTBUILDING	N/A
LOT OCCUPATION	
MAXIMUM COVERAGE*	60%
LOT WIDTH	N/A
SETBACKS - PRINCIPAL BUILDING	
FRONT - PRINCIPAL (a.1)	5 ft. min.
FRONT - SECONDARY (a.2)	5 ft. min.
SIDE (a.3)	0 ft. min.
REAR (a.4)	10 ft. min.
BUILDING PLACEMENT	
BUILDING SEPARATION (front to front)	60% of building height min.
BUILDING SEPARATION (garage to garage)	26 ft. min.
BUILDING SEPARATION (side to side or side to rear)	40% of building height min.
BUILDING SEPARATION (rear to rear)	50% of building height min
****COMMUNITY AMENITIES**	
LARGE QUALIFYING AMENITIES (L.Q.A.)	1 L.Q.A./200 units
QUAILIFYING AMENITIES (Q.A.)	1 Q.A./100 units

* Lot coverage includes the building footprint and any automobile related impervious surface

** Community amenities are calculated by applying the formula for both L.Q.A and Q.A. to the total units in each Village Plan. (For example a 400 unit development will be responsible for improvement and/or fair share of funding for 2 L.Q.A's and 4 Q.A's.)



KEY ELEMENTS:

Professional office, commercial, retail, incubator industrial, light industrial, flex office/office warehouse, public/semi public and recreation/open space uses, lofts, condos, townhomes, row house, live-work. internal motor court, senior/age restricted, assisted living facilities.

LAND USE - MIXED USE

OBJECTIVE:

Create an active Mixed Use District through the integration of office, retail, and a wide range of high density residential product types. The Mixed Use District encourages office, retail and high density residential uses between 10 to 16 dwelling units per acre. Office, retail and residential uses can be mixed either horizontally or vertically.

STRATEGIES:

1) Buildings in the Mixed Use area should not exceed 3 stories.

2) Create a hierarchy of public spaces that are oriented toward Utah Lake and views of Timpanogos.

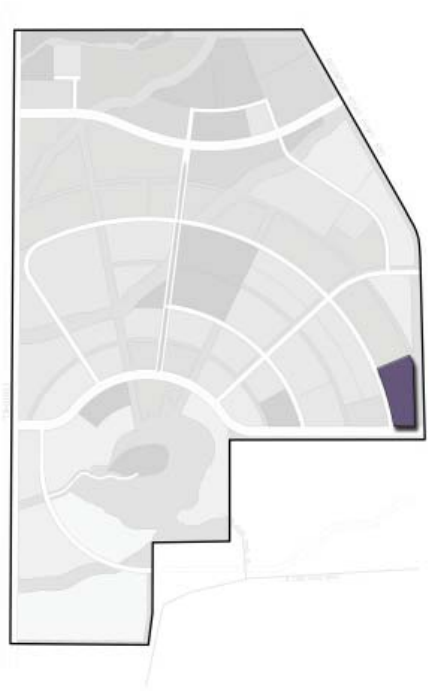
3) Building massing should be brought up to the street and parking provided internal to sites.

4) Office and retail uses are encouraged to achieve 0.35 floor area ratios.

5) Distribution and mix of uses is governed by acreage ratios. Each Mixed Use development parcel should contain both residential and non-residential uses. No less than 40% and no more than 60% of the parcel acreage should be dedicated to residential uses. Conversely no less than 40% and no more than 60% of the parcel acreage should be dedicated to non-residential uses. Shared parking is encouraged between residential and non-residential uses. Office uses should provide 3.5 parking stalls/1000 square feet of building. Parking requirements for residential uses should comply with current standards as defined by Saratoga Springs municipal code.

6) Builders should incorporate architectural variety in the elevations for each product type. The exterior facade of identical adjacent footprints should vary in color scheme, material, and fenestration pattern.

7) Create a hierarchy of pedestrian spaces interconnected by trails and/or sidewalks. Neighborhood trails and amenity paths should connect development parcels and community amenities to the community trail network. Connectivity to each development parcel should be abundant.



LAND USE - MIXED USE

DESIGN PROTOTYPE:

The concept plan on the following page is prototypical only and demonstrates one of many potential applications of the design principles for Mixed Use Neighborhoods. This artist rendering is conceptual in nature. The land owner/developer retains the right to modify or disregard any and/or all land use concepts featured in this plan.

This prototypical concept plan demonstrates horizontal integration of office and residential development on a 7.02 acre parcel. The non-residential component covers 3.78 acres (53%), the residential component covers 3.20 acres (47%) of the mixed use parcel.

The non-residential portion features:

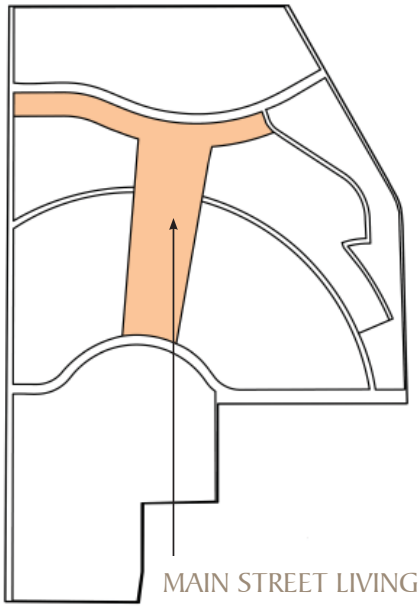
- 48,188 square feet office space (plotted at 0.29 F.A.R.)
- 168 parking stalls (satisfies a 3.5/1000 parking standard)
- 2-story buildings that are located adjacent to Redwood road to maximize views and visibilty.
- 1-story buildings that are strategically placed to provide an on-street architectural presence so that internal streets have a walkable character.
- Remnant spaces in the concept plan that are designed as a series of diverse hardscape plazas.
- Plazas are oriented toward building entrances and/or toward view of Utah Lake and programmed for climatic relief and visual interest.

The residential portion features:

- 68 dwelling units
- 26 guest parking stalls evenly distributed across site (not congregated in one location).
- Residential buildings are oriented toward highly amenitized green courts
- Buildings are arranged to present front doors toward the street and conceal alley ways internally to the site.
- Residential gathering areas such as the outdoor fireplace and plaza are placed near the street to enhance a walkable atmosphere.
- The tot lot is place away from automobile traffic with outstanding views of the Lake.
- High level of pedestrian connectivity to the office area as well as access to the street and community trail system.

CONCEPTUAL SITE PLAN

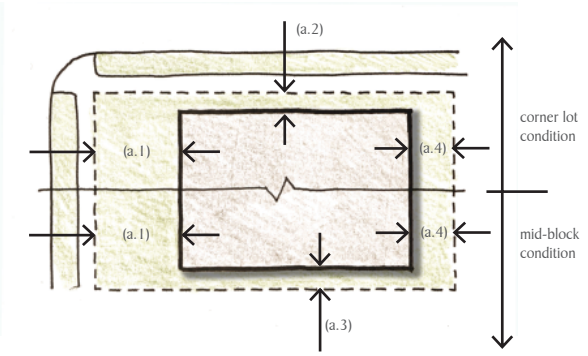
This concept plan is prototypical only and demonstrates one of many potential applications of the design principles for Mixed Use Neighborhoods. This artist rendering is conceptual in nature. The land owner/developer retains the right to modify or disregard any and/or all land use concepts featured in this plan.



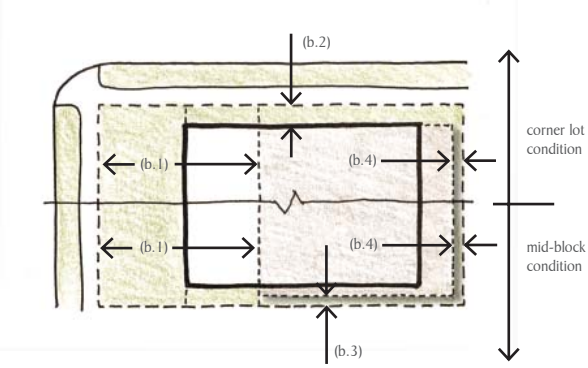
MAIN STREET LIVING

DEVELOPMENT CRITERIA - MAIN STREET LIVING	
ACRES:	77 ac
PERCENT OF TOTAL ACREAGE:	10.5%
DENSITY RANGE:	8-12 du/ac
BUILDING FUNCTION	
RESIDENTIAL	Permitted
LODGING	Limited
OFFICE	Limited
RETAIL	Limited
BUILDING CONFIGURATION	
PRINCIPAL BUILDING	3 Stories max.
OUTBUILDING	2 Stories max.
LOT OCCUPATION	
MAXIMUM COVERAGE*	50%
LOT WIDTH	N/A
SETBACKS - PRINCIPAL BUILDING	
FRONT - PRINCIPAL (a.1)	8 ft. min.
FRONT - SECONDARY (a.2)	5 ft. min.
SIDE (a.3)	5 ft. min.
REAR (a.4)	15 ft. min.
SETBACKS - OUTBUILDING	
FRONT - PRINCIPAL (b.1)	10 ft. min. + bldg setback
FRONT - SECONDARY (b.2)	6 ft. min.
SIDE (b.3)	3 ft. min.
REAR (b.4)	15 ft. min. from center line of alley
**COMMUNITY AMENITIES	
LARGE QUALIFYING AMENITIES (L.Q.A.)	1 L.Q.A./200 units
QUAILIFYING AMENITIES (Q.A.)	1 Q.A./100 units

SETBACKS - PRINCIPAL BLDG.



SETBACKS - OUTBUILDING



* Lot coverage includes the building footprint and any automobile related impervious surface

** Community amenities are calculated by applying the formula for both L.Q.A and Q.A. to the total units in each Village Plan. (For example a 400 unit development will be responsible for improvement and/or fair share of funding for 2 L.Q.A's and 4 Q.A's.)

KEY ELEMENTS:

Street trees, 10 foot landscaped parkways, 6 foot sidewalks, no individual unit driveway curb-cuts, on-street parking. Products: lofts, condos, townhomes, row homes, Live-work (home office, retail main level), two and/or three family homes (duplex/triplex), mansion homes, big house, zero-lot line, 2 pack, paseo homes, courtyard homes, auto court townhomes, green courts.

LAND USE - MAIN STREET LIVING

OBJECTIVE:

Create a pedestrian friendly Main Street Living area through a wide range of medium and high density residential product types that are scaled and oriented toward secondary arterials and primary residential collector streets. Main Street Living encourages attached and detached residential uses between 8 to 12 dwelling units per acre. Main Street Living residential units should be predominantly alley loaded to maximize front doors facing the street and to minimize curb-cuts for individual units.

STRATEGIES:

1) Residential buildings within the Main Street Living area should not exceed 3 stories.

2) Create a hierarchy of pedestrian spaces that are oriented toward the street.

3) Building massing should vary in scale along the street to maximize visual interest.

4) Building pads should be raised a minimum of two to three feet above street grade. This allows for larger overall lot area, slight second story views over adjacent homes, and enhanced street character.

5) Multifamily buildings are encouraged to be serviced by carriage lanes or alleys from behind. Single Family attached and detached product should also be alley loaded to maximize front doors facing the street and eliminate curb-cuts for individual units.

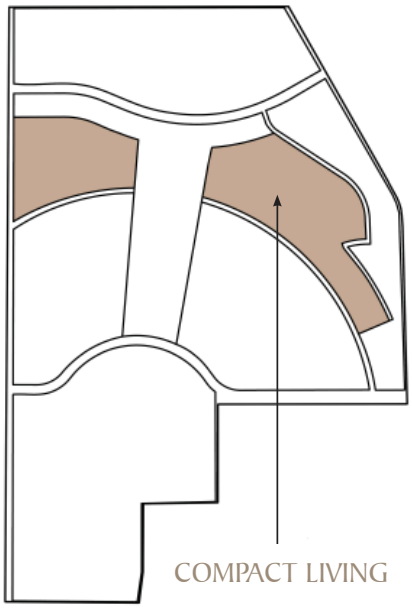
6) Traffic calming measures such as chokers, crossing islands, periodic landscaped medians, mini-circles, gateways, specialized paving treatments, and chicanes are encouraged.

7) On-street parking is encouraged in bays between landscaped chicanes.

8) Alleys should be designed with areas to accommodate snow removal.

9) Builders should incorporate a variety of architectural elevations for each product type. The exterior facade of identical adjacent footprints should also vary from each other in color scheme, material, and fenestration pattern.

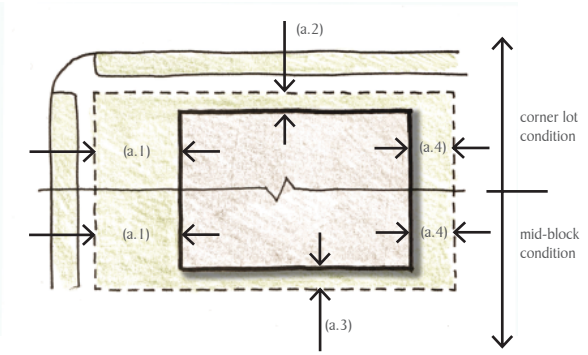
10) Create a hierarchy of pedestrian spaces interconnected by trails and/or sidewalks. Neighborhood trails and amenity paths should connect development parcels and community amenities to the community trail network. Connectivity to each development parcel should be abundant.



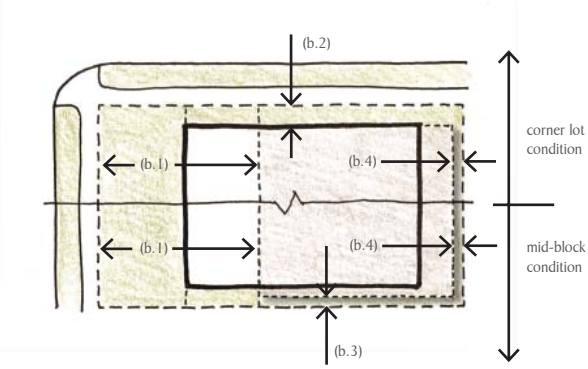
COMPACT LIVING

DEVELOPMENT CRITERIA - COMPACT LIVING	
ACRES:	102 ac
PERCENT OF TOTAL ACREAGE:	13.9%
DENSITY RANGE:	8-12 du/ac
BUILDING FUNCTION	
RESIDENTIAL	Permitted
LODGING	Restricted
OFFICE	Restricted
RETAIL	Restricted
BUILDING CONFIGURATION	
PRINCIPAL BUILDING	3 Stories max.
OUTBUILDING	2 Stories max.
LOT OCCUPATION	
MAXIMUM COVERAGE*	50%
LOT WIDTH	N/A
SETBACKS - PRINCIPAL BUILDING	
FRONT - PRINCIPAL (a.1)	10 ft. min.
FRONT - SECONDARY (a.2)	8 ft. min.
SIDE (a.3)	5 ft. min.
REAR (a.4)	15 ft. min.
SETBACKS - OUTBUILDING	
FRONT - PRINCIPAL (b.1)	10 ft. min. + bldg setback
FRONT - SECONDARY (b.2)	6 ft. min.
SIDE (b.3)	3 ft. min.
REAR (b.4)	15 ft. min. from center line of alley
**COMMUNITY AMENITIES	
LARGE QUALIFYING AMENITIES (L.Q.A.)	1 L.Q.A./200 units
QUAILIFYING AMENITIES (Q.A.)	1 Q.A./100 units

SETBACKS - PRINCIPAL BLDG.



SETBACKS - OUTBUILDING



* Lot coverage includes the building footprint and any automobile related impervious surface

** Community amenities are calculated by applying the formula for both L.Q.A and Q.A. to the total units in each Village Plan. (For example a 400 unit development will be responsible for improvement and/or fair share of funding for 2 L.Q.A's and 4 Q.A's.)

KEY ELEMENTS:

Products: townhomes, row homes, podium townhomes, two and/or three family homes (duplex/triplex), mansion homes, big house, auto court, 2 pack product, green courts, paseo homes, detached cluster products, modular homes, cottage homes (garden & court), small lot single family detached, public/semi public and recreation/open space uses, schools, and churches.

LAND USE - COMPACT LIVING

OBJECTIVE:

Among all of the land use categories in Teguayo, Compact Living shall have the most diverse array of residential products types in terms of form, massing, configuration, architectural style, and material. Compact Living encourages attached and detached residential uses between 8 and 12 dwelling units per acre.

STRATEGIES:

1) Create a series of residential enclaves within each Compact Living parcel. Individual enclaves should consist of 20 to 70 dwelling units and should possess a high level of architectural diversity. Distinct enclaves should vary from each other in at least three of the following characteristics: intensity, density, form, height, massing, orientation, configuration, and architectural style, and color scheme.

2) Within each enclave builders should incorporate a variety of architectural elevations for each product type. The exterior facade of identical adjacent footprints should also vary from each other in color scheme, material, and fenestration pattern.

3) Create a hierarchy of pedestrian spaces interconnected by trails and/or sidewalks. Neighborhood trails and amenity paths should connect development parcels and community amenities to the community trail network. Connectivity to each development parcel should be abundant.

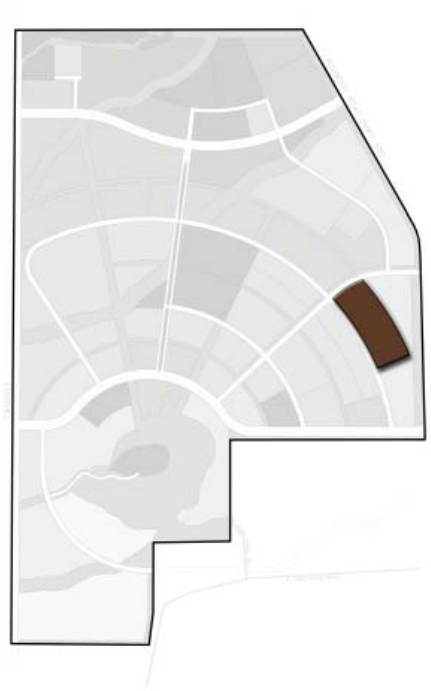
4) Residential product type should vary along the streets and trails to maximize visual interest.

5) Building pads should be raised above street grade. This allows for larger overall lot area, slight second story views over adjacent homes, and enhanced street character.

6) Residential buildings should not exceed 3 stories and should be oriented to maximize views of Utah Lake where possible.

7) Varying roof pitch and building heights are encouraged to maximize visual interest. Higher densities within these areas are offset by, and focused around high-quality lifestyle amenities (i.e. pocket parks, gardens, small community clubhouses/rec. centers, etc...).

8) Within each enclave builders should incorporate a variety of architectural elevations for each product type. The exterior facade of identical adjacent footprints should also vary from each other in color scheme, material, and fenestration pattern.



LAND USE - COMPACT LIVING

DESIGN PROTOTYPE:

The concept plan on the following page is prototypical only and demonstrates one of many potential applications of the design principles for Compact Living Neighborhoods. This artist rendering is conceptual in nature. The land owner/developer retains the right to modify or disregard any and/or all land use concepts featured in this plan.

This prototypical concept plan demonstrates integration of 3 distinct residential product types on a 11.74 acre parcel in order to achieve the parcel density (12 du/ac). Although none of the 3 product types is plotted to achieve 12 dwelling units per acre individually, in combination the varying densities equal the maximum allowable units (141).

This concept plan may be viewed as an extreme demonstration of product mixing; implementing a wide range of densities (6.1 du/ac - 18.3 du/ac) inside a 12 du/ac parcel. However, the intent of Compact Living is to maximize architectural variety by utilizing a wide range of residential products. When viewed as a whole the parcel accommodates the allowed number of residential units and also includes enough internal open space amenities that quality of life is enhanced.

The residential portion features:

- 141 dwelling units
- 73 guest parking stalls evenly distributed across site (not congregated in one location).
- Residential buildings are oriented to maximize views. 61 units (43%) have unobstructed views of Utah Lake.
- Buildings are arranged to present front doors toward the street and conceal alley ways internally to the site.
- Residential gathering areas located between different product types to provide equal access.
- High level of pedestrian connectivity to the office area as well as access to the street and community trail system.

It is also the intent of this exercise to demonstrate that within each enclave, builders should incorporate a variety of architectural elevations for each product type. The exterior facade of identical adjacent footprints should vary from each other in color scheme, material, and fenestration pattern.

COURTYARD TOWNHOMES
(Alley Loaded)

Sansovino
Ladera Ranch, CA
Builder: D.R. Horton

Site Statistics
Area: 3.56 acres
Density:18.3 du/ac
Total Units: 65
Guest Parking: 28
Product Specifications: 1,050 - 1,350 s.f.

AUTOCOURT TOWNHOMES

Newport Coast, CA
Builder: Brookfield Homes
2-story detached courtyard homes

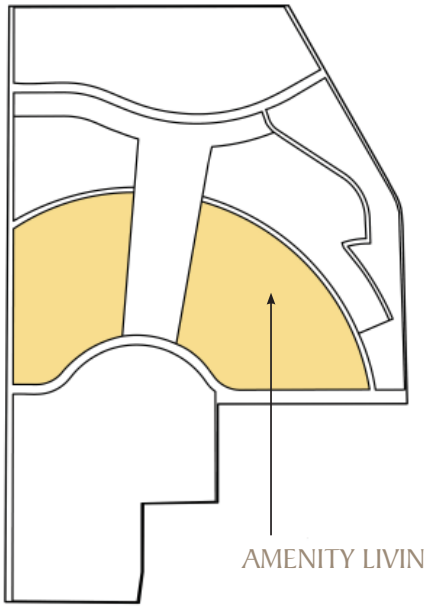
Site Statistics
Area: 4.92 acres
Density:11.4 du/ac
Total Units: 56
Guest Parking: 34
Product Specifications: 1,622 - 2,632 s.f.

MANSION TOWNHOMES
(Alley Load)

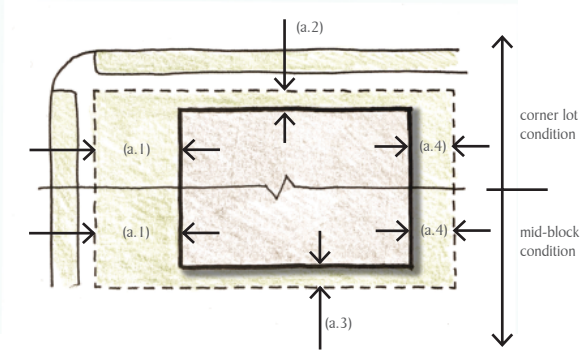
Daybreak, UT
Builder: Holmes Homes
3 and 4-plex units

Site Statistics
Area: 3.26 acres
Density:6.1 du/ac
Total Units: 20
Guest Parking: 11
Product Specifications:

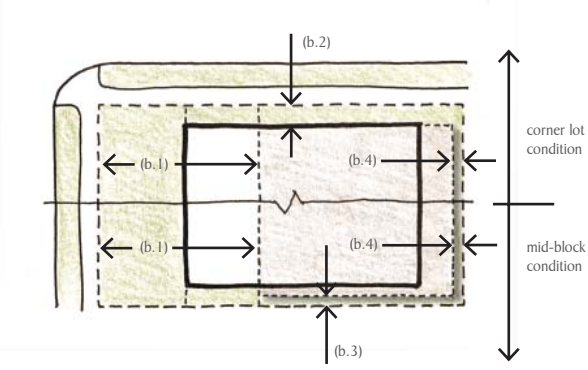
This concept plan is prototypical only and demonstrates one of many potential applications of the design principles for Compact Living Neighborhoods. This artist rendering is conceptual in nature. The land owner/developer retains the right to modify or disregard any and/or all land use concepts featured in this plan.



SETBACKS - PRINCIPAL BLDG.



SETBACKS - OUTBUILDING



DEVELOPMENT CRITERIA - AMENITY LIVING	
ACRES:	173 ac
PERCENT OF TOTAL ACREAGE:	23.6%
DENSITY RANGE:	4-8 du/ac
BUILDING FUNCTION	
RESIDENTIAL	Permitted
LODGING	Restricted
OFFICE	Restricted
RETAIL	Restricted
BUILDING CONFIGURATION	
PRINCIPAL BUILDING	2 Stories max.
OUTBUILDING	2 Stories max.
LOT OCCUPATION	
MAXIMUM COVERAGE*	40%
LOT WIDTH	40 ft. min.
SETBACKS - PRINCIPAL BUILDING	
FRONT - PRINCIPAL (a.1)	15 ft. min.
FRONT - SECONDARY (a.2)	10 ft. min.
SIDE (a.3)	5 ft. min.
REAR (a.4)	15 ft. min.
SETBACKS - OUTBUILDING	
FRONT - PRINCIPAL (b.1)	10 ft. min. + bldg setback
FRONT - SECONDARY (b.2)	6 ft. min.
SIDE (b.3)	3 ft. min.
REAR (b.4)	3 ft. min.
**COMMUNITY AMENITIES	
LARGE QUALIFYING AMENITIES (L.Q.A.)	1 L.Q.A./200 units
QUAILIFYING AMENITIES (Q.A.)	1 Q.A./100 units

* Lot coverage includes the building footprint and any automobile related impervious surface

** Community amenities are calculated by applying the formula for both L.Q.A and Q.A. to the total units in each Village Plan. (For example a 400 unit development will be responsible for improvement and/or fair share of funding for 2 L.Q.A's and 4 Q.A's.)

LAND USE - AMENITY LIVING

OBJECTIVE:

As the name suggests, Amenity Living residential units possess their own private open space amenity (i.e. small yard, patio, garden, etc...) and/or have convenient access to high-quality community lifestyle amenities. Amenity Living is comprised of residential uses between 4 and 8 dwelling units per acre. Homes in this land use category are predominantly detached. However, attached duplex units or mansion townhomes are not precluded.

STRATEGIES:

1) Create a series of residential enclaves within each Amenity Living parcel. Individual enclaves should consist of 20 to 40 dwelling units and should possess a high level of architectural diversity. Distinct enclaves should vary from each other in at least three of the following characteristics: intensity, density, form, height, massing, orientation, configuration, and architectural style, and color scheme.

2) Create a hierarchy of pedestrian spaces interconnected by trails and/or sidewalks. Neighborhood trails and amenity paths should connect development parcels and community amenities to the community trail network. Connectivity to each development parcel should be abundant.

3) Within each enclave builders should incorporate a variety of architectural elevations for each product type. The exterior facade of identical adjacent footprints should also vary from each other in color scheme, material, and fenestration pattern.

4) Residential product type should vary along the streets and trails to maximize visual interest.

5) Building pads should be raised two to three feet above street grade. This allows for larger overall lot area, slight second story views over adjacent homes, and enhanced street character.

5) Single family detached units should implement a variety of garage orientations and front yard setbacks (rear loaded, detached, recessed, front loaded, side entry, and corner entry). No more than two adjacent properties should have the same garage configuration and a minimum of 4 different configurations should be used on each street (alley loaded product exempt)

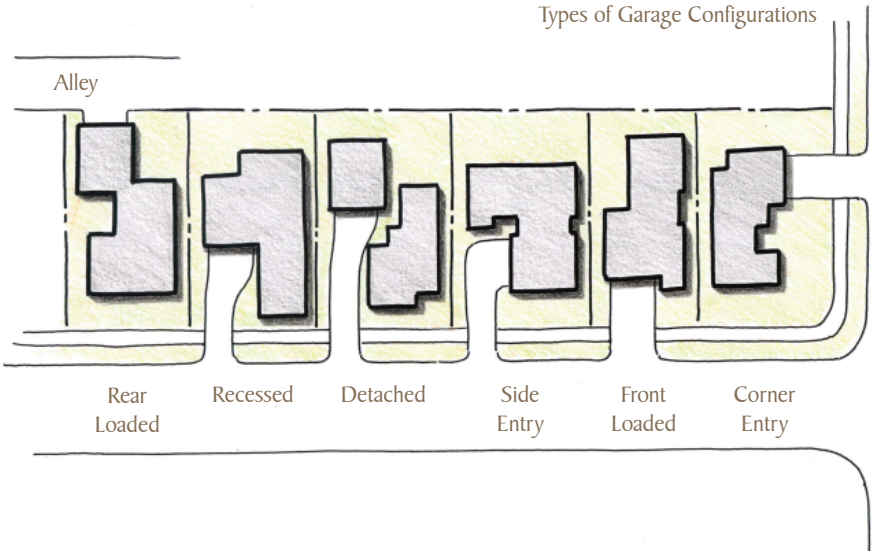
7) Structures should not exceed 2 stories and should be oriented to maximize views of Utah Lake where possible.

8) Garage placement in this category is critical. Varying the front setbacks and orientation is encouraged to maximize visual interest.

KEY ELEMENTS:

PRODUCTS: duplex, triplex, mansion townhomes, big house, detached greencourt homes, modular homes, paseo homes, cottage homes (garden & court), small lot single family detached, public/semipublic and recreation/ open space uses, schools, and churches.

Types of Garage Configurations

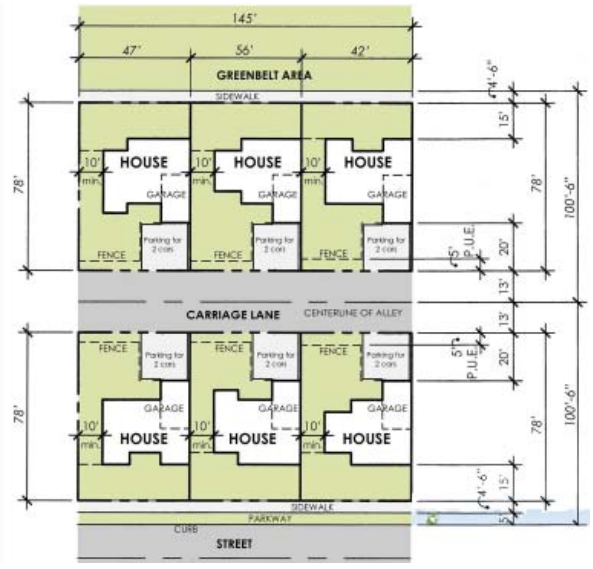


SHARED DRIVEWAY
Daybreak, UT
Builder: Various
Attached units
Density: 8 - 10 du/ac

This product is designed to face both streets to the front and a greenway to the rear.

GREENWAY / GREENBELT (Alley Load)
Daybreak, UT
Builder: Various
Detached units on 37' x 65' lots
Density: 8 - 10 du/ac

This product is designed along a common greenway amenity

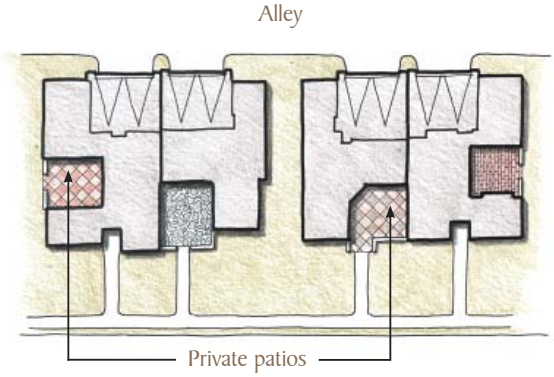


MANSION TOWNHOMES
(Alley Load)
Daybreak, UT
Builder: Holmes Homes
3 and 4-plex units
Density:6 - 8 du/ac

This product is designed to appear as a large single familiy home but in reality is a multi-famlliy attached 3 or 4 plex building

GREENCOURT
(Alley Load)
Daybreak, UT
Builder: Various
Detached units on 42' x 65' lots
Density: 8 - 10 du/ac

This product is designed around a common greencourt amenity

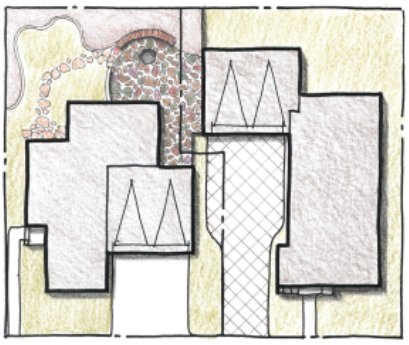


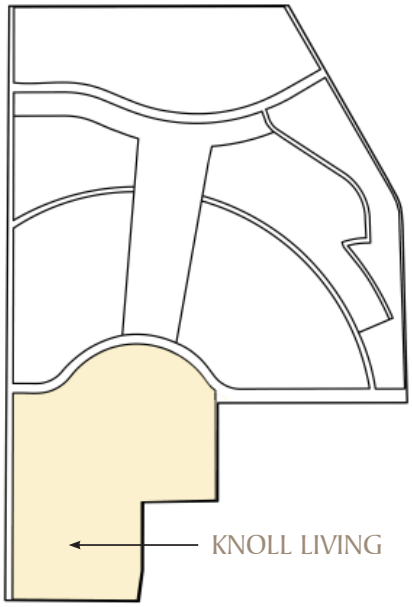
DUPLEX
(Alley Load)
Summerplace
Tustin Ranch, CA
Builder: n/a
2-story duplex
Density: 9 du/ac

This duplex product includes private patios for each unit

Two-Story Detached Two-Pack
Cypress
Irvine, CA
Builder: Catellus
2-story detached homes on 40' x 72' lots
Density: 9 du/ac

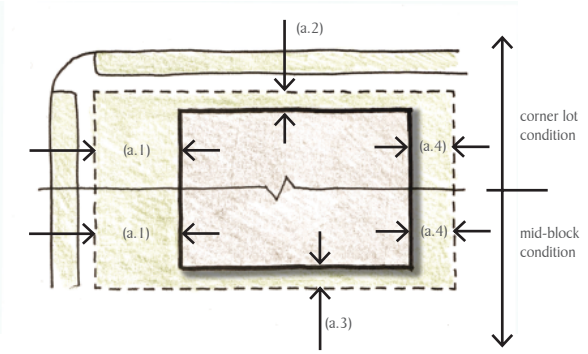
Z lot product has the appearance of zero lot line units. Garage location creates private areas for adjacent units.



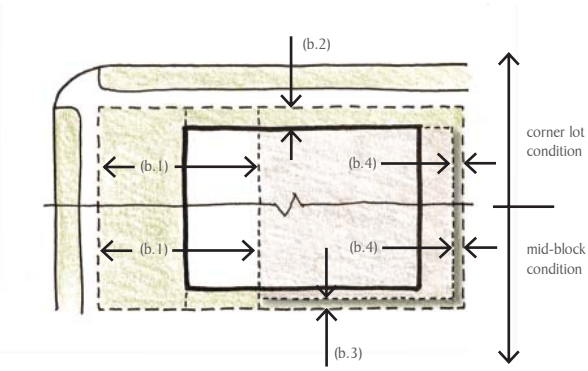


DEVELOPMENT CRITERIA - KNOLL LIVING	
ACRES:	166 ac
PERCENT OF TOTAL ACREAGE:	22.6%
DENSITY RANGE:	2-4 du/ac
BUILDING FUNCTION	
RESIDENTIAL	Permitted
LODGING	Restricted
OFFICE	Restricted
RETAIL	Restricted
BUILDING CONFIGURATION	
PRINCIPAL BUILDING	2 Stories max.
OUTBUILDING	2 Stories max.
LOT OCCUPATION	
MAXIMUM COVERAGE*	35%
LOT WIDTH	60 ft. min. 120 ft. max
SETBACKS - PRINCIPAL BUILDING	
FRONT - PRINCIPAL (a.1)	20 ft. min.
FRONT - SECONDARY (a.2)	15 ft. min.
SIDE (a.3)	10% width of lot min.
REAR (a.4)	20 ft. min.
SETBACKS - OUTBUILDING	
FRONT - PRINCIPAL (b.1)	15 ft. min. + bldg setback
FRONT - SECONDARY (b.2)	5 ft. min. or 8 ft. at corner
SIDE (b.3)	5 ft. min.
REAR (b.4)	5 ft. min.
**COMMUNITY AMENITIES	
LARGE QUALIFYING AMENITIES (L.Q.A.)	1 L.Q.A./200 units
QUAILIFYING AMENITIES (Q.A.)	1 Q.A./100 units

SETBACKS - PRINCIPAL BLDG.



SETBACKS - OUTBUILDING



* Lot coverage includes the building footprint and any automobile related impervious surface

** Community amenities are calculated by applying the formula for both L.Q.A and Q.A. to the total units in each Village Plan. (For example a 400 unit development will be responsible for improvement and/or fair share of funding for 2 L.Q.A's and 4 Q.A's.)

KEY ELEMENTS:

PRODUCTS: Executive living, estate homes, large single family detached with lot dimensions (60 x 100, 70 x 100, 80 x 100, 120 x 125, 100 x 150).

LAND USE - KNOLL LIVING

OBJECTIVE:

Knoll living encourages detached residential uses between 2 and 4 dwelling units per acre.

STRATEGIES:

1) Depending upon parcel size, Knoll living neighborhoods should accommodate multiple builders or several different product types from a single builder. Adjacent units should vary from each other in at least 4 of the following characteristics: floor plan, architectural style, color scheme, exterior building material, roof pitch, height, massing, garage orientation, or fenestration pattern.

2) Building pads should be raised two to three feet above street grade. This allows for larger overall lot area, slight second story views over adjacent homes, and enhanced street character.

3) Single family detached units should implement a variety of garage orientations and setbacks (rear loaded, detached, recessed, front loaded, side entry, and corner entry). No more than two adjacent properties should have the same garage configuration and a minimum of 4 different configurations shall be used on each street (alley loaded product exempt).

4) Driveways for individual units should not take access from primary or secondary arterial streets. However, units adjacent to high volume arterials are encouraged take access from alleys or carriage drives and orient front doors toward major streets. When not feasible rear yards adjacent to primary and secondary arterials should be screened by an additional 10 foot landscape buffer between the property line and right of way.

5) Cul-de-sacs should be designed to maximize walkability. A portion of the terminal end of the cul-de-sac should provide pedestrian access to the trails and open space network, or a sidewalk outlet to an adjacent street.

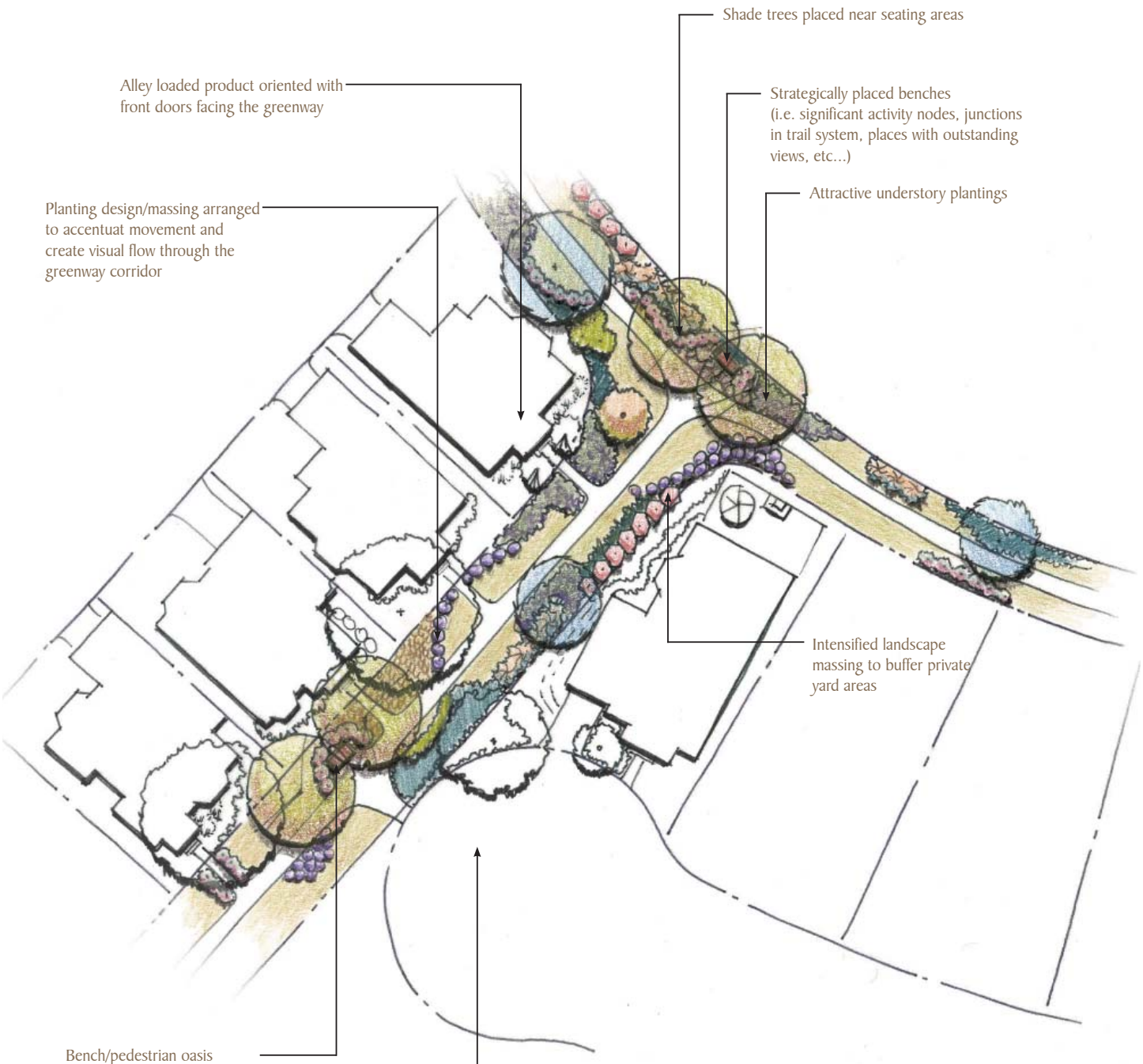
6) Structures should not exceed 2 stories and should be oriented to maximize views of Utah Lake where possible.

7) Generous porches are encouraged.

8) Garage placement in this category is critical. Varying the front setbacks and orientation of the garage is encouraged to maximize visual interest.

10) Create a hierarchy of pedestrian spaces interconnected by trails and/or sidewalks. Neighborhood trails and amenity paths should connect development parcels and community amenities to the community trail network. Connectivity to each development parcel should be abundant.

CONCEPTUAL GREENWAY PLAN



This concept plan is prototypical only and demonstrates one of many potential applications of the design principles for greenways and cul-de-sacs. This artist rendering is conceptual in nature. The land owner/developer retains the right to modify or disregard any and/or all land use concepts featured in this plan.

OPEN SPACE OBJECTIVES

OPEN SPACE - RECREATION NETWORK

OBJECTIVE:

The extensive trails, open space and recreation network affords residents of Teguayo a high quality of life and promotes a healthy lifestyle. Pedestrian access to employment, education, worship, and recreation is critical as an alternative to the car, reducing congestion/greenhouse gases and fostering community.

STRATEGIES:

1) A minimum of 30% of the project area preserved as open space.

2) Arrange program elements in a way that maximizes their use and ensures long-term sustainability.

3) Human systems and natural systems must co-exist. Plant material shall be predominantly drought tolerant. Kentucky bluegrass and other irrigation dependent species shall be reserved for play fields, seating areas, or select venues where said species are deemed necessary to facilitate a desirable activity.

4) Use drainage corridors as open space and linkages.

5) Open space and recreation amenities should be provided in a manner that coincides with the needs of the residents and businesses, to maximize the market potential of the development, and be phased to coincide with the ability of the developer to finance their fair share of the features as defined in a Village Plan and Development Agreement. Larger amenities are not required to be fully completed at one time and instead may also be phased (e.g. build an entire regional park in 2-4 phases). The Community Amenity Guidelines provide general direction as to the type of amenities; however, precise amenities, phasing, and level of fair share responsibility will be determined in conjunction with each Village Plan. The overriding requirement is that the fair share of each amenity be fully completed or funded prior to final completion of the Village Plan.

COMMUNITY AMENITY GUIDELINES

Community Wide Amenities required with development:

Improvements and/or fair share of funding for open space corridors, community pathways, Central Park, Entry Park, Extreme Sports Park, Tranquility Park, Active Park, Trail Head Park, Passive Park, and Linear Park

Improvements and/or fair share of funding for one (1) qualifying large amenity per 200 units:
(i.e. a 50 unit development is responsible for 25% of the cost of 1 qualifying large amenity)

Large qualifying amenities include*:

- community clubhouse (5000 s.f.)
- swimming pool
- skate park
- tennis court
- soccer pitch
- disc golf course
- softball field
- racquetball
- fitness facility
- 18 hole putting course
- indoor volleyball/basketball
- amphitheater
- baseball field

Improvements and/or fair share of funding for one (1) qualifying amenity per 100 units:
(i.e. a 50 unit development is responsible for 50% of the cost of 1 qualifying amenity)

Qualifying amenities include*:

- par course
- picnic pavilion
- hardscape plaza
- horseshoe pit
- tot Lot
- outdoor fireplace
- sand volleyball
- pocket park
- gazebo
- community garden
- sculpture garden
- basketball court
- croquet Lawn
- playground
- barbeque stations
- dog park
- 5 park benches
- childrens labryinth
- bird/wildlife observatory
- splash pool
- shuffle board
- climbing wall
- interactive water feature
- community orchard
- 3 picnic tables

* List of qualifying amenities is not final. Exact amenities will be determined in conjuction with the Village Plan.

Unnecessary redundancy of amenities should be avoided. It is the intent of the Community Plan to provide a wide range of different amenities throughout Teguayo. Specific amenities within each Village Plan should correspond to targeted demographics in the immediate vicinity as well as the desires of the overall community.

CONCEPTUAL OPEN SPACE SYSTEM

This concept diagram is prototypical only and is included to demonstrate a variety of potential applications of the design objectives for the Open Space and Recreation Network. The land owner/developer retains the right to modify or disregard any and/or all concepts and program elements featured in this diagram.

Community Center
Community Clubhouse
Fitness Center
HOA Offices
Gamerooms
Multipurpose Rooms
Indoor Pool
Outdoor Family Pool
Hot Tub
Children's Splash Pad
Tennis Courts
Putting Course

Passive Park
Dog Park
Disc Golf
Community Gardens
Farmers Market
Passive Use Areas

Natural Drainage and Wildlife Corridors
Trail System
Pedestrian Seating Areas

Entry Park
Ruins Entry Monument
Detention Basins
Sculpture Garden
Botanical/Demonstration Garden
Informal Seating
Waterfall/Sound Garden
Shade Plaza

Linear Park
Trail
Seating
Par Course

Central Park
Soccer
Basketball
Baseball
Softball
Grand Pavilion
Horseshoes
Bocce
Croquet
Picnic tables
Amphitheater
Fire Pit
Community Gardens
Orchard
Tot Lots

Trail head Park
Passive Open Space
Trail head Parking
Small Dog Park

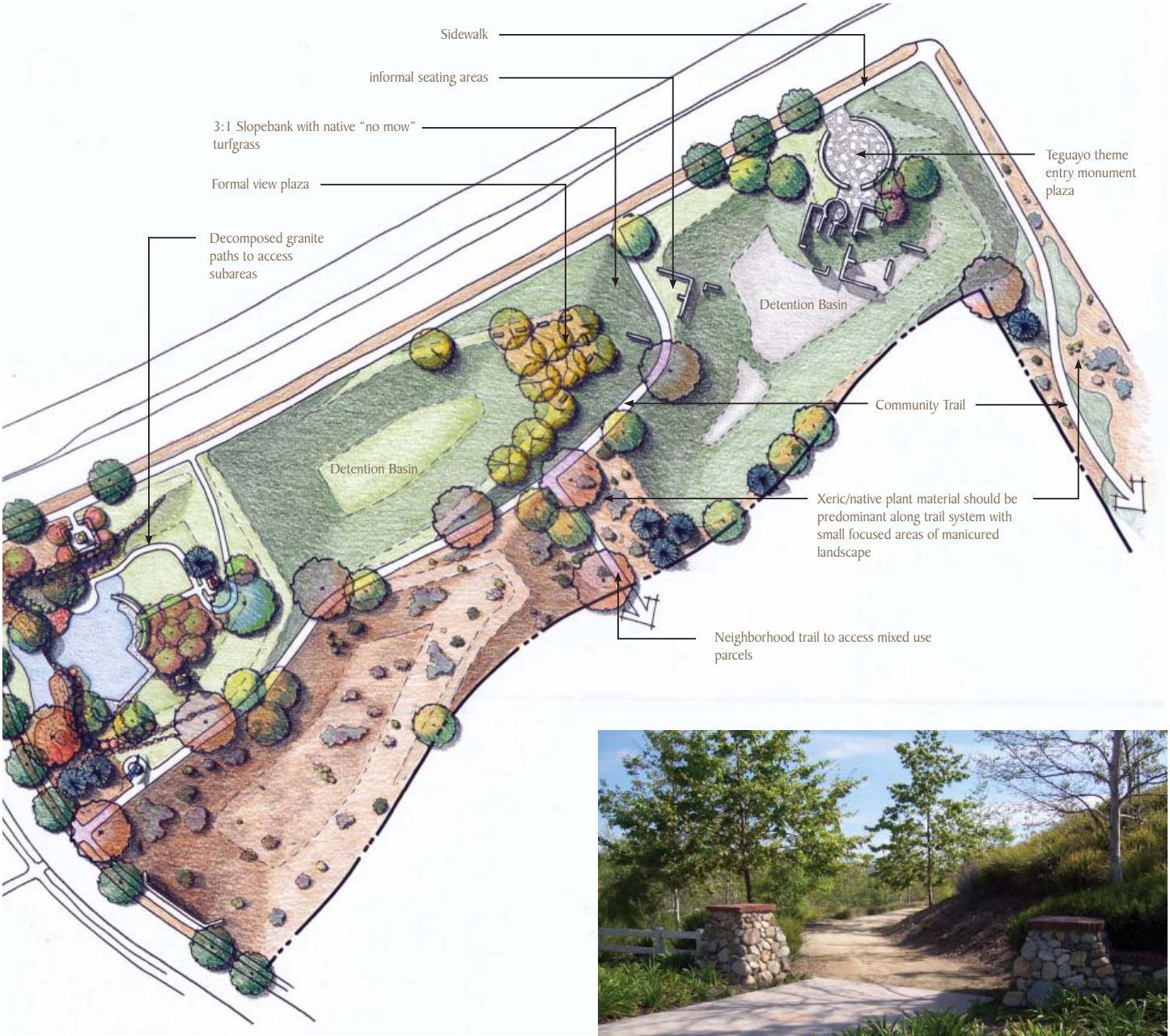
Active Park
Sand Volleyball
Tennis
Small Pavilion
Picnic tables
Outdoor Fireplace
Barbecue Grill
Tot Lots
Children's Labyrinth

Extreme Sports Park
Skate Park
Basketball Courts
Climbing Wall
Passive Open Space Area

Natural Drainage and Wildlife Corridors
Trail System
Pedestrian Seating Areas

Tranquility Park
View Patio
Terrace Gardens
Passive Open Space Area
Picnic Tables
Reflection Garden

CONCEPTUAL PEDESTRIAN HIERARCHY



This concept sketch is prototypical only and demonstrates one of many potential applications of the design principles for sidewalks, paths and trails. This artist rendering is conceptual in nature. The land owner/developer retains the right to modify or disregard any and/or all concepts featured in this plan.

OPEN SPACE - PARKS AND TRAILS

OBJECTIVE:

Provide parks with a wide range of passive and active recreational amenities. Parks should be scaled to reflect the population of Teguayo and the intensity of recreational amenities should correspond to the residential densities that they serve.

STRATEGIES:

1) Ball fields must be oriented correctly and should be nestled into the slope to provide natural seating for spectators.

2) Parking should be conveniently located near group gathering areas.

3) Pedestrian trails must be abundant and ADA accessible to provide adequate access to all park areas.

4) Open space should serve multiple functions

5) Pedestrian circulation is intended on community trails, neighborhood trails, sidewalks, and small decomposed granite amenity paths. Neighborhood trails and amenity paths should connect development parcels and community amenities to the community trail network. Connectivity to each development parcel should be abundant.

KEY ELEMENTS: Central community park, neighborhood parks, pocket parks, linear parks, tot lots and playgrounds, community trails, neighborhood trails, drainageway paths, and sidewalks.

CONCEPTUAL CENTRAL PARK PLAN

This central park plan is conceptual only and is intended to demonstrate a potential application of the design objectives. The land owner/developer retains the right to modify or disregard any and/or all concepts and program elements featured in this plan.

Teguayo themed grand pavillion

Sand Volleyball

3:1 Slopebank with native "no mow" turf-grass as natural bleacher

Natural Drainage Corridor

Pedestrian Trail

Picnic Tables

Passive Use Area

Horseshoe Pits

Softball

Crocket/Bocce Lawn

Fire Pit

Parking

Baseball

Amphitheatre

Tot Lot / Playground

Orchard

Outdoor Fireplace

Restrooms / Small pavillion

Pedestrian Trail

Soccer

Basketball Courts

Soccer

Tot Lot / Playground

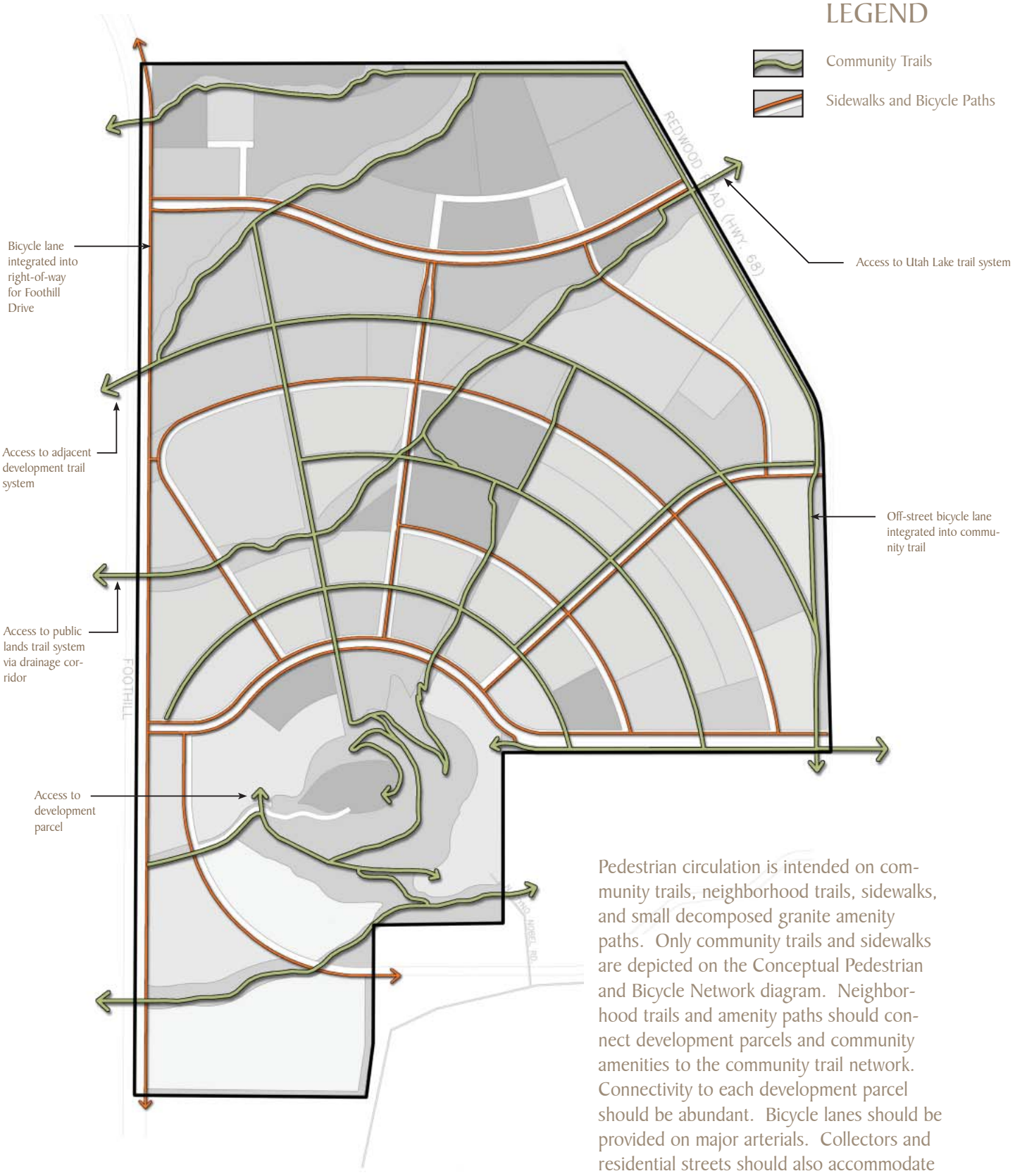
3:1 Slopebank with native "no mow" turfgrass

Community Garden Plots

3:1 Slopebank with native "no mow" turf-grass as natural bleacher

Mounding / Xeric Landscape

CONCEPTUAL PEDESTRIAN AND BICYCLE NETWORK



Pedestrian circulation is intended on community trails, neighborhood trails, sidewalks, and small decomposed granite amenity paths. Only community trails and sidewalks are depicted on the Conceptual Pedestrian and Bicycle Network diagram. Neighborhood trails and amenity paths should connect development parcels and community amenities to the community trail network. Connectivity to each development parcel should be abundant. Bicycle lanes should be provided on major arterials. Collectors and residential streets should also accommodate bicycle traffic.

This pedestrian and bicycle network diagram is conceptual only and is intended to demonstrate a potential application of the design objectives. The land owner/developer retains the right to modify or disregard any and/or all concepts and program elements featured in this plan.

URBAN DESIGN - PUBLIC SPACES

OBJECTIVE:

Create an array of vibrant public spaces to satisfy the social needs of Teguayo residents. In addition to building footprints and automobile parking and circulation, commercial site plans should include a series of public spaces of various sizes that are linked together by an extensive network of pathways, trails, and sidewalks. Site plans should maximize opportunities for visitors to have a positive outdoor experience.

STRATEGIES:

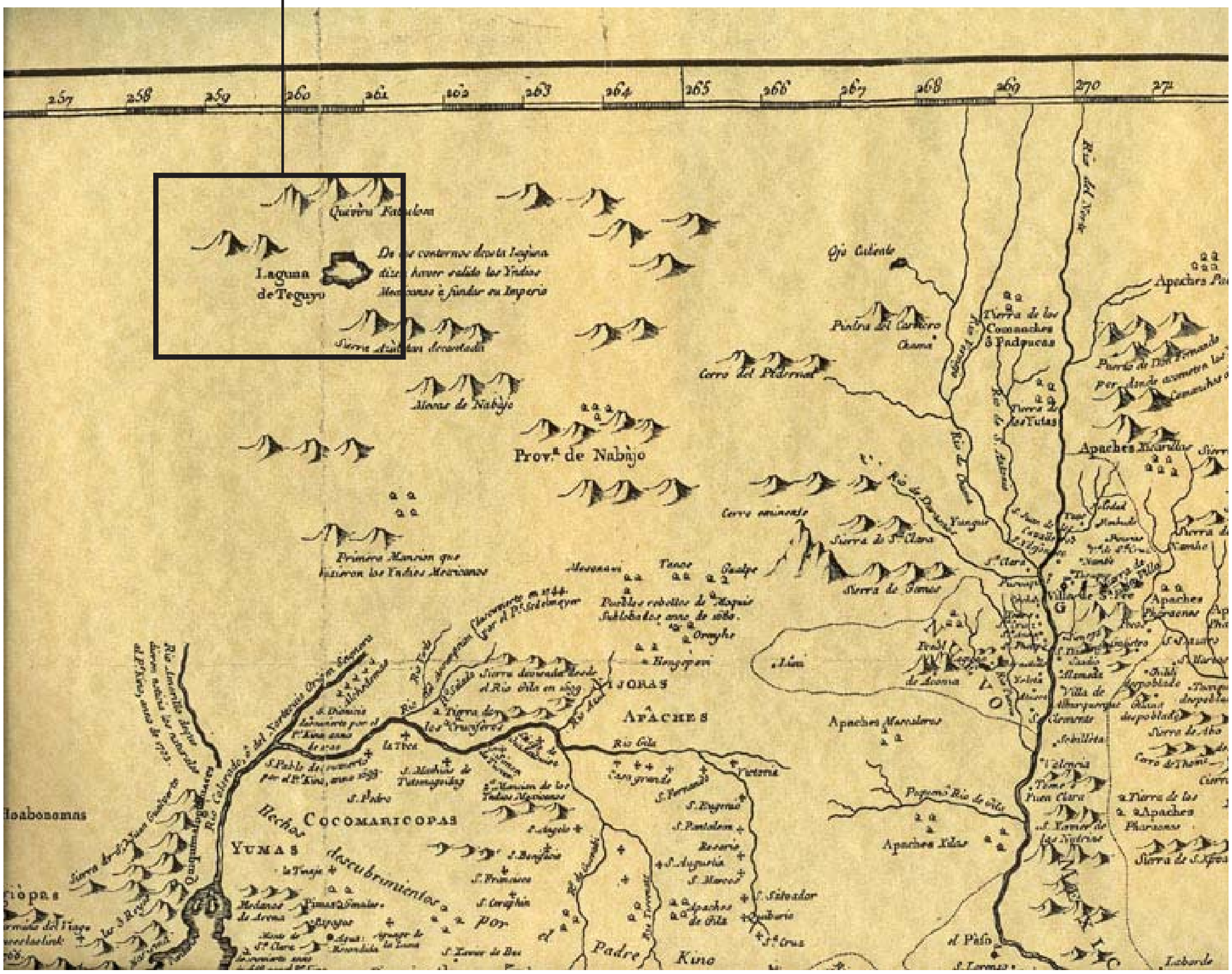
1) When site planning non-residential areas, designers should employ a comprehensive approach that incorporates "surplus areas", or "leftover places" into the usable placemaking fabric.

2) Public spaces should be rich in visual, auditory, and olfactory sensory stimulation.

3) Public spaces should create comfortable microclimates for year-round use.

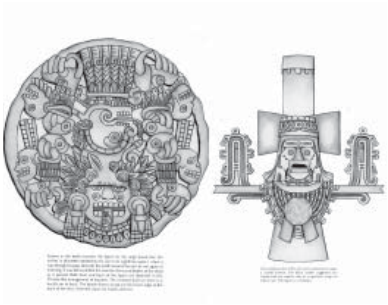
KEY ELEMENTS: Hardscape plazas, informal and formal seating, water features, shade structures, shade trees, colorful understory plants, landscape lighting, etc...

Lake Teguayo is located in the upper left-hand corner, somewhere significantly north of the Gila River.



THE NUEVO MAPA DE LA AMERICA SEPTENTRIONAL (1768)

URBAN DESIGN - COMMUNITY THEME



OBJECTIVE:

Establish a strong community theme that is distinctive, easily identifiable and memorable. The theme must elicit a sense of cohesion and have the ability to unify a diverse collection of residential product types and non-residential land uses. Application of the theme must at a minimum influence landscape monumentation, architecture of community facilities, community signage, and community lighting,

STRATEGIES:

1) For the name of the community use a word that is not commonly used, but which has strong historical significance.

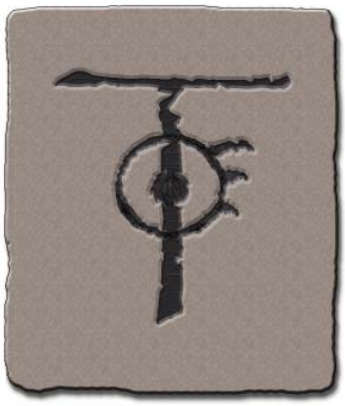
2) Adopt a theme that is rich in visual character.

ORIGIN OF THE NAME TEGUAYO

A prominent native tradition claims "the existence of a large lake at the foot of a small mountain, around which lived an advanced people more myriad than the stones." These legends, of a rich and civilized people living near a large lake, have spanned many centuries: stretching from the Aztec myth of Lake Copala through to early New World traditions. As part of this persistent myth, Coronado would hear from the Pueblo Indians in 1540 of Lake Teguayo. In 1640, Don Juan de Onate, the colonizer of New Mexico also heard these legends which were previously chronicled by Father Jeronimo de Zarate Saleron in 1626. Saleron recorded the Amavaca Indian tales of a "Great Lake...with great pueblos by its shores inhabited by peoples who adorned themselves with golden jewelry."

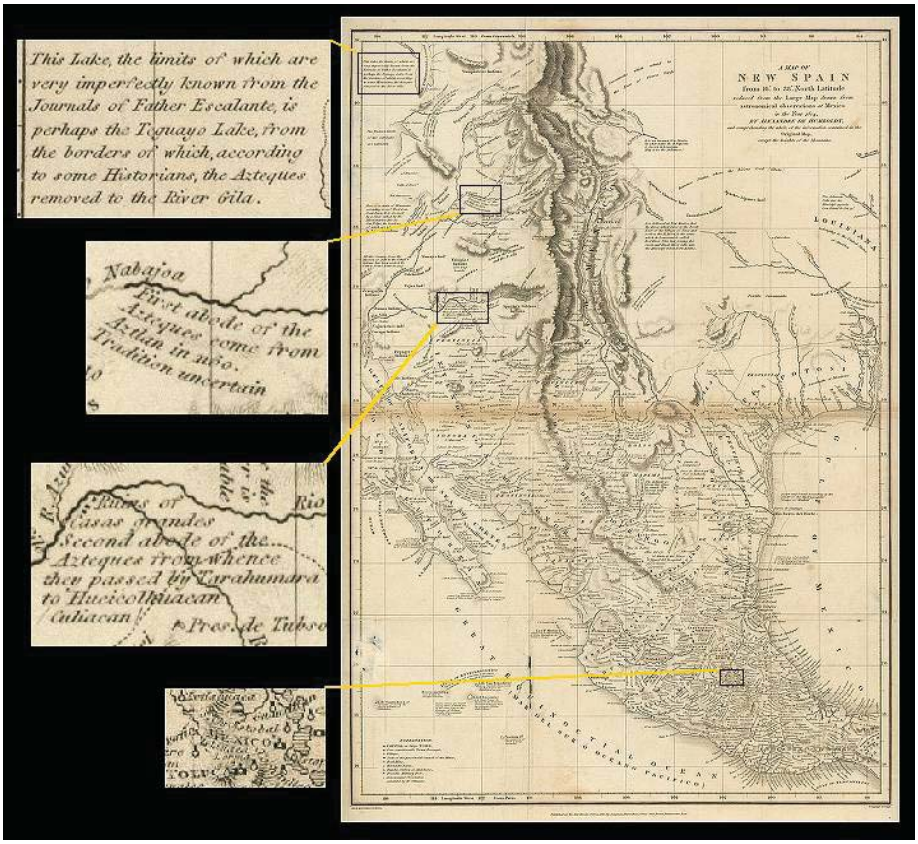
For centuries, explorers and scholars have speculated on the reality of legendary Lake Teguayo. Utah has two natural "Great Lakes", The Great Salt Lake and Utah Lake. "While there have never been great colonies of inhabitants around the Great Salt Lake- Salt Lake valley had for centuries been a 'no-man's land' between the Shoshone and Ute Indian territories - Dominguez and Escalante did discover a large population of Indians living in Utah Valley in several large villages surrounding a lake at the foot of the 'small' Y-mountain. While not 'rich' in gold and silver, by comparison to the nomadic and often impoverished Ute and Paiutes of central Utah, these Timpanogos Utes lived in an area rich in game, food grasses, fish and water fowl." [1]

[1] Early Explorers: 'Lake Legend, Quest for Silver Brought 1st White Man to Area 231 Years Ago, Deseret News, Sunday, October 20, 1996



THE BRAND

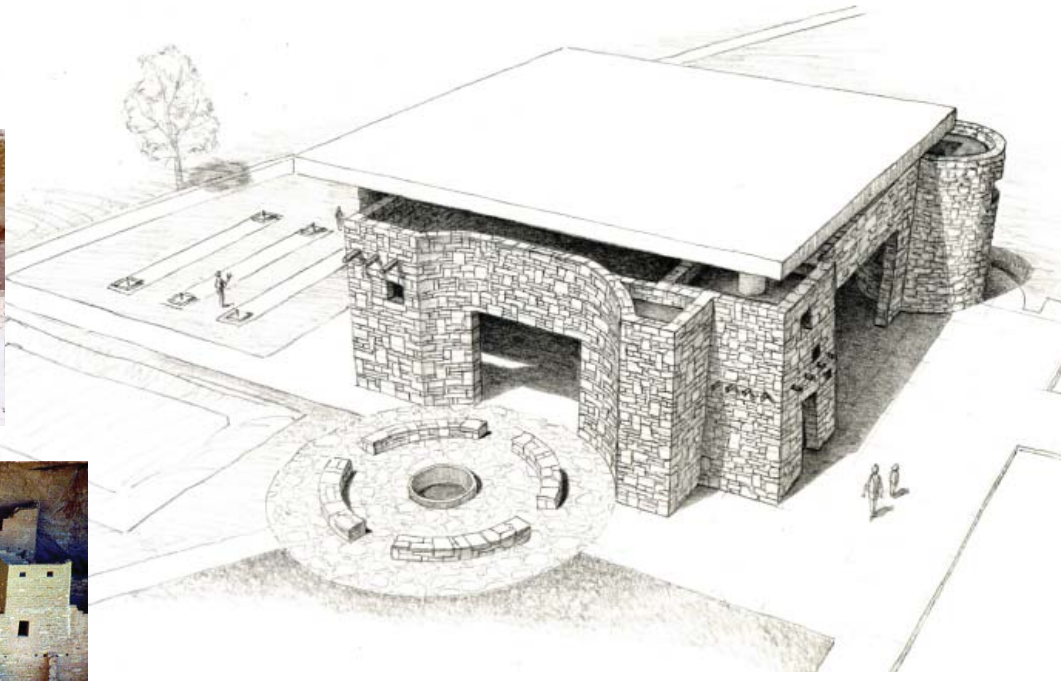
The name Teguayo is fairly obscure, most people in Utah have never heard it. Using the name Teguayo is an opportunity to draw upon the positive historical associations with native cultures and create a brand that is unique, memorable, and easy to recognize. The logo can (shown to the left) should have wide application throughout the project. Community logos can be stamped in concrete sidewalks near intersections, used in signage. etc... Architectural style derived from the visually rich Aztec culture should be reflected in all community facilities and monuments. A predominance of xeric plant material is also an appropriate reflection of theme. Extensive use of Kentucky Bluegrass in drainage areas or along the community trail system is strongly discouraged.



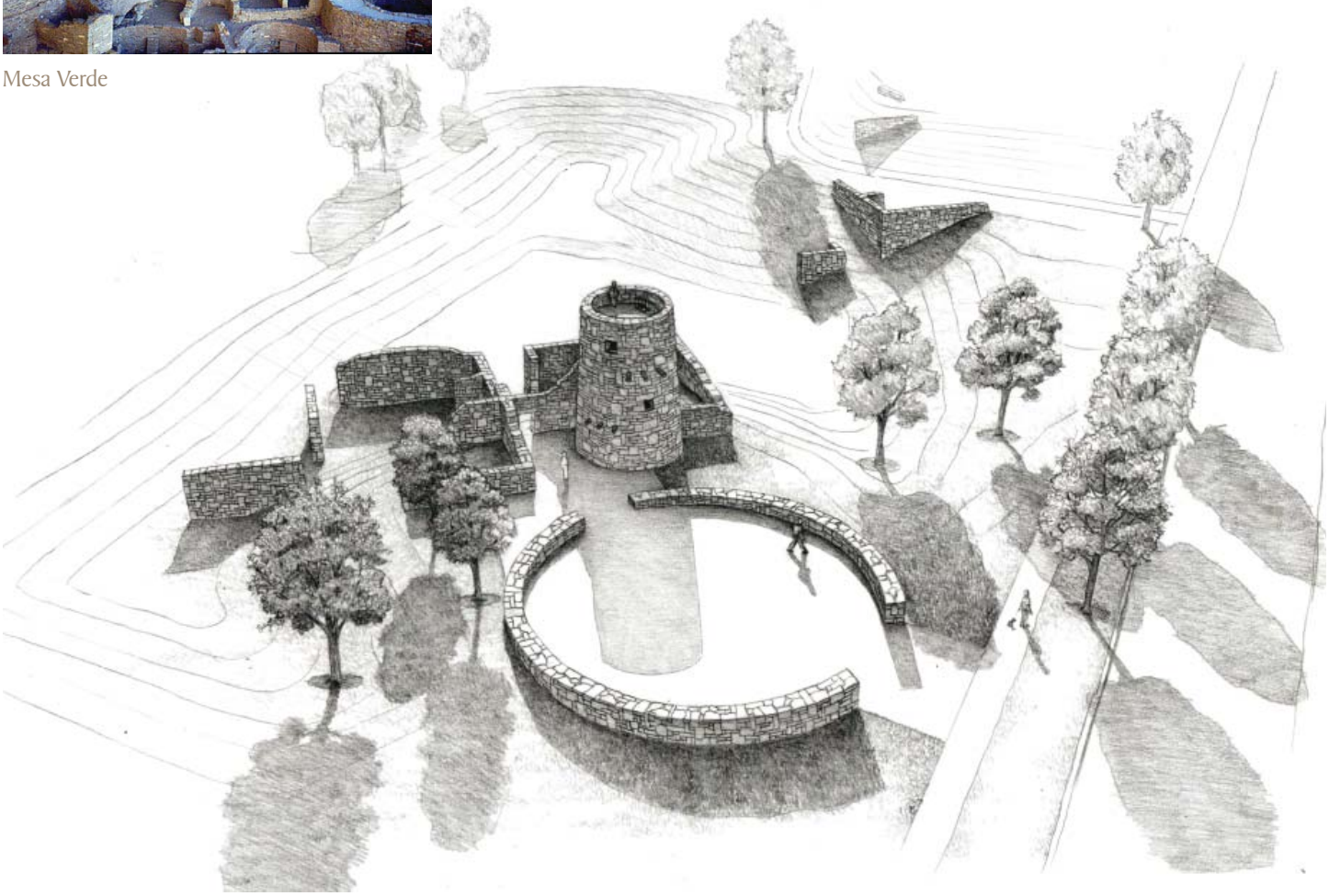
1804 HUMBOLDT MAP

Humboldt depicts the location of Lake Teguayo west of the Colorado River in the general vicinitiy of Utah Lake.

Mesa Verde



Grand Pavillion in Central Park



Entry Plaza

URBAN DESIGN - ARCHITECTURE

MECHANISM:

In accordance with section 19.26.030,2,d of the Planned Community Zone, a home owners association, master association, design review committee, or other governing body will be established to review, approve, and enforce architectural requirements in conjunction with the first Village Plan for Teguayo. All architectural elements will be reviewed and approved by this entity prior to going before the Saratoga Springs Design Review Committee.

OBJECTIVE:

The architectural style for Teguayo is not predetermined by this Community Plan and a single style is not envisioned for the entire project. Instead, a range of complementary architectural styles may be used to create diversity and interest. An overall detailed architectural menu, required in the Village Plan, will provide a suggested range of complementary styles that are appropriate for the vision and types of uses and buildings proposed. However, other styles in subsequent village plans may be used as long as they are compatible in terms of form, scale, and materials and are appropriate for the building type and use. The menu will also describe the typical elements that characterize the features of each architectural style and is intended to guide the review of projects. Each menu will not include an exhaustive list of required features for each acceptable style, as some variations may be used as long as the integrity of the chosen style is maintained.

This section of the Community Plan establishes in general terms the design criteria that all architectural styles must comply with within the Planned Community District. Despite the fact that the imagery in this section is focused primarily on residential architecture, these same principles should also apply to nonresidential structures within the Planned Community District.

Each building should be its own composition, using the utilitarian aesthetic of the American vernacular. Each structure should be a complete entity “in the round”, with architectural interest evenly distributed on all visually prominent facades-front, sides and rear.

Architecture should not be ornamented for the sake of ornament, but for a reason. Each element should have a purpose; hence, they should be articulated by using porches and colonnades for weather protection, dormers as roof accents/day lighting, cupolas as vents or sky lighting, etc... Attention to detail is of utmost importance and should be governed by the rule: its not how much is used, but how it is used.

Architectural relationship should follow a natural chronologic sequence. Neighborhoods should feel like they were built over an extended period of time. Therefore the architectural transition between enclaves of attached product or individual detached units should follow this rule: The historic origin of adjacent architectural styles should be no more than 30 years apart (i.e. a victorian revival home from the 1890’s should not be build next to a california ranch style home from the 1950’s. However, a victorian revival home from the 1890’s could be build next to a craftsman style home from the 1920’s that is next to a california ranch home from the 1950’s). Architecture should also embrace the principles of transition in terms of height and massing when considering off-site adjacent land uses.

DESIGN CRITERIA (Applies to all styles)

STYLE AUTHENTICITY

Purity of architectural style is important. The fusion of multiple styles on single buildings is strongly discouraged. Ornamentation should clearly reflect the associated architectural style.



ENTRY

Main entrances should be visually prominent, Residential units should highlight the entrance with a generous porch (if congruent with the architectural style). All structures should incorporate adequate lighting and some form of overhead structure.



MATERIAL

Building material should be consistent with and reinforce architectural style. Quality materials should be used to convey a sense of permanence. Materials should be consistent on all four sides of each structure.



FORM

Architectural styles should use shapes and forms that are arranged purposefully, in massing and composition. Massing should exhibit balance, by either symmetric and asymmetric means.


COLOR

Color and texture should be used in a manner that reflects a pleasing balance of composition. Architecture should incorporate a diversity of color, not only within individual structures, but also within the context of the broader streetscape composition.



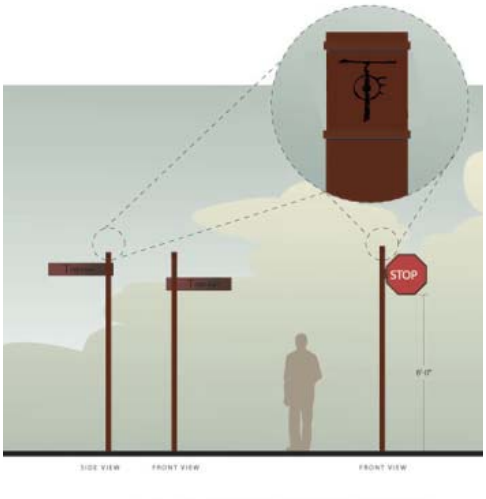
URBAN DESIGN - SIGNAGE

OBJECTIVE:

The signage guidelines are intended to assist property owners and project designers in understanding the goals of Teguayo for maintaining high quality development that is sensitive to the community's unique character. Signage and lighting must be approved by the Design Review Committee (DRC) in conjunction with the Village Plan application process. These guidelines contained in the Community Plan are general in nature and may be interpreted with some flexibility in their application to specific projects with the intent to encourage the highest level of design quality while at the same time providing the flexibility necessary to encourage creativity on the part of individual project designers. The guidelines encourage Signs that:

1) Be consistent with the overall theme for Teguayo

2) Provide clear identification for businesses and other activities



3) Are compatible in scale, proportion, and massing with surrounding structures and streetscapes

4) Incorporate high-quality design and materials that will not fade, delaminate, distort, and/or deteriorate in severe climates

APPLICATION OF COMMUNITY THEME

1) The community theme should be represented by a logo that should have widespread application throughout the community,

2) The community logo should be represented directly in the signage for all community amenities.

3) Other applications may include: light poles, traffic signs poles, directional sign poles, decorative stamped concrete aprons at intersections, concrete banding in road surfaces, etc...

COLOR

1) Color is one of the most important aspects of visual communication. It can be used to catch the eye, or to communicate ideas or feelings. Too many colors used simultaneously can confuse and negate the message of a sign. The number of colors will be limited to two or three on any one sign. Small accents of several colors can make a sign unique and attractive, but the competition of large areas of many different colors decreases readability.

2) Contrast is an important influence on the legibility of signs. Light letters on a dark background or dark letters on a light background are most legible.

3) Colors or color combinations that interfere with legibility of the sign copy or that interfere with viewer identification of other signs must be avoided. Bright day-glo (fluorescent) colors or brilliant luminescent colors must be avoided as they are distracting and do not usually blend well with colors on structures or other background colors.

4) Sign colors must complement the colors used on the structures and the project as a whole.

MATERIALS

1) Sign materials must be compatible with the design theme and use of materials on the building where the sign is to be placed.

2) The selected materials must contribute to the legibility of the sign.

3) Except for individually mounted channel letters, internally illuminated plastic faced cabinet signs are strongly discouraged.

4) Neon tubes are a popular sign material and can contribute to the night time ambiance of an area. However, care must be taken when using neon, because of its brightness and attention attracting properties.

5) Generally, the signs of Teguayo must be constructed of natural materials, or materials that imitate or appear like natural materials to reflect the character of the environment. Natural materials include redwood, cedar, or other kinds of wood that resist the elements well. Materials that may imitate or appear like natural materials include foamboard, pressboard, and fiberglass

6) Signs must be constructed of weather resistant materials.

URBAN DESIGN - LIGHTING

OBJECTIVE:

It is the intent of these standards to balance the goals of the Teguayo design guidelines to maintain a small village atmosphere with the need to provide for the safe movement of vehicles and people in all districts. To meet this intent, recommended lighting levels are to be defined at minimum levels to provide public safety and at the same time enhance the appeal of buildings and landscaping and to protect the desired atmosphere of the community.

ON-SITE LIGHTING

1) Exterior lighting will be designed to be compatible with the architectural and landscape design of the project.

2) An appropriate hierarchy of lighting fixtures/structures and intensity must be considered when designing the lighting for the various elements of a project (i.e., building and site entrances, walkways, parking areas, or other areas of the site).

3) The use of exterior lighting to accent a building's architecture is encouraged. All lighting fixtures will be properly shielded to eliminate light and glare from impacting adjacent properties, and passing vehicles or pedestrians. If neon tubing is used to illuminate portions of a building it must be concealed from view through the use of parapets, cornices or ledges. Small portions of exposed neon tubing may be used to add a special effect to a building's architecture but this must be well thought out and integrated into the overall design of the project.

4) To achieve the desired lighting level for parking and pedestrian areas, the use of more short, low intensity fixtures is encouraged over the use of a few tall fixtures that illuminate large areas.

PEDESTRIAN WALKWAY LIGHTING

To insure the safe movement of pedestrians within a commercial, industrial or public project excluding public facilities where the site is closed during non-daylight hours.

1) Illuminance. Light will be directed in such a manner that any changes in elevation of the walkway (i.e. steps or curbs) will be illuminated such that said features are clearly discernible (without shadow).

2) Fixture Type. Pedestrian walkway lighting fixtures can be a combination of free-standing pole, bollard, in-place step or building mounted fixtures. For building mounted fixtures, the Design Review Committee will require that the proposed fixture type will be in scale with the building elevation on which it is to be installed.

3) Fixture Heights. Light Fixtures will not exceed the following heigth provisions:
(a) Free-standing pole - Not greater than fourteen (14') feet as measured from finish grade to the bottom of the light fixture.
(b) Building-mounted - will be located below the roof eave or fourteen (14') feet whichever is less.
(c) Bollard- Said fixture type will not exceed a height of forty-two (42") inches as measured from finish grade to the top of the fixture.

ARCHITECTURAL AND LANDSCAPE LIGHTING

The use of architectural or landscape lighting to of the parking lot lights (these lights will be equipped with a photo-cell for dusk to dawn illumination), and required lights over all building entries. Exterior lighting including parking lots will be reduced in intensity after 10:00 p.m., or one-half hour after close of business, whichever is later.

Exterior lighting installations must be in character with the architecture or its surroundings. Exterior lighting in particular must utilize fixtures that provide superior glare control according to IES (full cutoff type optics). Avoid specifying incandescent lighting, especially in hard-to-reach locations. For energy conservation, extended architectural lighting will be avoided.

LANDSCAPE CONCEPT PLAN

This concept diagram is prototypical only and is included to demonstrate a variety of potential applications of the design objectives for the Landscape Concept Plan. The land owner/developer retains the right to modify or disregard any and/or all concepts and program elements featured in this diagram.

Non-irrigated Drainage Corridors

Preserve natural condition with reintroduction of native plant species (irrigated through establishment). Use predominantly xeric plant material along trails with focused areas of irrigated species to complement pedestrian amenities.

Irrigated Passive Park Landscape

Turf and other irrigated plant material used on playfields and group gathering areas, seating areas, etc... Perimeter and informal use areas should contain xeric material

Redwood Road Landscape Buffer

Predominantly non-irrigated/ xeric plant material with strategically placed nodes of irrigated material to complement pedestrian amenities

Irrigated Landscape Linear Park

Highest concentration of plant material in Teguayo to create a rich sensory environment.

Irrigated Park Landscape

Active play areas contain turf and other irrigated material. Slope banks should contain drought tolerant no-mow turfgrass or other low growing xeric groundcover. Perimeter areas and large planter beds should contain xeric plant material

Non-irrigated Pedestrian Corridors

Predominantly xeric plant material with focused areas of irrigated species to complement pedestrian amenities

Irrigated Landscape

Active play areas contain turf and other irrigated material. Perimeter areas and large planter beds should contain xeric plant material

Non-irrigated Steep Slopes

Preserve natural condition with reintroduction of native plant species (irrigated through establishment). Use predominantly xeric plant material along trails with focused areas of irrigated species to complement pedestrian amenities.

Non-irrigated Pedestrian Greenways

Predominantly xeric plant material with focused areas of irrigated species to complement pedestrian amenities. Slope banks should contain drought tolerant no-mow turfgrass or other low growing xeric groundcover.

LANDSCAPE - PHILOSOPHY

OBJECTIVE:

Celebrate the Great Basin high desert natural ecosystem by incorporating native drought tolerant plant material and minimizing water-dependent plant species in all public areas.

STRATEGIES:

1) Human and natural systems must co-exist. Plant material shall be predominantly drought tolerant. The widespread application of Kentucky bluegrass and other irrigation dependent species is prohibited and shall be reserved for play fields, seating areas, or select venues where said species are deemed necessary to facilitate a desirable activity.

2) Planting designs should incorporate climatic relief, seasonal color and fragrance for year-round appeal.

3) Xeric landscapes should contain a minimum of 60% tree canopy coverage at 10 years to reduce heat-island effect. On the ground plane living plant material should cover no more than 50% and no less than 15% of the total surface area at maturity. Broad application of ornamental rock, cobbles, or organic mulch should be used in conjunction with a weed barrier and/or enough mulch depth to prevent growth weed species.

4) A master control system should be used to regulate water consumption. Several irrigation companies have developed products that regulate when water is delivered to plants based upon actual on-site climatic conditions.

5) Secondary water can be difficult for many plant species to tolerate. Landscape architects should investigate plant species that are not susceptible to the high dissolved solids and salinity typically found in secondary water.

EDGE CONDITIONS AND BUFFERS

The landscape concept for Teguayo incorporates generous landscape buffers around the perimeter of the project. These buffers will accomplish 3 primary objectives:

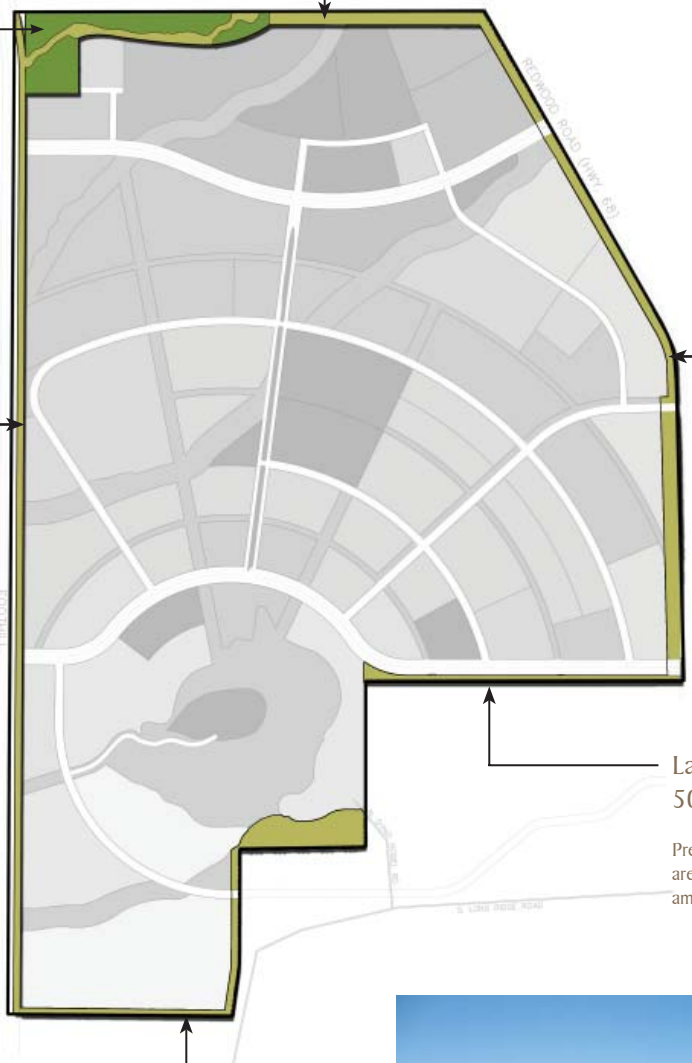
a) Create a transition between potentially different adjacent land uses.
b) Create a visually pleasing edge condition adjacent to Redwood Road and Foothill.
c) Serve as a fire break as part of an overall fuel modification program.

North Landscape Buffer and Transition Zone
100 feet wide

Preserve natural condition with reintroduction of native plant species (irrigated through establishment). High percentage of inorganic (non-living) material on the ground plane incorporating 15 to 25 percent coverage of xeric plant material at maturity. This transition zone will also serve as a fuel modification zone. Use mounding and strategic placement of trees to provide visual relief of adjacent properties.

Irrigated Passive Park Landscape

Turf and other irrigated plant material used on playfields and group gathering areas, seating areas, etc... Perimeter and informal use areas should contain xeric material



Redwood Road Landscape Buffer
70 - 100 feet wide

Predominantly non-irrigated/ xeric plant material with strategically placed nodes of irrigated material to complement pedestrian amenities

Foothill Landscape Buffer
50 feet wide

Incorporated into an enhanced landscaped parkway within the180 foot right-of-way. Predominantly non-irrigated/xeric plant material with strategically placed nodes of irrigated material to complement pedestrian amenities

Landscape Buffer
50 feet wide

Predominantly xeric plant material with focused areas of irrigated species to complement pedestrian amenities.

South Landscape Buffer and Transition Zone
50 feet wide

Preserve natural condition with reintroduction of native plant species (irrigated through establishment). High percentage of inorganic (non-living) material on the ground plane incorporating 15 to 25 percent coverage of xeric plant material at maturity. This transition zone will also serve as a fuel modification zone. Use mounding and strategic placement of trees to provide visual relief of adjacent properties.

LANDSCAPE - FENCING

OBJECTIVE:

The boundary for Teguayo should be a soft transition between parcels that consists primarily of landscape buffer. However various conditions may occur where a fence, wall or other type of physical barrier is required. These fencing guidelines are intended to unify the design of fences and walls within a comprehensive theme.

STRATEGIES:

1) The overall design of Teguayo strongly emphasizes open styles of fencing, especially along roadways and surrounding neighborhoods.

2) Solid fences are not appropriate except in between houses and between different land uses.

3) Open styles are considered to be those that emphasize the use of natural materials such as wood with architectural detailing, iron fencing between solid pilasters, and which utilize natural colors, such as brown, gray or green.

4) Any fence or wall must be designed to be compatible with the architecture of the immediate area, and are subject to Design Review.

5) The design of fences and walls must harmonize with the site and with the buildings in both scale and materials.

6) The placement of walls and fences must respect existing land forms and follow existing contours and fit into existing land masses rather than arbitrarily following site boundary lines.

7) Fencing must not dominate the buildings or the landscape. Planting may often be integrated with fencing schemes to soften the visual impact. Fencing materials must be compatible with the materials and color of surrounding buildings.

8) If the ground slopes, the fence must be stepped.

9) Permanent chain link, livestock wire, plywood, chain and bollard are prohibited.

10) All fences, walls, gates & pylons require Design Review. Fences that replace, in kind, existing fencing of less than 100 linear feet, do not require a permit. Additionally, fences over six feet in height, electric gates and all retaining walls will require a building permit.

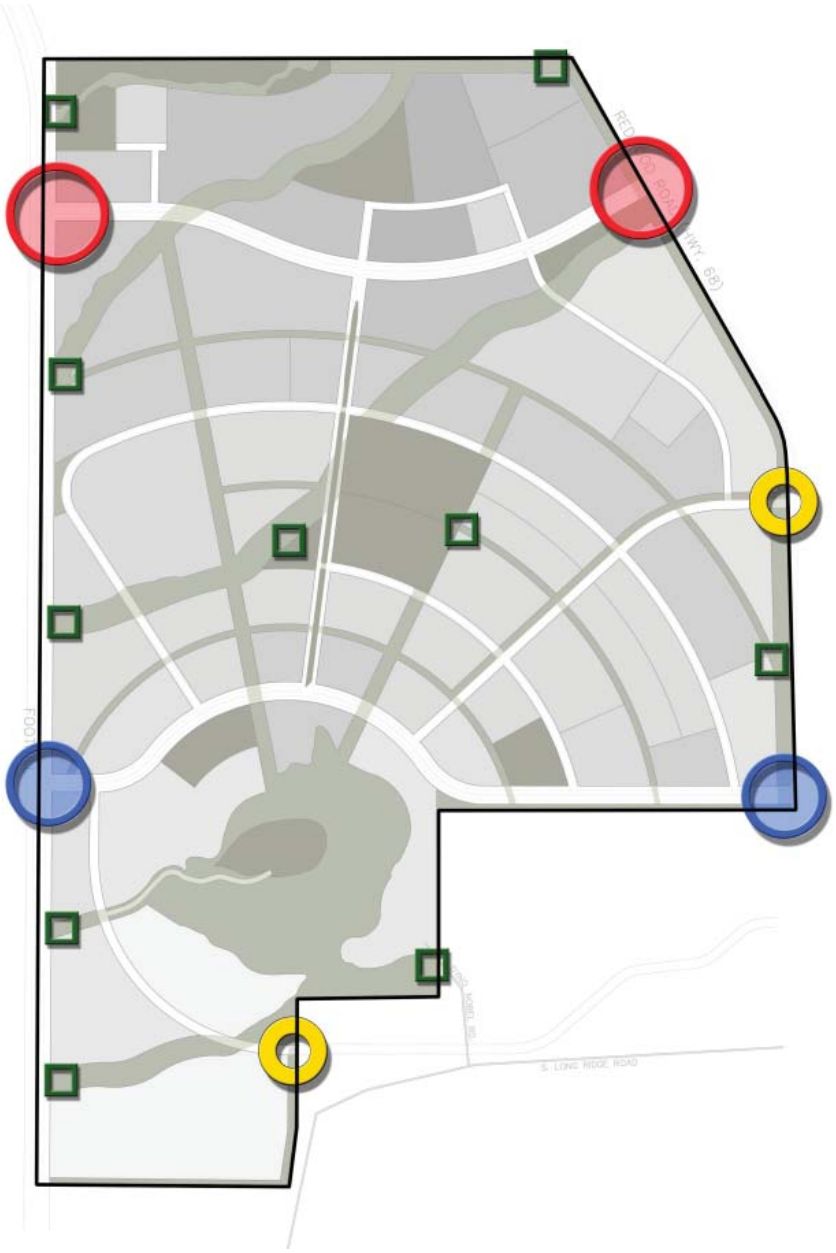
LANDSCAPE - ENTRY MONUMENTATION

OBJECTIVE:

Create a sense of community through a hierarchical approach to entry monumentation. Visitors and residents should be greeted by a visually prominent monument, or landscape feature, that clearly communicates community theme and is consistent in scale to the adjacent roadway or pedestrian facility. Community monumentation should be constructed of materials that will age gracefully. Monuments must be constructed once the adjacent road or pedestrian facility becomes functional.

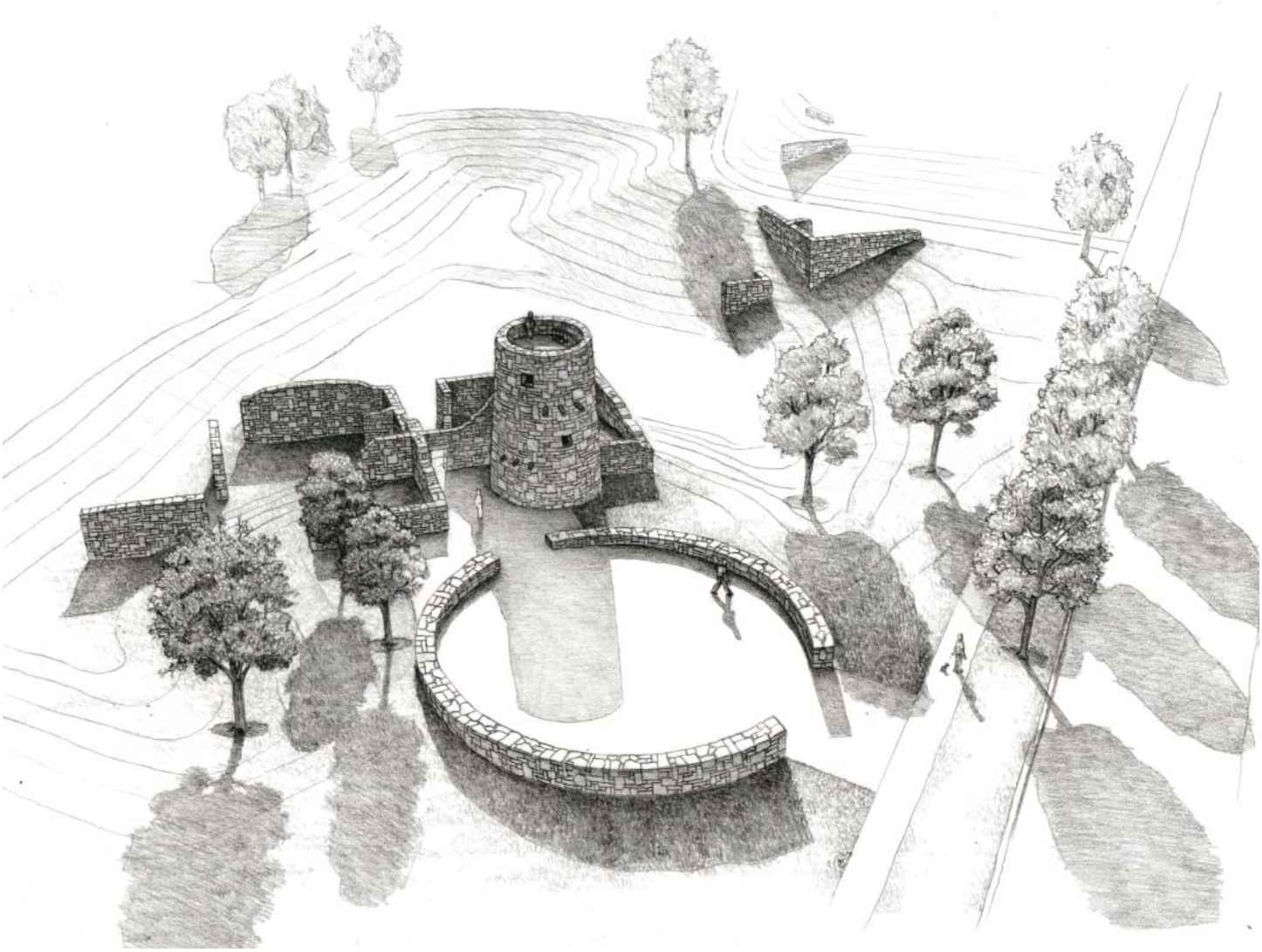
LEGEND

- Primary Entry Monuments
- Secondary Entry Monuments
- Tertiary Entry Monuments
- Pedestrian Entry Monuments



PRIMARY ENTRY MONUMENTS

Primary entries adjacent to primary arterial streets should feature a large monument with an accompanying landscaped area designed to consider visual interest during all seasons. Primary entry monuments should be placed in a manner that will not interfere with site distance requirements on major streets or be compromised because of future road expansion. The design of monument elements should evoke a strong sense of place through material, color, form, massing, and lighting. Primary monuments should also provide formal or informal pedestrian seating areas that are protected from adjacent traffic.



Example of a primary entry monument

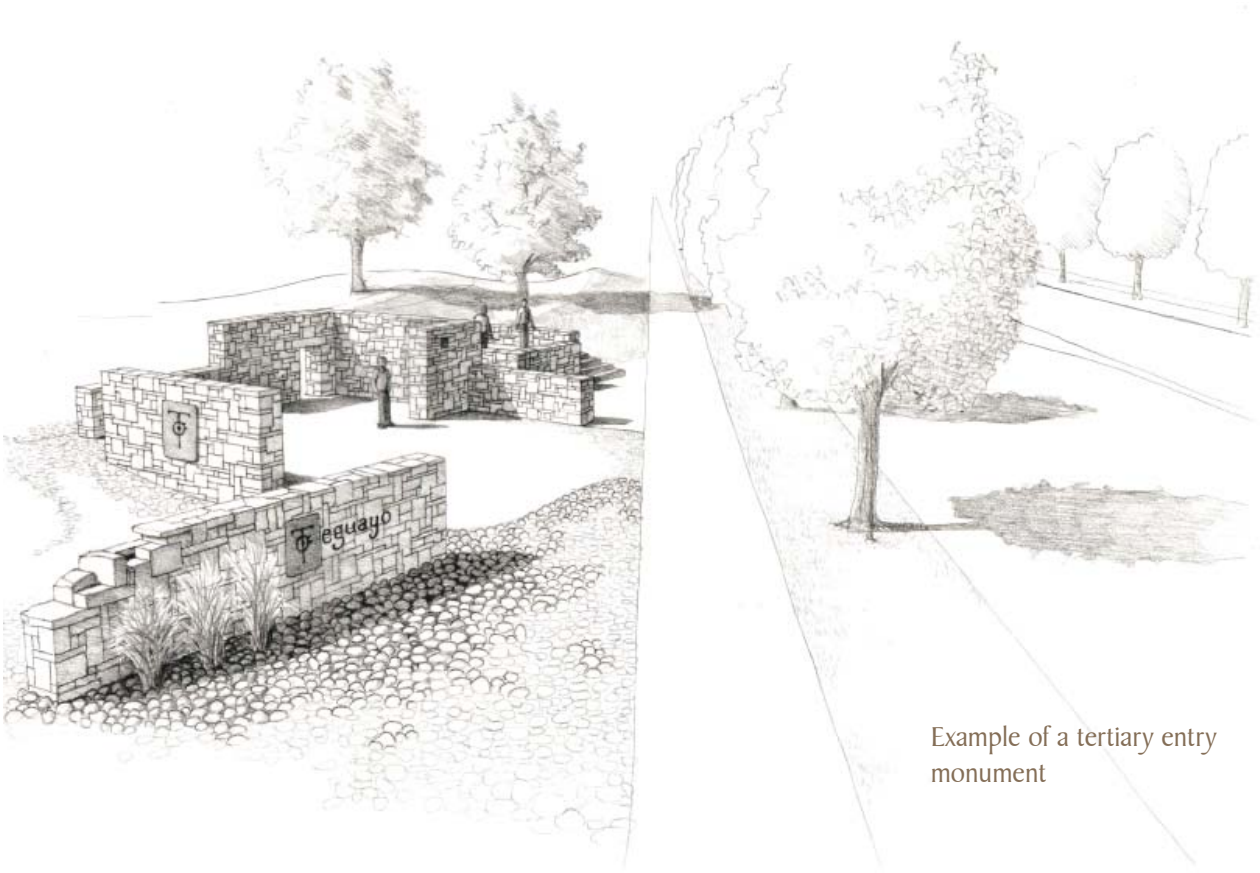
SECONDARY ENTRY MONUMENTS

Secondary entries adjacent to arterial streets should feature a medium-scale monument with an accompanying landscaped area designed to consider visual interest during all seasons. Secondary entry monuments should be placed in a manner that will not interfere with site distance requirements. The design of secondary monument elements must emulate the strong sense of place established by primary entry monuments and must be consistent in material, color, form and lighting design. Secondary monuments are more visually oriented and therefore, do not require seating areas for pedestrians.

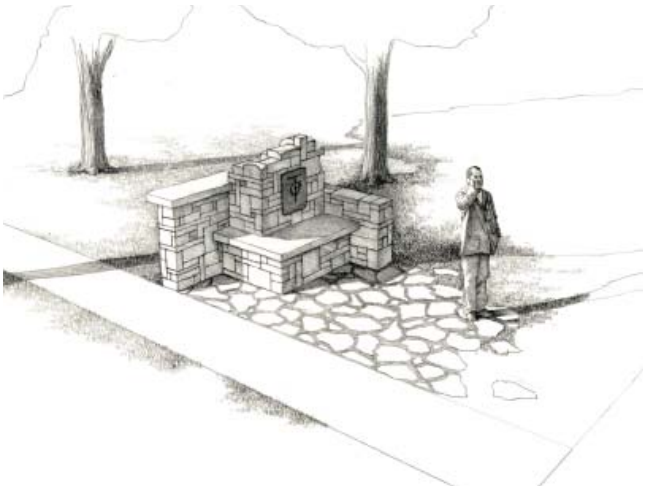
Example of a secondary entry monument

TERTIARY ENTRY MONUMENTS

Tertiary entries associated with collector streets should feature a small monument with an accompanying landscaped area designed to consider visual interest during all seasons. Tertiary entry monuments should be placed in a manner that will not interfere with site distance requirements. The design of tertiary monument elements must be consistent with primary and secondary monuments in material, color, form and lighting design. Tertiary monuments are purely visually oriented and therefore, do not require seating areas for pedestrians.



Example of a tertiary entry monument



Example of a pedestrian entry monument

PEDESTRIAN ENTRY MONUMENTS

The trail system should feature a small, pedestrian scale, monuments that are integrated within the landscape design. The design of pedestrian entry monuments must be consistent with all other monuments in material, color, form and lighting design. Pedestrian monuments should not be exclusively a visual indication of entrance, but may should include tastefully incorporated informational signage (i.e. distances and direction to community amenities). These monuments may also include seating areas for pedestrians.

INTERNAL MONUMENTS

Internal monuments are not shown at this scale. The placement of internal monuments will be determined in the Village Plan.

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APPENDICES

IMPACT REPORT

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Impact Report

Prepared by

PSOMAS

Leslie Morton, P.E.

March, 2010

Impact of Teguayo Development on Saratoga Springs Infrastructure

The pupose of this report is to analyze future infrastructure needs for the Teguayo project and to evaluate and identify development solutions in order to minimize impacts on existing infrastructure and systems in Saratoga Springs. The requested annexation fills a property void along the southern boundary of the existing City limits. The annexation will not create any isolated island areas and adheres to the State of Utah Statutes for annexation. However, with the potential for nearly 4,000 residential units, the annexation will have impacts on the existing infrastructure and systems the City currently operates. This report will describe the impacts as we have studied them.

As will be noted in this report, many of the City's current infrastructure and systems are insufficient to service the Teguayo project. If the developer is going to be responsible for expansion or development of any off-site infrastructure and systems, reimbursement agreements will need to be authorized by the Annexation and Development Agreement.

Culinary Water

The Teguayo project generally sits in 2 zones of the City's water system: Zones 2 and 3. The eastern portion of the property is in Zone 2 and the western in Zone 3. There is also a small portion of the southwest corner of the project that is located above Zone 3. Although not guaranteed, the general intent is to develop the parcels in Zone 2 first. A proposed trunk line layout for the water system is shown in Exhibit 1.

According to the City staff, the existing system is currently insufficient to service the build-out development of Teguayo. The City's system is in need of upgrades beyond the project boundaries to service the project. The existing system may be deficient in terms of source, storage, distribution or all. Depending upon when Teguayo begins construction, additional wells, storage tanks or pipelines may be needed. The following describes the existing system deficiencies and needs as we currently understand them. These deficiencies and needs could change by the time Teguayo begins construction.

Zone 2

For initial phases of the development in Zone 2, the 20-inch line in Redwood Road will need to be extended to the property. The line will be extended through the project to the southern boundary for future connection in accordance with the City's masterplan. The City's master plan indicates a 20-inch line will be extended to the south. It is likely that the Teguayo project will not need a 20-inch line so it is assumed that the City will participate in the cost to upsize the Teguayo line to 20-inches.

This Zone 2 20-inch line is a dead-end system. Extending this line to Teguayo and adding additional demands on it will impact the system and it may not be possible to provide necessary pressures and flows to any of Teguayo's Zone 2 with this dead-end system. A PRV connection from Zone 3 may be needed as early as initial development begins in Teguayo. In addition, upgrades to booster facilities from Zone 1 to Zone 2 may be necessary if minimum pressures or flows cannot be met. Modeling will need to be

completed in order to determine when the existing system reaches capacity and a PRV and/or booster stations will be required.

Exhibit 2 illustrates the offsite improvements that will be needed to service the Zone 2 build-out of the Teguayo project. Improvements will be needed to the Zone 1 tank on Grandview Blvd which boosts water to the Zone 2 tank. The Zone 1 tank is ¾ million gallons and is frequently drained due to the demands in Zone 2 and 3 and the capacity of the booster station that pushes water to those upper zones. This tank and/or booster station will need to be upsized or an additional tank constructed to supplement the existing capacity.

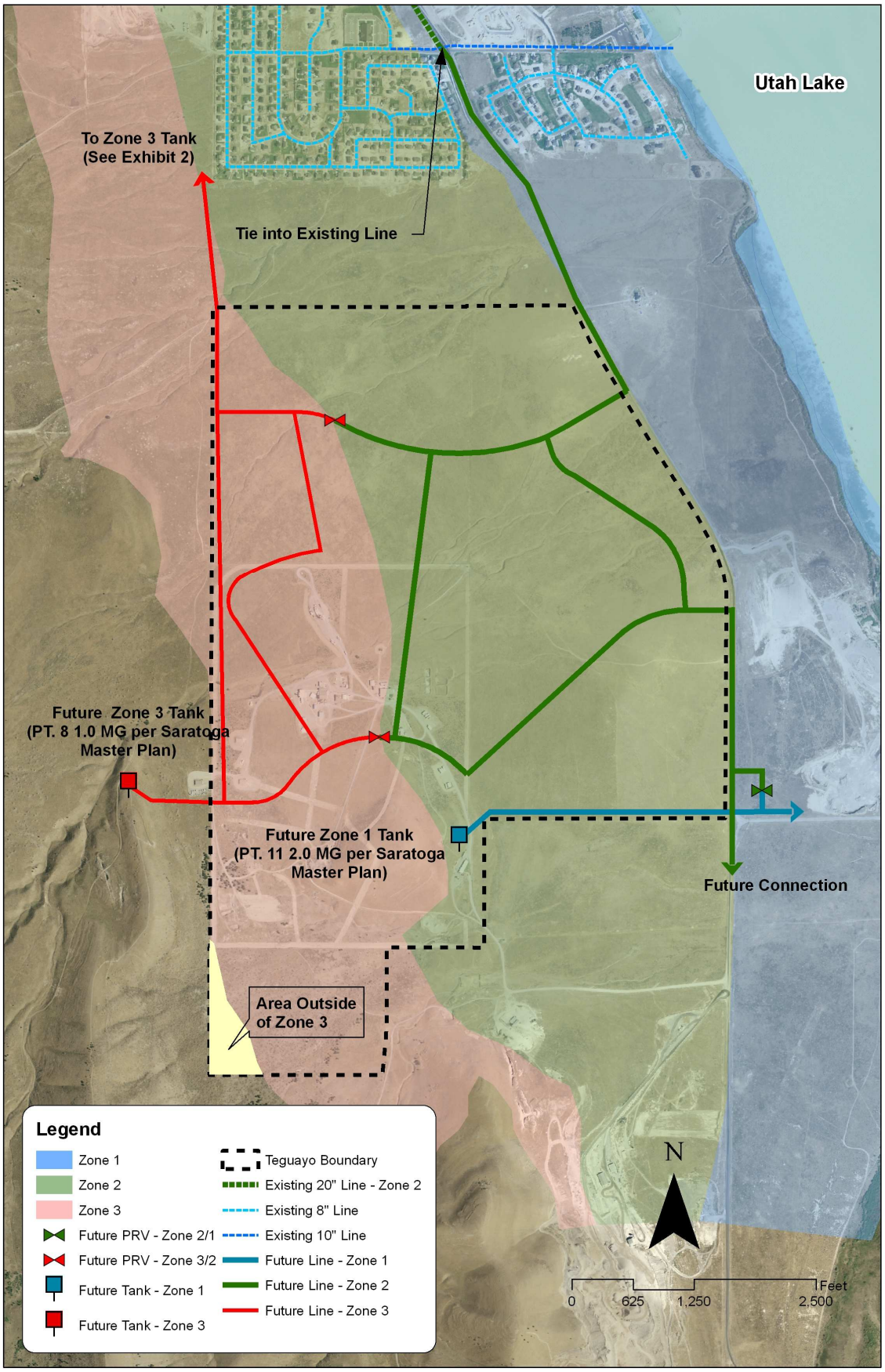
Zone 3

The portion of the Teguayo project in Zone 3 will be developed at a future date. The existing City system cannot service this area without substantial improvements. The existing Zone 3 tank in the Villages project is complete but inactive because the booster station needed to fill the tank was never completed. This booster station will need to be completed and a line extended from the tank south towards to the Teguayo project along Foothill Drive (the City's masterplan indicates this is a 16-inch waterline; see Exhibit 2). Depending upon other development occurring in the City when Teguayo develops in this zone, upgrades to the pump stations boosting water from Zone 2 to Zone 3 may also be needed.

Southwest Corner

There is a small area on the southwest corner of the site that is above Zone 3 (see Exhibit 1). The western-most 50 feet of this area will be reserved for the future Foothill Blvd. right of way. The remainder of this area is planned as very low density residential. The Zone 3-4 boundary is the 4940 contour with a 60 psi static pressure at that elevation. The highest elevation where a home would be developed is approximately 5000 feet which is 60 feet above the maximum elevation in Zone 3. This would bring the pressure down to 34 psi static at the highest elevation of this area, approximately 5,000 feet. Development in this area (shown in yellow on Exhibit 1) will be limited until a Zone 4 system is available.

Although none of the Teguayo project can be serviced by Zone 1, the City's masterplan suggests a Zone 1 tank be located in the southern portion of the project. As the land planning process progresses, a site will be reserved for a future Zone 1 reservoir. Since the Zone 1 system cannot provide service to the Teguayo project, so the developer should have no participation costs in the design or construction of this tank.



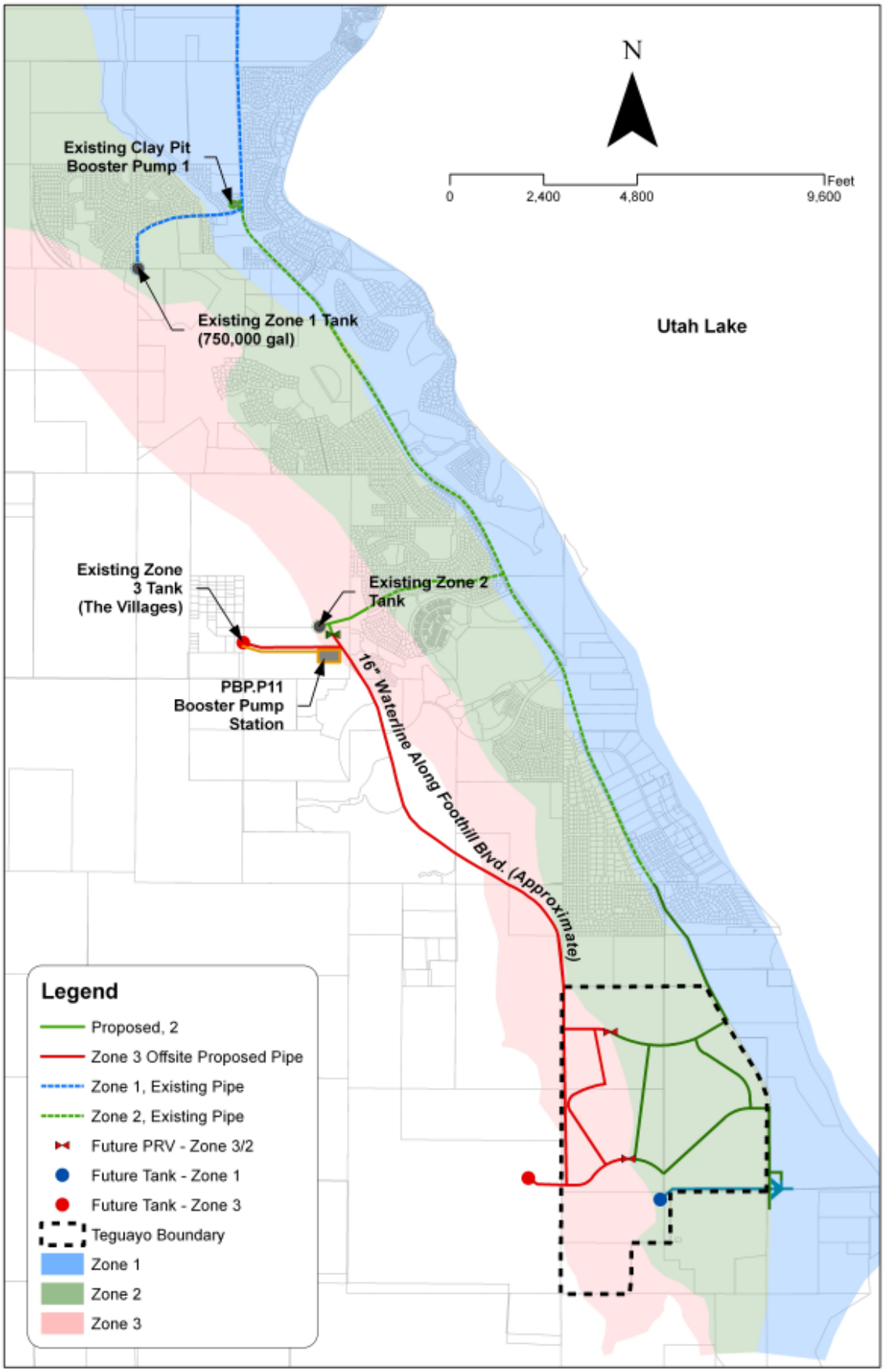
Teguayo

Exhibit 1

Culinary Water Improvements - Proposed Trunklines

PSOMAS

March 2010



Teguayo

Exhibit 2

Culinary Water Improvements - Offsite Improvements

PSOMAS

March 2010

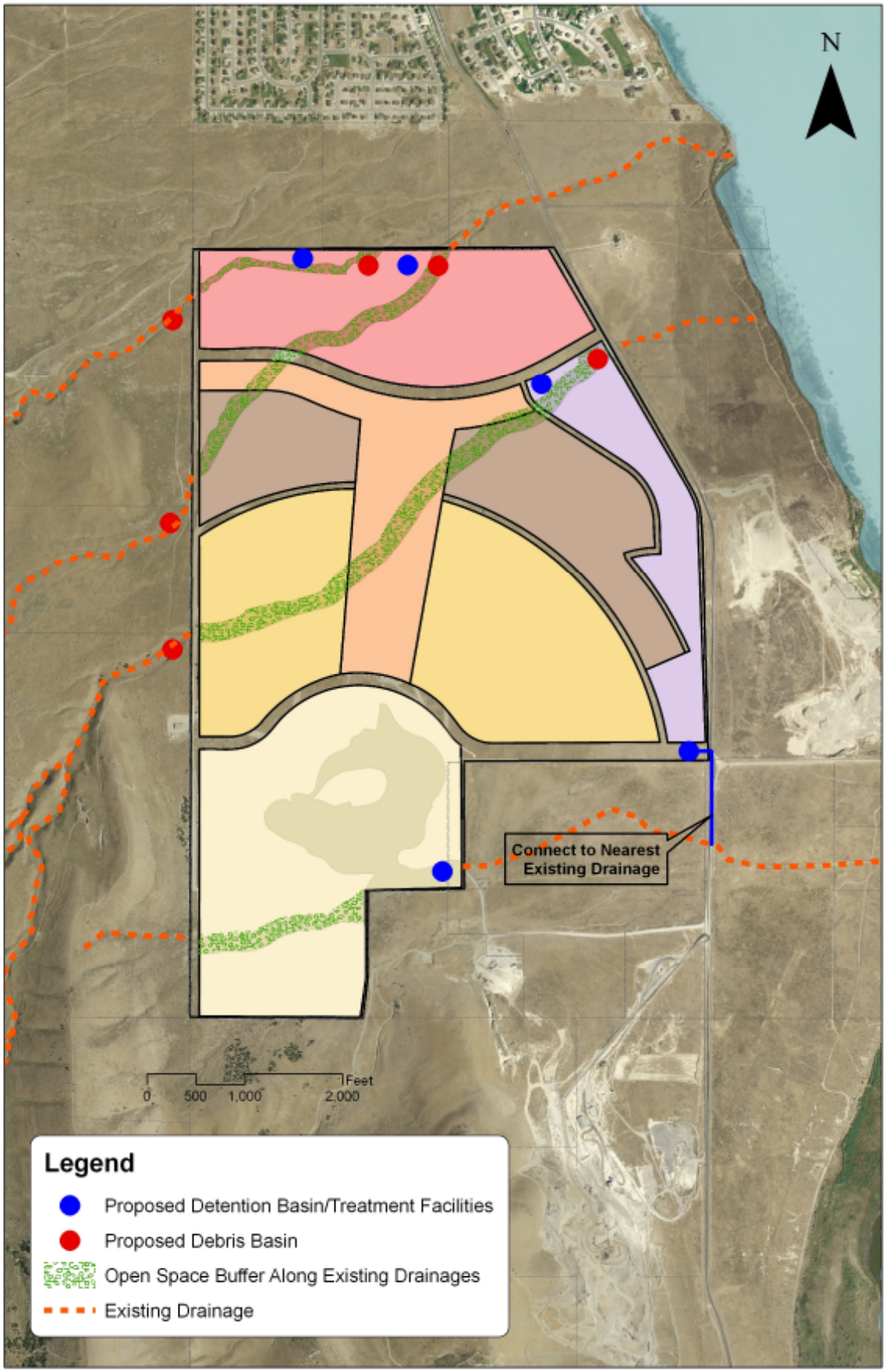
Storm Drainage

The Teguayo project site has several natural drainages running through it. The proposed land plan incorporates buffer areas around these drainages into the development. The buffer areas will be used for open space features along with storm water storage and treatment (see Exhibit 3). Storm water treatment will comply with NPDES, UPDES and Saratoga Springs requirements for water quality. Treatment methods such as oil/water separators, bio swales, detention/retention ponds, etc will used. At this time it is unknown where these facilities will be located but they will be designed and sited to meet the at least the minimum requirements.

All stormwater discharge from the treatment facilities will go into the natural drainage channels which currently utilize the existing culverts under Redwood Road. At this time, the location, size and capacity of the culverts have not been confirmed. Since the detention facilities will be designed such that no more than pre-developed storm water flows will be released from the site, the Teguayo Project will not likely have any negative impacts on the Redwood Road culverts. If the culverts under Redwood Road are currently operating at an acceptable level, they should continue to operate at the same level and will not need to be upgraded. As we move into more detailed designs, the capacity of the culverts will be analyzed and determinations made as to the condition of the culverts. If upgrading is deemed necessary by the City a discussion should be initiated between the City, UDOT, the Teguayo developers and other surrounding property owners whose drainage impacts the culverts to determine courses of action and financial responsibilities.

Detention ponds and debris basins will be constructed throughout the open space areas within the Teguayo project to capture the storm water runoff and debris from the development and treat it prior to discharging back into the drainage channels. These basins will not be located in the drainage channels but in the buffer areas along the drainage channels. Discharges back into the drainage channels will be limited to historic flows to avoid erosion in the channels and negative downstream impacts. Exhibit 3 shows the conceptual drainage plan and location of major detention facilities and debris basins.

The drainage basins contributing to the natural channels extend to the west as shown in Exhibit 4. As design of the Teguayo project progresses, these drainages will be modeled to determine pre-developed flows. The developed project will also be modeled to determine post-development flows and required detention amounts. In order to mitigate negative impacts from debris transported through drainages to the west, debris basins should be installed just west of Foothill Drive, so off-site debris can be captured before going through the roadway culverts. Since the properties west of Foothill Drive are not under control of the developer; the City will need to acquire rights of way from the property owner for the basins in connection with the development of the future roadway. If the City is unable to acquire the properties, the debris basins could be located on Teguayo property although this would not be the preferred location in terms of functionality.



Teguayo

Exhibit 3

Storm Drain Improvements

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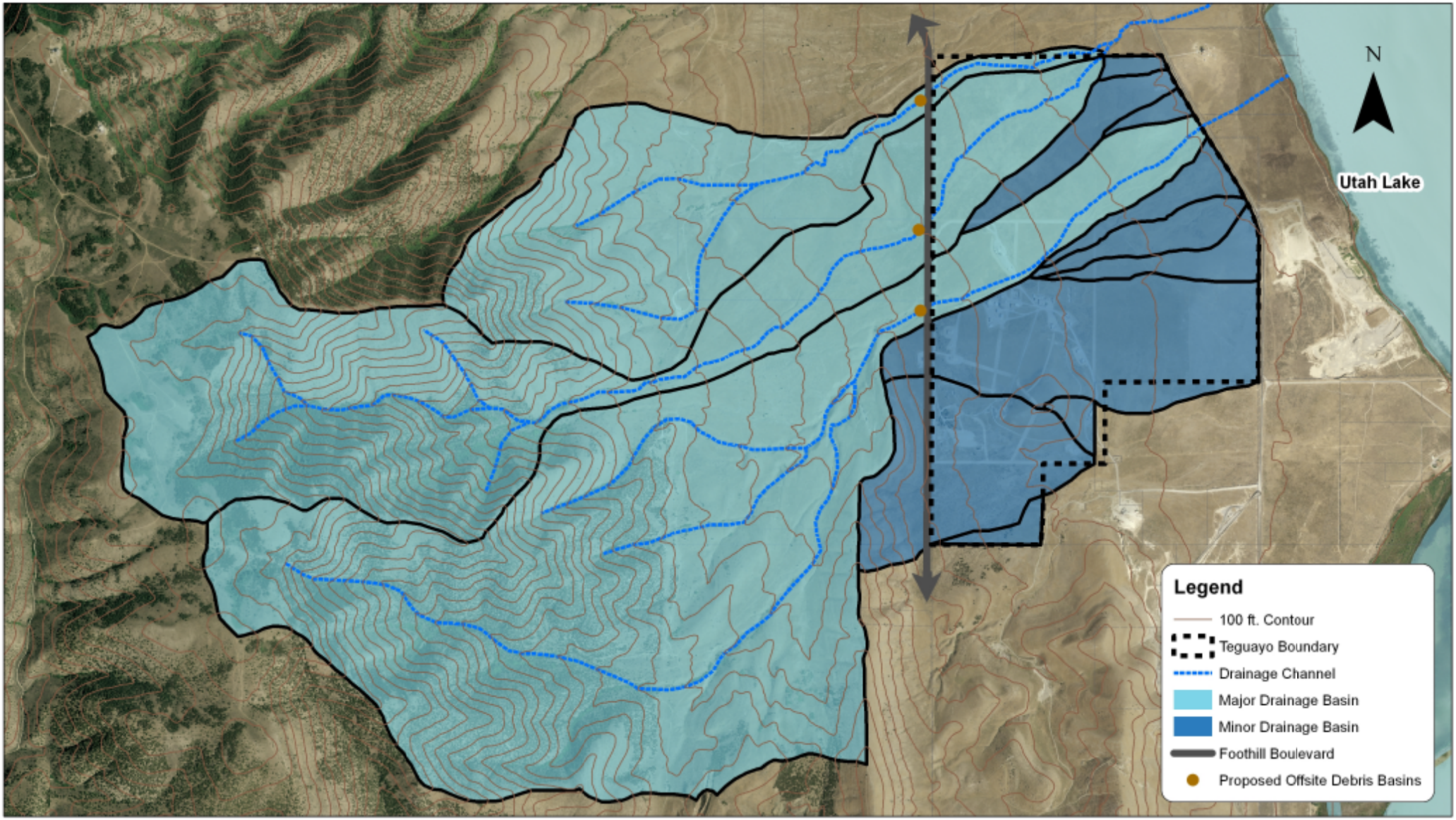

Teguayo

Exhibit 4

Offsite Drainage Basins

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Sanitary Sewer

Conversations with Saratoga Springs representatives indicate that the existing City sanitary sewer system does not have the capacity to service the Teguayo project. Significant off-site improvements will need to be made to service even just a few homes. The on-site sanitary sewer system will collect sewerage from the project and gravity flow to the east, towards Redwood Road (see Exhibit 5). At that point there are two options: (1) a lift station(s) and forced main system to the Timpanogos Special Service District (TSSD, or (2) a new sewer treatment plant near Pelican Point.

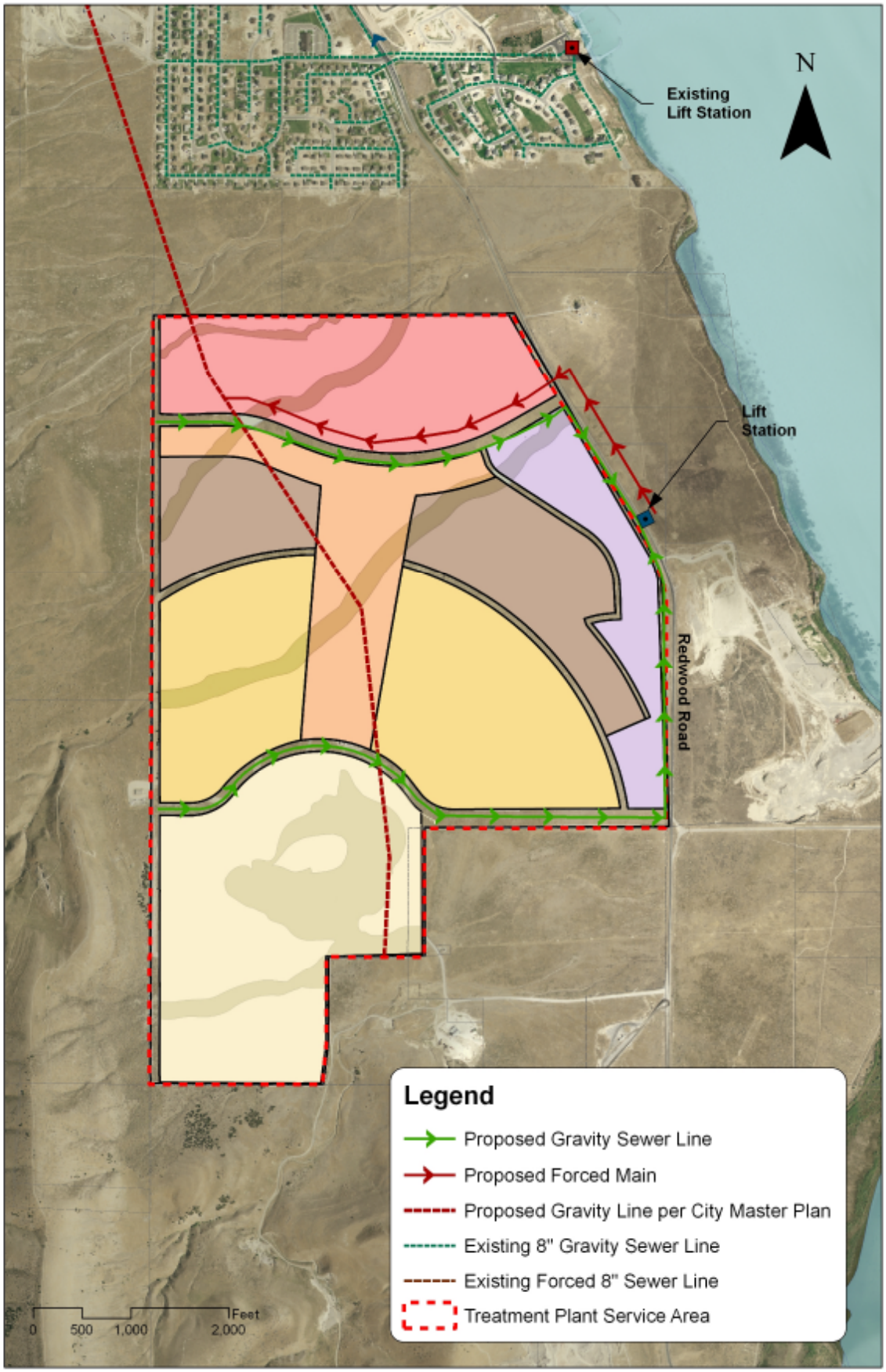
In option 1, a lift station would pump sewerage through a forced main to a future master planned gravity line running mid-way through the Teguayo project (shown in Exhibit 5). The sewerage will need to be pumped from a low point on the Teguayo project to the future gravity line. From there it would gravity flow to the Jordan River where a siphon would need to be constructed to cross the Jordan River. After crossing the river, another ¾ mile of gravity line will need to be installed to connect into the TSSD 54" line in 7350 North. Sizing of the siphon has not been completed at this time but will be part of future calculations and designs.

Along with researching the costs associated with a lift station(s), force main and siphon to the TSSD system, the City, in conjunction with the the development team for Teguayo, should study the potential for a third alternative; a new sewer treatment plant to be located near Pelican Point. The treatment plant would service the 4,360 units inTeguayo and, for that purpose, would need to be approximately 1.6 MGD. It is possible that the treatment plant could service other projects as well if expanded. Part of the research will be to determine the economic, legal and political feasibility of such a solution. Permitting at the Federal, State and local levels will also need to be defined and analyzed for feasibility.

Both options for sanitary sewer are complex and costly and need to be analyzed in much greater detail before a direction should be chosen by the developer and/or the City. Both options offer advantages and disadvantages as discussed in Table 1.

Table 1 – Advantages/Disadvantages of Proposed Sanitary Sewer Solutions

Option	Advantages	Disadvantages
Forced Main	• City is owner and in control • Quicker timeframe to begin constructing	• High maintenance costs • Adds another lift station into the City • Siphon maintenance • Construction of lines through existing neighborhoods
Treatment Plant	• Potential for effluent reuse • Environmental • Possibility to expand in future	• Political barriers based on ownership, service area, permitting • Likely more expensive alternative



Teguayo

Exhibit 5

Sanitary Sewer Improvements - Proposed Trunklines

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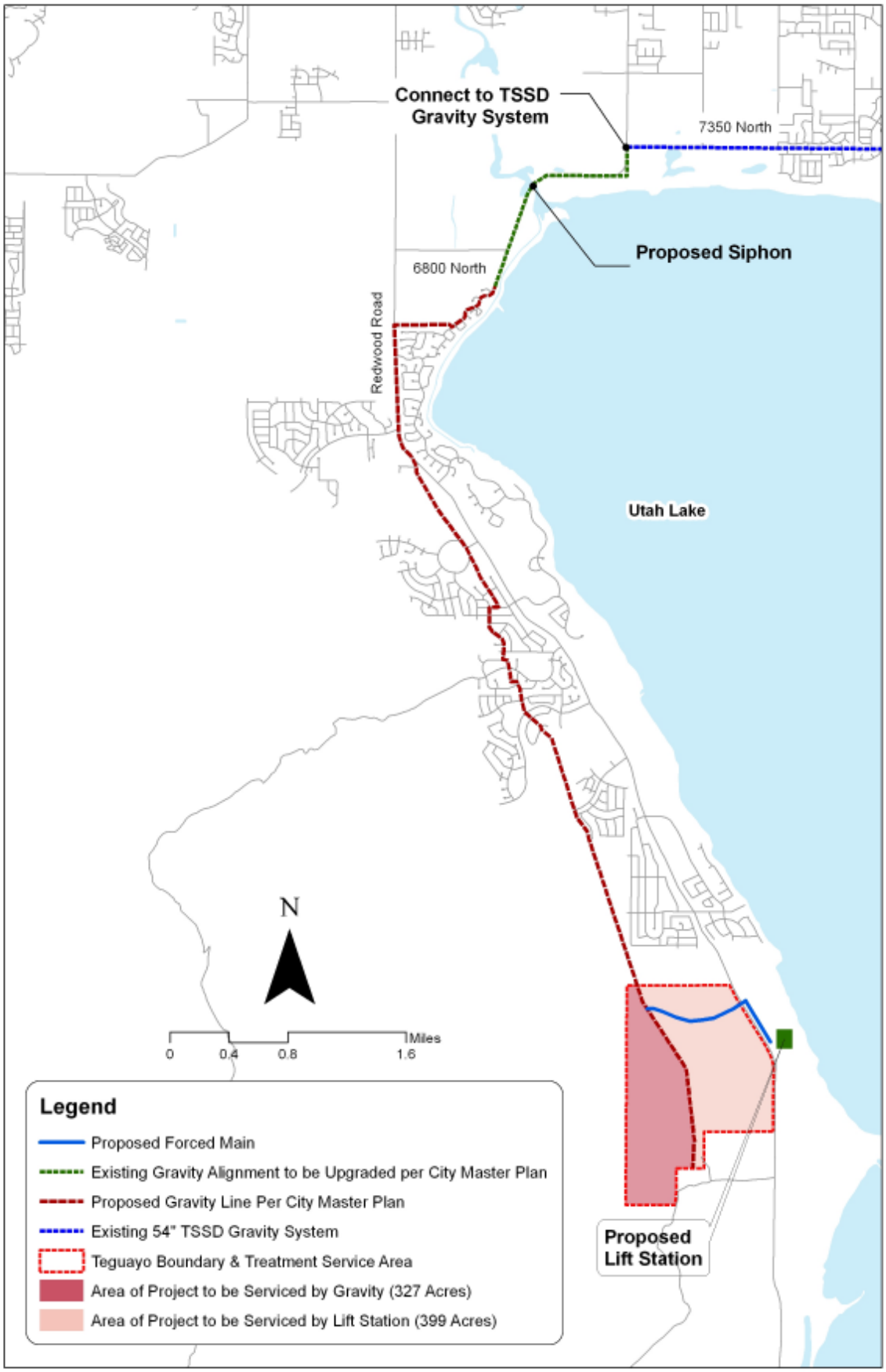


Teguayo

Exhibit 6

Sanitary Sewer Improvements - Offsite Improvements

PSOMAS

March 2010

Secondary Water

Similar to the culinary water system, the Teguayo project sits in 2 zones of the City's secondary water system: Zones 2 and 3. The eastern portion of the property is in Zone 2 and the western in Zone 3. A small section in the southwest corner of the project sits above Zone 3 and will have limited development until a Zone 4 system is available. A proposed trunk line layout for the secondary water system, which is a completely separate, stand-alone system from the culinary water system, is shown in Exhibit 7.

As mentioned earlier, the general intent is to develop the project in phases with the first phases beginning in Zone 2. As such, the secondary system will also be phased, with infrastructure being constructed as the project is developed and the system likely being sourced with culinary water initially. The secondary system phasing will occur in 3 parts;

Phase 1: **Getting started** – Although not guaranteed, the City has indicated that culinary water is available for development and, if needed, can be used as secondary water. As the initial homes connect to the secondary system, the source water will be culinary water. In order for this to occur, several things have to be determined:

(a) Does the City have enough culinary water to service both the domestic and outdoor uses for the early phases of Teguayo? Along with the source, does the culinary system tanks and pump stations have the capacity to handle the additional demands imposed?

(b) If the source is available, can the existing Zone 2 system provide adequate flows and pressures for the secondary system? Will connections need to be made to Zone 3 or pipelines need to be upsized to meet the increased demands?

(c) Using culinary water for outdoor use will require that culinary water rights and impact fees be paid per the City's policy. How does the higher cost of those impact fees affect the developers proforma?

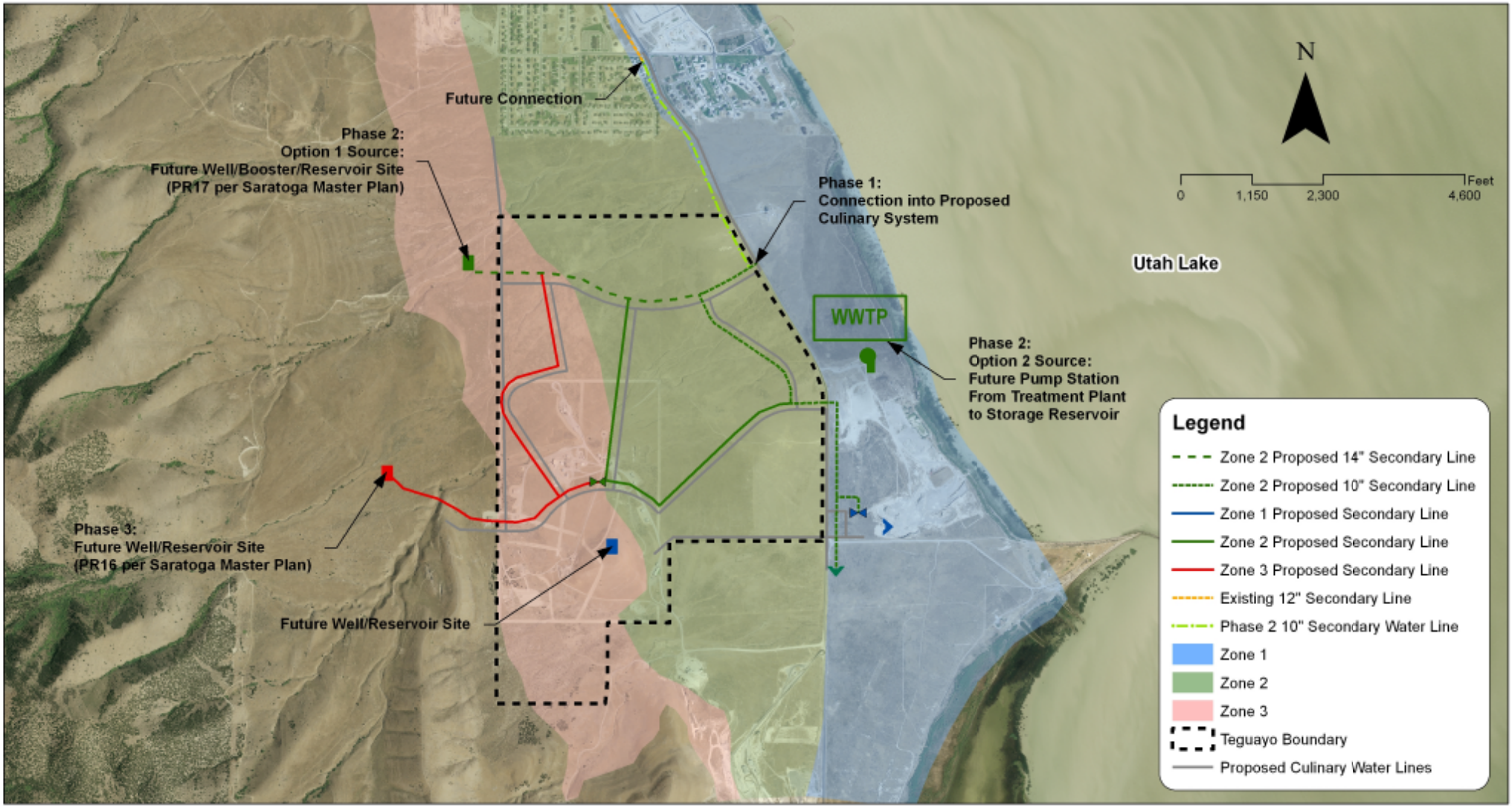
Phase 2: **When secondary water becomes available and economics permit** – A master planned 10-inch line will be constructed along Redwood Road, extending from the City's existing secondary system (approximately ½ mile to the north) to the southern boundary of Teguayo. This will now source the sytem with existing City secondary water sources. If the City's system does not contain enough source water to service the project, an additional source may need to be developed for this phase. Two options for source water exist:

1. Drill a new well – a new (shallow or deep) well could be constructed on or near the Teguayo site to enhance the City's source.
2. Treatment plant effluent – if a sewer treatment plant is constructed near Pelican Point, the effluent could be treated to human contact standards and be used as a source for the secondary system. A storage reservoir will also need to be constructed to collect and store the effluent. Due to the location, this reservoir will be in Zone 1 and will need a booster station to pump the water to higher zones.

As part of this phase a Zone 2 storage reservoir will also need to be constructed. The City's master plan suggests a 10 AF storage pond just west of Foothill Blvd. This entire volume will not be needed for the Teguayo project. A 14-inch line is master planned to extend from the Zone 2 reservoir to the 10-inch line along Redwood Road.

Phase 3: Zone 3 - As the development moves into Zone 3 additional storage will be needed. The City's master plan suggests a 12 AF reservoir west of Foothill Blvd. This entire volume will not be needed for the Teguayo project. A booster pump will also be needed to pump water from Zone 2 to the Zone 3 reservoir.

The City's masterplan also suggests a Zone 1 reservoir be located on the project. As the land planning process progresses, a site will be reserved for a future Zone 1 reservoir. The Zone 1 system will not have enough pressure to service the Teguayo project, so the developer should have no participation costs.



Teguayo

Exhibit 7

Secondary Water Improvements

PSOMAS

March 2010

Roadways

The traffic analysis for the Teguayo project is being completed by A-Trans Engineering. The current traffic along Redwood Road is only 112 vehicles per day (vpd). While Redwood Road is only a two-lane roadway along the property frontage, the roadway has a capacity of 19,500 vpd. Therefore, there is substantial capacity along the property frontage. We do anticipate intersection improvements at the two main accesses of the development at Redwood Road to provide for left and right turn lanes as well as plans for future traffic signals. Future signals will also need to be considered at the accessed on Foothill Blvd.

The impact that Teguayo will have on the existing roadway network will come from adding this new traffic to the north. The critical point is at the SR 73 / SR 68 intersection under the current conditions. However, with the improvements to Redwood Road and the new Pioneer Crossing 5-lane roadway to the American Fork Interchange at I-15, the majority of this development's commuter traffic will utilize this new roadway and not travel to the SR 73 / SR 68 intersection. Commercial traffic is still expected to travel to the area.

Internal roadway sizing will be based on the development layout and internal densities. This will allow the roadway size, auxiliary lane sizing and intersection control to be determined. The intersection analysis will size the roadways appropriately to maintain acceptable peak period levels of service

Schools, Parks, Churches, Civic Centers, Public Safety Facilities and Commercial

The Teguayo development project has planned areas for facilities such as schools, parks, churches, civic centers, public safety facilities and commercial. Although the residents of Teguayo will likely use existing facilities within the City, the Teguayo project is also providing additional facilities for existing City residents to use and enjoy.

APPENDICES

TRAFFIC STUDY

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February 15, 2010

TRANSPORTATION ENGINEERING

RE: Teguaya Transportation

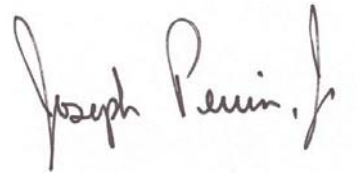
A-Trans Engineering is working on the analysis for the 4,000+ unit Teguaya Development, south of Saratoga Springs, UT. This preliminary evaluation was to identify any critical flaws/constraints that may preclude the full development from occurring from a transportation aspect. The findings indicate that roadway mitigation improvements can offset the developments impact and allow for sufficient roadway capacity and access for the site and proposed land use.

While Redwood Road is only a two-lane roadway along the property frontage, the current traffic is only 112 vehicles per day (vpd). Therefore, there is substantial capacity along the property frontage. We do anticipate intersection improvements at the two main accesses of the development to provide for left and right turn lanes as well as plans for future traffic signals. The traffic concern would typically come from adding this new traffic to the north, at the critical SR 73 / SR 68 intersection under the current conditions, however, with the improvements to Redwood Road and the new Pioneer Crossing 5-lane roadway to the new American Fork Interchange at I-15, the majority of this development's commuter traffic will utilize this new roadway and not travel to the SR 73 / SR 68 intersection. Commercial traffic is still expected to travel to the area. Internal roadway sizing will be based on the development layout and internal densities. This will allow the roadway size, auxiliary lane sizing and intersection control to be determined. The intersection analysis will size the roadways appropriately to maintain acceptable peak period levels of service.

The next phase of the traffic analysis will include providing a UDOT formatted study for the official request for the accesses for the development.

Please contact me with any questions.

Sincerely,
A-Trans Engineering



Joseph Perrin, PhD, PE, PTOE
Principal

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atrans@comcast.net

Assumptions for Teguaya in Saratoga Springs, Utah

1. Total site is to include:
   - 3963 Residential Units
     - 2302 Multi Family
     - 1661 Single Family
   - 205,712 sf Retail

2. The project phasing is as follows
   - 2015
     - 25% Residential
   - 2020
     - 50% Residential
     - 1/3 Commercial
   - 2025
     - 75% Residential
     - 2/3 Commercial
   - 2030
     - 100% Residential
     - 100% Commercial

3. Site is located along SR 68. Peak hour volumes are determined as 10% of the Average Annual Daily Traffic (AADT) with 50% north and 50% south distribution assumed. AADT was considered at the site frontage as well as farther to the north near SR 73 in Saratoga Springs. The peak hour 2008 traffic volumes for the site frontage as assumed at 112 vehicles per hour with 56 vehicles northbound and 56 vehicles southbound. The peak hour 2008 traffic volumes for the arterial farther to the north is assumed at 1016 vehicles per hour with 508 vehicles northbound and 508 vehicles southbound. Development that accesses the roadway between the site and SR 73 contributes to the large difference in volume at these two locations.

4. Growth for the area was determined using AADT along SR 68. Growth is determined to be 7.4% for the area. The growth factors and AADT for SR 68 are shown in the following table.

Table 1: Growth

			Peak Hour Volumes	
7.40%	Growth Factor	Years In Future	Site Frontage	North of Site on SR 68
2008	1.00	0	112	1016
2015	1.65	7	185	1675
2020	2.36	12	264	2393
2025	3.37	17	377	3420
2030	4.81	22	539	4886

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5. Institute of Transportation Engineers Trip Generation Handbook 7th Edition was used to determine the trips generated by the site in 2030. No pass by was assumed because no traffic projected to pass by the site as a whole. For internal circulation pass by should be considered for the retail portion of the development but the site as a whole will generate no pass by. The following table shows the trip generation for the site with no internal capture.

Table 2: 2030 Trip Generation

2030 Volumes with No External Traffic																				
													AM		PM		AM		PM	
	Size	Land Use	AM	PM	turday Pe	Daily	Saturday	AM	PM	Sat Peak	Daily	Saturday	% IN	% Out	% IN	% Out	IN	Out	IN	Out
MF	2302	230	0.44	0.52	0.47	5.86	5.67	1013	1197	1082	13490	13052	0.17	0.83	0.67	0.33	172	841	802	395
SF	1661	210	0.75	1.01	0.94	9.57	10.1	1246	1678	1561	15896	16776	0.25	0.75	0.63	0.37	311	934	1057	621
Commercial	205.712	820	1.03	3.75	4.97	42.94	49.97	212	771	1022	8833	10279	0.61	0.39	0.48	0.52	129	83	370	401
								2471	3646	3666	38219	40108					613	1858	2229	1417

Internal capture for the residential and retail is assumed as follows:

- 2015
  - 15% Residential
- 2020
  - 20% Residential
  - 66% Commercial
- 2025
  - 25% Residential
  - 66% Commercial
- 2030
  - 25% Residential
  - 66% Commercial

Trip Generation for 2015, 2020, 2025 and 2030 including internal trip reductions are shown in the following table.

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Table 3: Trip Generation by Year

2015																		
			AM	PM	AM	PM		AM	PM	AM		PM		AM		PM		
	Size	Land Use	Peak Hour Trip Rate		Site Trips Generated		Internal %	External Trips		% IN	% Out	% IN	% Out	IN	Out	IN	Out	
MF	576	230	0.44	0.52	253	299	15%	215	254	0.17	0.83	0.67	0.33	37	179	170	84	
SF	415	210	0.75	1.01	311	419	15%	265	356	0.25	0.75	0.63	0.37	66	199	225	132	
Commercial	0	820	1.03	3.75	0	0	0%	0	0	0.61	0.39	0.48	0.52	0	0	0	0	
					565	719			611					103	377	395	216	
2020																		
			AM	PM	AM	PM		AM	PM	AM		PM		AM		PM		
	Size	Land Use	Peak Hour Trip Rate		Site Trips Generated		Internal %	External Trips		% IN	% Out	% IN	% Out	IN	Out	IN	Out	
MF	1151	230	0.44	0.52	506	599	20%	405	479	0.17	0.83	0.67	0.33	69	336	321	158	
SF	831	210	0.75	1.01	623	839	20%	498	671	0.25	0.75	0.63	0.37	125	374	423	248	
Commercial	69	820	1.03	3.75	71	257	66%	24	87	0.61	0.39	0.48	0.52	15	9	42	45	
					1200	1694			1237					208	719	786	452	
2025																		
			AM	PM	AM	PM		AM	PM	AM		PM		AM		PM		
	Size	Land Use	Peak Hour Trip Rate		Site Trips Generated		Internal %	External Trips		% IN	% Out	% IN	% Out	IN	Out	IN	Out	
MF	1727	230	0.44	0.52	760	898	25%	570	673	0.17	0.83	0.67	0.33	97	473	451	222	
SF	1246	210	0.75	1.01	934	1258	25%	701	944	0.25	0.75	0.63	0.37	175	526	595	349	
Commercial	137	820	1.03	3.75	141	514	66%	48	175	0.61	0.39	0.48	0.52	29	19	84	91	
					1835	2670			1792					301	1017	1130	662	
2030																		
			AM	PM	AM	PM		AM	PM	AM		PM		AM		PM		
	Size	Land Use	Peak Hour Trip Rate		Site Trips Generated		Internal %	External Trips		% IN	% Out	% IN	% Out	IN	Out	IN	Out	
MF	2302	230	0.44	0.52	1013	1197	25%	760	898	0.17	0.83	0.67	0.33	129	631	602	296	
SF	1661	210	0.75	1.01	1246	1678	25%	934	1258	0.25	0.75	0.63	0.37	234	701	793	466	
Commercial	206	820	1.03	3.75	212	771	66%	72	262	0.61	0.39	0.48	0.52	44	28	126	136	
					2471	3646			2418					407	1359	1520	898	

6. Origin Destination for the site is estimated as 10% to/from the south and 90% to/from the north along Redwood Rd or if necessary Foothill Drive.

7. Improvements to the area will be recommended, as they are needed based on the previous assumptions. The order which they will be implemented is as follows:

- Single unsignalized access point along Redwood Rd
- Single signalized access point along Redwood Rd
- Second unsignalized access point along Redwood Rd
- Second signalized access point along Redwood Rd
- Dual eastbound left turn lanes at northern access location with Redwood Widened to accommodate two acceptance lanes
- Dual eastbound left turn lanes at southern access location with Redwood Widened to accommodate two acceptance lanes
- Single unsignalized access point along Foothill Drive
- Single signalized access point along Foothill Drive

Analysis and Recommended Improvements by Year

2015

For 2015 a single unsignalized access point will accommodate the projected traffic volumes. The access should be built with separate left and right turn lanes.

Table 4: 2015 Single Unsignalized Access

	EBL	EBR	NBL
AM	12.3/B	8.9/A	7.6/A
PM	11.2/B	8.9/A	8.5/A

2020

The single access point along Redwood Road has enough capacity to accommodate projected site traffic in 2020.

Table 5: 2020 Single Unsignalized Access

	EBL	EBR	NBL
AM	34.7/D	9.4/A	8.0/A
PM	22.8/C	9.2/A	10.5/B

2025

In 2025 the single unsignalized access point will no longer efficiently be able to accommodate the projected site traffic.

Table 6: 2025 Single Unsignalized Access

	EBL	EBR	NBL
AM	208.2/F	10.0/A	8.5/A
PM	210.8/F	9.7/A	14.1/B

A signal at this location will operate with the following level of service. The signal should be built with separate left and right turn lanes for each approach and have permitted phasing.

Table 7: 2025 Single Signalized Access

	EBL	EBR	NBL	NBT	SBT	SBR	INT
AM	18.5/B	1.4/A	20.9/C	23.6/C	23.6/C	5.6/A	16.6/B
PM	12.1/B	1.8/A	19.1/B	16.0/B	16.0/B	14.0/B	13.7/B

2030

With one signal servicing the development in 2030 the intersection will operate with an unacceptable LOS.

Table 8: 2030 Single Signalized Access

	EBL	EBR	NBL	NBT	SBT	SBR	INT
AM	45.3/D	1.4/A	75.4/E	81.2/F	81.2/F	10.0/A	46.0/D
PM	104.7/F	4.7/A	19.0/B	16.7/B	16.7/B	87.3/F	73.1/E

It was found that a second unsignalized access would not sufficiently accommodate all site traffic so a second signalized location was considered. The northern access location will experience larger volumes of traffic due to the origin destination heavy to the north. Although the overall intersection operates with acceptable levels, this causes this access to operate with LOS E for the EBL movement.

Table 9: 2030 North Signalized Access

	EBL	EBR	NBL	NBT	SBT	SBR	INT
AM	68.3/E	5.1/A	10.9/B	47.7/D	15.7/B	2.2/A	41.5/D
PM	57.6/E	7.0/A	52.4/D	11.6/B	27.3/C	2.8/A	22.3/C

Table 10: 2030 South Signalized Access

	EBL	EBR	NBL	NBT	SBT	SBR	INT
AM	15.2/B	2.4/A	12.3/B	15.0/B	16.1/B	3.6/A	13.3/B
PM	14.6/B	3.9/A	9.1/A	10.3/B	9.9/A	4.1/A	8.7/A

If the northern signal is improved to include dual eastbound left turn lanes and Redwood Road is widened to two acceptance lanes the intersection operates with the following LOS.

Table 11: 2030 North Signalized Access with Dual Lefts

	EBL	EBR	NBL	NBT	SBT	SBR	INT
AM	10.3/B	3.1/S	7.8/A	11.1/B	8.2/A	2.7/A	9.3/A
PM	14.2/B	5.2/A	13.4/B	6.5/A	7.8/A	3.2/A	7.4/A

Summary of Recommendations:

2015: Build single access point with opening of site. Separate left and right turn lanes for each approach.

2020: The single access point will accommodate site traffic through 2020.

2025: Upgrade single access point to a signal with separate left and right turn lanes for each approach. Permitted Phasing

2030: Upgrade existing signal to include dual eastbound left turn lanes and widen Redwood Road to a five lane facility to accommodate two acceptance lanes. Add protected phasing. Build a second signal south of the first access point with permitted phasing and separate left and right turn lanes.

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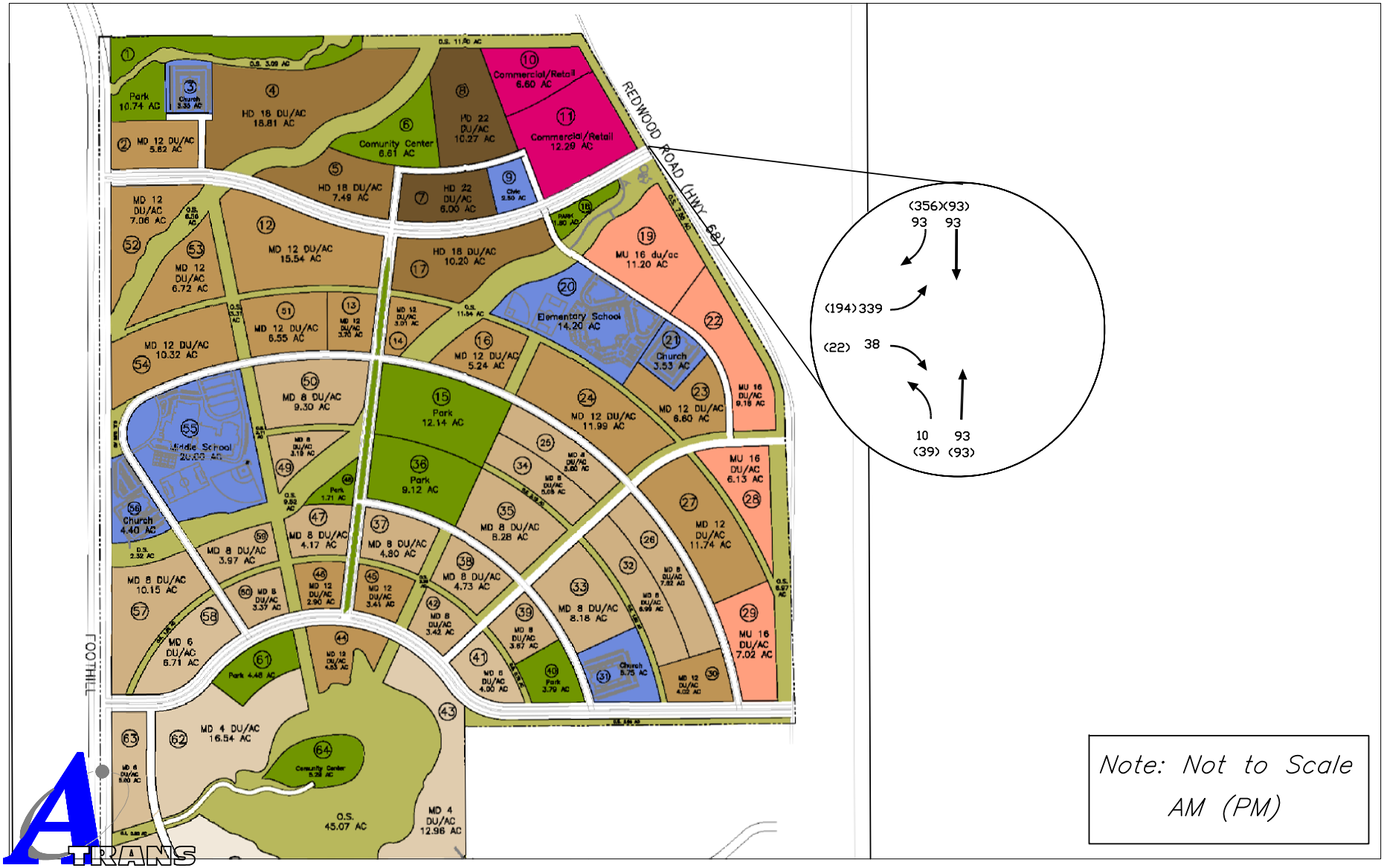

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Figure 1

2015 Total Traffic

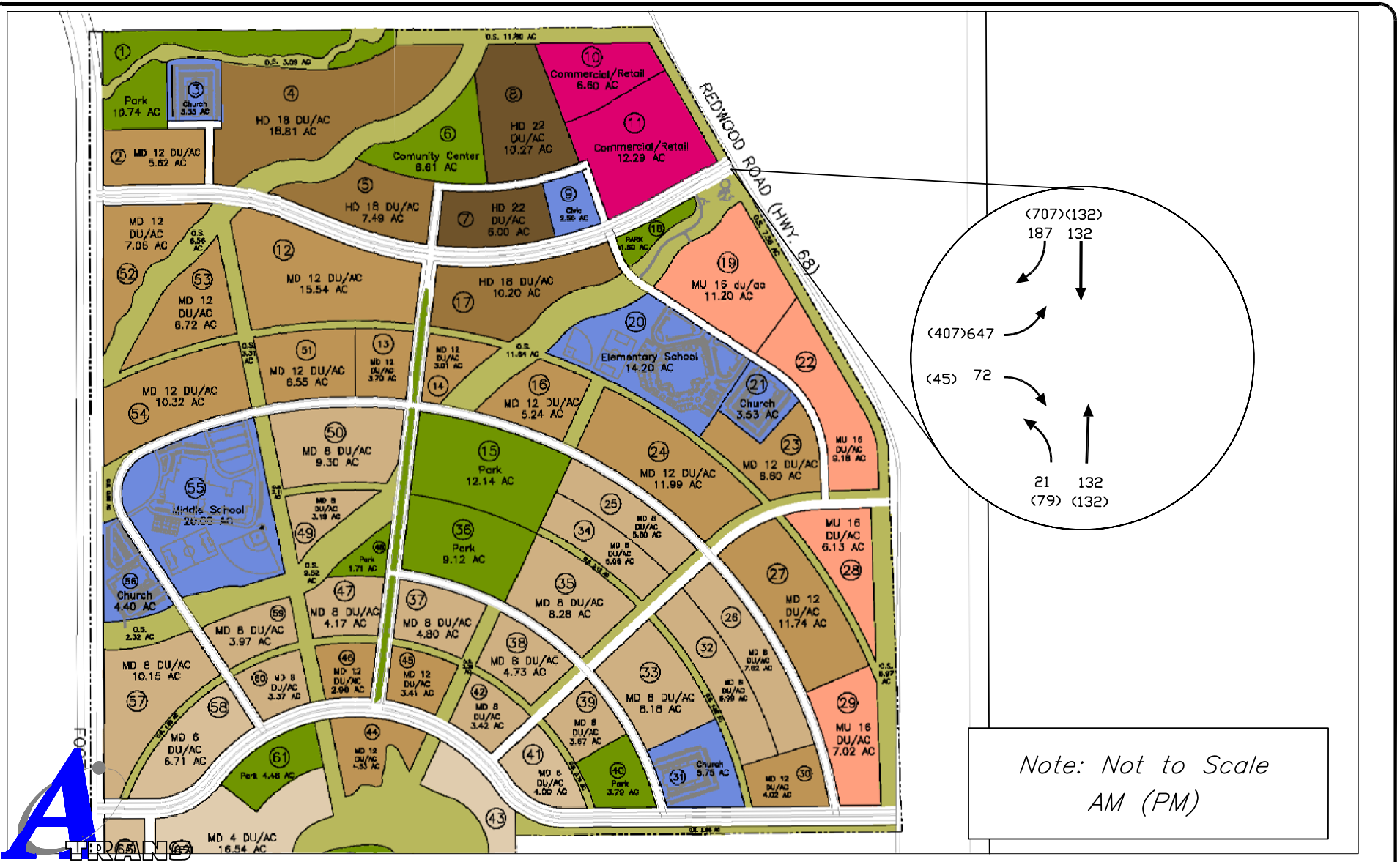

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Figure 2

2020 Total Traffic

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Figure 3

2025 Total Traffic

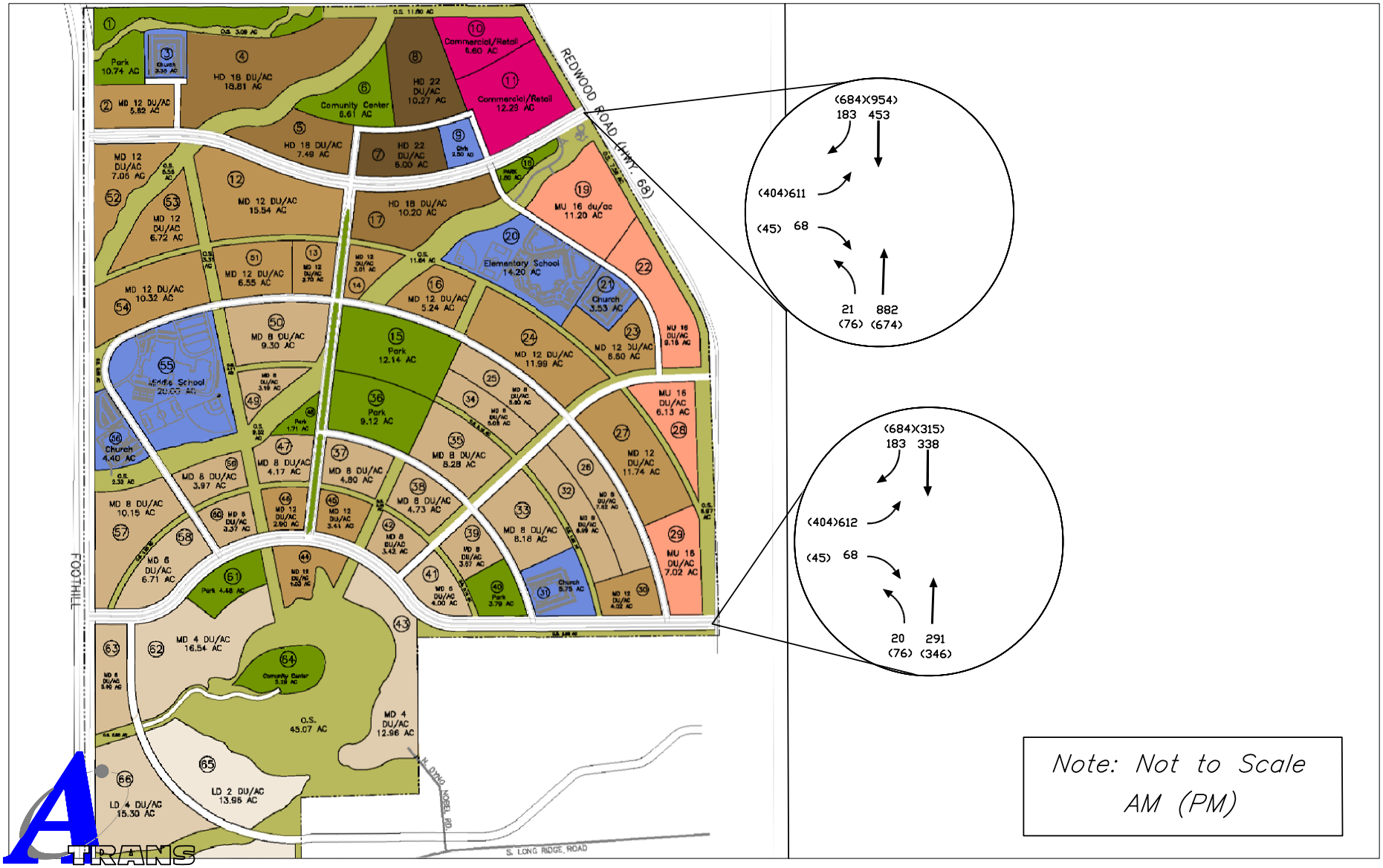

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Figure 4

2030 Total Traffic

APPENDICES

MEETS AND BOUNDS LEGAL DESCRIPTION AND MAP

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