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**Comprehensive Development Plan: Jermuk as a
Destination Spa & Winter Tourism Center**

**Volume 4 – Development
Control Guidelines**

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Plan: Jermuk as a Destination Spa
& Winter Tourism Center**

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DISCLAIMER: The author's views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government.

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1. INTRODUCTION & OBJECTIVES

The town of Jermuk is expected to grow significantly in the next few years, thanks to a number of planned development projects and increased tourism expected from various government and private sector initiatives. However, one of the greatest threats to Jermuk's future is that new development will occur in a haphazard way, leading to the loss of its character and environmental features which draw tourists.

Therefore, these development control guidelines are designed to assist Jermuk in evaluating all new development, both public and private, to ensure the protection of its assets. The goal is for Jermuk to become a 'Center for Healthy and Active Living' catering to high-end domestic and foreign tourists who seek to adopt and maintain an active and healthy lifestyle, and this document is one of four which make up the Jermuk Local Development Framework, or LDF, which will help the municipality of Jermuk to achieve its vision. To do this, the development control guidelines follow a number of key principles, many of which are outlined in the 2004 Jermuk Master Plan:

- Ensure sufficient and appropriate infrastructure for residents and visitors
- Assist the city to envision its growth management strategy for the future
- Develop community facilities to encourage community participation in the development of Jermuk and attract new residents to work in the tourism industry
- To ensure that all new development is sustainable and protects the valuable natural environment of Jermuk
- To protect and enhance Jermuk's primary resource, the natural spring water
- To promote appropriate uses of land and division of uses to protect tourist attractions
- Preservation of historically and culturally significant architecture and natural features, and promotion of attractive new development to attract tourists

These guidelines are only guidelines and are in draft form for further discussion within the Municipality and National Government. Alterations should be made, if appropriate, through consensus by those with a more intimate knowledge of specific laws, regulations and decrees relating to Armenia, or those with experience in urban planning. None of the guidelines in this document are intended to conflict with existing legislation, although legislative changes may be deemed appropriate in order to adopt these guidelines.

2. SUSTAINABLE DEVELOPMENT

Jermuk's entire economy is based on natural features, including the landscape and the quality of the mineral water. It is essential, therefore, to protect Jermuk's natural assets, as well as its economy and well-being of its population to ensure sustainable growth and development.

To ensure sustainability, these development control guidelines, and the LDF overall, suggest a number of actions to be taken for all planning and new development projects by the developer and/or the municipality, as appropriate, prior to approval of the project. These include:

- Environmental Impact Assessments, in accordance with Armenian law
- Health Impact Assessments, to ensure Jermuk can retain its reputation as a center for healthy living
- Market Analysis to ensure economic sustainability and feed into a growth management plan

- Monitoring and Evaluation of new development projects to determine if they are reaching capacity and their intended goals, to help in making educated decisions about future development
- Following the Development Control Guidelines outlined here and utilize them to improve upon existing building and maintenance codes and processes (additional information in other LDF documents as well)
- Holding community meetings and encourage community participation for new development projects to promote a sustainable and involved community going forward
- Other proposals and permitting documents as required by law

3. ZONING

Zoning of land is a key planning tool. Jermuk is currently zoned for residential, municipal, industrial, protected forest areas, and agricultural use. It is recommended that Jermuk municipality work with the State Real Estate Cadastre and Ministry of Urban Development to revise the zoning for Jermuk by more clearly separating residential, commercial, public, industrial, agricultural, and conservation lands. The 2004 Master Plan lays out some of the possible zone categories and permitted uses.

The left bank of Jermuk and Kechut should include primarily residential zoning with some public and park land and small-scale commercial (grocery stores, etc.) zoning. The right bank of Jermuk should be primary commercial, both large and small scale, with some industrial and some mixed use areas (for future apartments and/or townhomes) and public and park lands. Industrial uses, including factories of any kind, should limit new development to the edges of the city and should all be concentrated in one area, and with some distance from residential areas, tourist attractions, and the spas. In addition, a review should be done of existing codes and regulations for sub-division of land, to put into place effective regulation which will help Jermuk ensure efficiency of land use, lot size, and sub-division. The 2004 Master Plan also discusses some options for these considerations.

Outside of Jermuk, land should be zoned as agricultural or conservation only. Enforcement of the forest protected zones could provide a large benefit to Jermuk in terms of preserving its character and landscape. Ideally, Jermuk would be surrounded by a greenbelt of land zoned as conservation or agricultural (with conservation comprising the majority of the greenbelt to protect natural vegetation).

Given this, the current zoning for Jermuk should be reviewed to ensure that zoning and enforcement regulation is sufficiently clear and reflects the existing master plans as well as recommendations and guidelines put forward in the LDF.

4. DESIGN AND MAINTENANCE GUIDELINES PERTAINING TO ALL NEW CONSTRUCTION AND RENOVATIONS

To ensure that the character of Jermuk and its landscape are well-preserved for tourists and future generations, it is essential that the design of buildings and facilities follow a clear plan and pattern which together will form an aesthetically pleasing, and relaxing, environment. It is also of utmost importance that all buildings and facilities be maintained with care, and that needed updates and repairs are completed in a reasonable amount of time to prevent a cumulative effect of poor maintenance which will ultimately deteriorate the character and

attractiveness of Jermuk for tourists and residents alike. Therefore, these guidelines should be incorporated into revised building and maintenance codes to be enforced for all new construction and renovations. It should be noted that existing buildings will be exempted from revised design elements until renovation of the property, but maintenance elements should begin to be enforced immediately after adoption of the proposed new codes to assist the government to reach its goals in the next few years.

The design and maintenance guidelines for Jermuk are as follows:

- Buildings shall have well-maintained exterior, without major infrastructural problems (cracks, etc.)
- Windows, doors, balconies, sidewalks, and other exterior design features must be of consistent design with each other, and with the building
- The architectural design of buildings shall fit within the character of Jermuk, that is, a relaxing, natural, aesthetically pleasing, light, clean, and healthy environment. Architectural styles for new development must take into account existing buildings to prevent a mish-mash of styles which will ultimately lead to an unpleasant skyline and streetscape.
- The design of all buildings and development must fit into the environment, and have no negative effect on the landscape
- All land owned by a property owner must be well-maintained. Dead trees and shrubbery shall be removed. Sidewalks and other infrastructure on the property will be protected from being overtaken by grass and other plants. Dirt patches should be filled with grass or other plants. Tall weeds must be removed or trimmed.
- Earthquake-resistant design and construction methods must be incorporated into all new development given that Jermuk is in a seismically active region
- Building design must account for wind and other climatic conditions to ensure proper protection against the elements, ease of maintenance, and energy efficiency
- Overall height limit in Jermuk shall be no more than 8 stories for any building
- All buildings will have a plan for waste collection and screen garbage collection areas from the street view
- A fire or emergency escape plan must be made and provisions (such as smoke alarms) included for all buildings except single family homes
- All buildings must have an appropriate electric, phone, heating, and plumbing system. Provision of high-speed internet, satellite television, and air conditioning are also highly recommended for all tourist facilities.
- No separate basement level entrances may be street-facing and all the bottom of any basement windows must be placed at least 30 cm above the ground.
- Sufficient parking must be included for new buildings. The appropriate amount of parking will be determined by market analysis. New buildings must also ensure they have access to other modes of transport, such as sidewalks and bus stops. Parking should be located on the property in such a way as to help enhance the natural landscape and streetscape and reduce its visual impact.
- New development must provide appropriate green space – the amount that is determined to be appropriate will vary depending on the type of building. Furthermore, if any trees or other significant environmental features of the land are removed during construction, these must be replaced somewhere else on the property as part of the development plan.
- New development must include provision for the completion of appropriate infrastructure, such as repair of sidewalks and streets post-construction, safe connections to gas, electric, and other utilities, and plantings providing screening, if appropriate. Best practice encourages the municipality to cost-share some of these additional improvements to encourage investment.
- Maximization of energy efficiency and environmentally-friendly technologies

- New buildings must provide access for the disabled. This requires elevators or ramps if a building is more than one story and any major features of the building (dining room or spa for example) are not on the first floor, and ramps and other features on the exterior as well, where appropriate.
- Maintenance of buildings is required at all times. Broken, peeling, outdated, or dangerous windows, doors, electrical, plumbing, and heating systems, leaks, walls, floors, roofs, siding, balconies, and other major exterior and interior features must be fixed within a specific amount of time to be determined by the proposed building and maintenance codes.
- A new building and maintenance code should outline specific violations and appropriate actions to be taken by the municipality against the property owner in case of consistently poor maintenance to eliminate existing derelict buildings and prevent new problems of blight. Appropriate actions include a progressive series of warnings, fines, and ultimately, condemnation of the property. Property owners shall be given a reasonable timeframe to carry out the repairs depending upon the violation, but the municipality should have the authority to condemn the property within 2 years if no actions are taken by the property owner. As it is not in the best interest of property owners or the municipality, Jermuk may also wish to provide incentive packages to property owners to encourage the completion of repairs and code violations, such as reduced taxes for a certain period of time.

All development proposals to the municipality must address these guidelines for design and maintenance, as well as those more specific guidelines detailed below for specific types of development, to be considered for approval and permitting.

5. CONSTRUCTION METHODS

To ensure sustainability and minimal impact on the community and the environment, the following methods must be followed in carrying out new construction or renovation:

- Recycle construction waste where possible and dispose of remaining construction waste safely and appropriately
- Restrict noise to normal working hours
- Reduce the destruction of natural or topographical features of the land, and/or ensure that the final landscape is as similar to the original landscape as possible and does not include any unusual or alien natural features (such as piles of dirt, tree stumps, etc.)
- Ensure traffic and pedestrian safety throughout the construction process by practicing safety when moving equipment and/or materials
- Must not block road access of another property
- Construction must not involve dangerous materials to be exposed to the population or the environment
- To promote the character of Jermuk, provide additional architectural interest for the purpose of tourism, and encourage sustainability, local materials should be used wherever possible

6. DEVELOPMENT GUIDELINES FOR SPECIFIC USES

The remainder of this document is dedicated to specific development, design, maintenance, and related guidelines for certain uses. The uses outlined in more detail below are as follows:

Direct Tourism Factors

- Spa and Related Services
- Attractions
- Tourist Facilities and Services
- Visitor Accommodation
- Destination Management Guidelines

Indirect Tourism Factors

- Character of Jermuk and Design
- Transport
- Communications
- Health
- Housing
- Restaurants
- Infrastructure
- Retail
- Education
- Economy and Employment
- Agriculture
- Community Services
- Leisure/Recreation
- Culture/Religious
- Environment
- Civil Society
- Governance
- Business Environment and Financing

A. Spa and Related Services

Spa Health Facilities and Services

See under “Health” section below

Spa Design and Maintenance Guidelines

See under “Health” section below

Development of Spa and Related Services

The development of spa services is the basis for Jermuk’s economic and tourism strategy. Given the unique qualities of the water and the fact that it is the premier spa destination in Armenia, Jermuk should look to best practices in spa tourism development around the world to develop appropriate facilities, services, and supporting services and attractions. Information regarding some of the world’s top spa destinations is outlined in the core strategy for consideration.

B. Attractions

Design Guidelines for Leisure and Recreation

See “Leisure/Recreation” section below

Design Guidelines for Cultural and Religious Attractions

See “Culture/Religious” section below.

Development of Appropriate Tourist Attractions

The development of appropriate tourist attractions should follow the vision for Jermuk laid out in the core strategy. Therefore, attractions approved by the municipality reinforcing the relaxing, healthy, natural, and calm environment should be developed. For example, attractions such as parks, a golf course, or yoga facilities would be appropriate, whereas an amusement park or shopping mall would be inappropriate because they do not fit into the vision of the town.

For additional information, see “tourist facilities and services” section below.

C. Tourist Facilities and Services

Tourist Facilities

Signs marking the entrance to tourist attractions should be placed clearly along the roadway, and in Armenian, Russian, and English. Tourist attractions should include informational signage along pathways and/or in brochures in Armenian, Russian, and English. Design of any buildings (including restrooms, information centers, etc.) should follow the guidelines listed under “Commercial.” Tourist attractions should also be well-maintained, landscaped, and well-lit according to the development control guidelines laid out under “Environment.” Tourist attractions must be wheelchair accessible where possible, include sidewalks or paths where appropriate, and provide benches for relaxation and enjoyment. Guardrails should be installed if a walking or climbing safety hazard exists, to prevent injury. Tourist attractions must allow for sufficient parking and appropriate road access to prevent traffic or pedestrian hazards. Tourist attractions should also connect to hiking trails and walking and biking paths if possible. Tourist attractions should have a restroom facility and/or small café for larger attractions, if appropriate sewer connections, plumbing hook-ups, and other infrastructure requirements can be made (in some areas this will not be possible). Restrooms must be well-maintained and clean. Trashcans should be provided at all tourist facilities. Graffiti or other vandalism must be cleaned up immediately.

Tourist Services

Certain services will improve the experience of visitors in Jermuk. Hotels and spas should include an area with tourist information, including maps, brochures, attractions, menus, etc. With the growth of the tourism industry, a separate tourist information kiosk or center may be

required for sufficient visitor services and information. Regarding services at tourist attractions, a manager should be available during operating hours to assist visitors and ensure proper maintenance of site and prevent vandalism (including scratching names into walls, etc.). Upgrading of existing service quality and training in hospitality should be considered for both new and existing development.

D. Visitor Accommodation

Hotel Design & Maintenance Guidelines

Hotels should be no more than 6 stories or 18 meters tall. All hotels will be located on the right bank of Jermuk only, and must follow “commercial” design guidelines below for architectural design, accessibility, safety, and maintenance. Guest rooms must include a bathroom, bedroom, television, a clothes closet, and telephone, window, linens including curtains, and secure door locks. In addition, guest rooms should include satellite or cable television stations including some English channels, high-speed internet connection, mini-refrigerator, hair dryer, desk and chair, and coordinating décor. Hotels must offer both smoking and non-smoking rooms.

Hotel facilities should also strive to include as many of the following features when designing renovations or new development, as appropriate:

- Restaurant(s)
- Bar/café
- Gym
- Conference room
- Recreation room
- Lobby area
- Information desk or area

All common areas of the hotel should be designated “non-smoking” given the Jermuk’s vision to be a place for healthy living.

Accommodation Services

Accommodation services offered in hotels will be designed in accordance with facilities offered. Hotels offering restaurant or café service must follow the guidelines for “restaurants” below. Information services should be provided via an information area or desk, preferably with a staff person to assist, but at a minimum, brochures featuring the different attractions in Jermuk and maps. Level, types, and training for services should be based on recommendations from the core strategy.

E. Destination Management Guidelines

Branding of Jermuk as a Town

It is essential that Jermuk portray a consistent image in signage, brochures, tourist information websites and other promotional materials. The municipality should incorporate their logo/slogan into “Welcome” signs to the town, on signage at tourist information centers, and banners that can be put on streetlights.

Branding of Tourist Attractions and Accommodations

Tourist attractions and accommodations should have road signs pointing the way to each, in Armenian, Russian, and English. These signs should be designed to be easily recognized as pointing out a tourist facility by using consistent colors, shapes, or designs throughout the municipality for all of these types of road signs. The municipality may also consider doing a workshop with major tourist facilities to help managers to understand the municipality's branding campaign and assist them to understand their business' role within that campaign and how they can design their promotional materials to fit within both Jermuk's brand as well as each organization's unique brand.

Management of Jermuk's Development within Armenia's National Tourism Campaign

The municipality will have to work closely with the national level tourism associations to ensure successful destination management. This includes lobbying the national and regional governments for assistance, changes, and cooperation as needed to carry out the proposed LDF and master plan for tourism development, as well as working to strengthen Jermuk's relationships with ATDA and tourist-oriented business associations, such as the tour guide association, hotel association, and restaurant association based in Yerevan. The municipality should do what it can to cooperate with Armenia's overall vision for tourism, while also playing an active role to ensure Jermuk is presented by other tourism organizations as a place for healthy and active living, based on its vision. Any activities the municipality can carry out to encourage the strengthening of the tourist-oriented business associations (such as allowing them to meet at community centers, inviting the presidents of the associations for a weekend in Jermuk, etc.) to help Jermuk businesses to develop these relationships, would be helpful towards improving community participation and coordination to promote Jermuk as a tourist destination.

F. Character of Town and Design

Town Character

Jermuk is well-known for its mineral waters, natural beauty, and small town relaxing atmosphere. In addition, tourism, and the types of features that tourists enjoy, should also be considered to sustain the economy. This includes a unique and local style of architecture and building materials and a coherent integration of development for ambiance and good photographs. A mixed variety of architecture, types of buildings, and building materials in a small tourist center like Jermuk can result in a disjointed and displeasing look. Therefore, given Jermuk's current reputation for natural beauty, relaxation, and tourism, and its vision to be a 'Center for Healthy & Active Living', these qualities should be supported by any new development or renovations.

Architectural Design Guidelines

Architecture in Jermuk is a wide mix of styles. Many buildings are simple rectangular buildings from the Soviet era, some buildings have a pleasing European and/or local design, some buildings reflect modern architecture, and others are designed purely for function with

no sense of design at all. To develop a good tourist destination in a small town like Jermuk known for its natural beauty, architecture must be integrated with a unified architectural style.

New development and renovation must not detract in any way from the landscape. This means that buildings must not be too high (no more than 8 stories maximum), should reduce unpleasant elements on the property (such as parking lots), and the colors of buildings, roofs, and other exterior features should be pleasing and not stand out from the landscape – neutral colors such as browns, creams, grays, rose, burgundy, sage or moss greens, and slate blues should be used as much as possible rather than stark primary colors. Architecture should also have a soft look to it to maintain the relaxing atmosphere – large rectangular buildings such as those built during the Soviet period (Jermuk World spa, for example) are angular and imposing, and therefore not conducive to relaxation nor do they blend with the natural environment.

The native Armenian architecture, however, uses local materials, provides visual interest for tourists, and is based on Roman and Greek architecture. Roman-style architecture in particular is pleasing for spas, and is a common architectural style for major spa towns such as Karlovy Vary. Good examples of this architecture include the Armenia spa, Olympia spa, and Tulis hotel which can serve as models for future architectural development. In addition to local architecture, other European architectural styles should be considered, such as ski lodge-style architecture (Interlaken, Switzerland) or elements of French or Czech architecture. However, local architecture should be the first choice. Modern architecture with sharp lines such as the Anush Hotel and large imposing structures such as Gladzor should be discouraged.

Shop Fronts and Advertisements

Shop fronts should be inviting to entice customers to enter. This means that store fronts should be well-signed, well-lit, the door should be inviting, and window displays showing the merchandise should be included or added where possible. Shop fronts should also be within the general architectural guidelines in this document. Shop fronts in particular should not be tall – one story is ideal to be at a human scale and on the same level as potential customers. Although retail buildings may be more than one story, the shop front, signage, and merchandise displays should be primarily on the first level. Shop fronts should also have pathways leading to the door from the sidewalk (if they are not directly on the sidewalk) and the front garden area should be fully landscaped.

Signs marking the name of an establishment must be placed on all commercial and industrial buildings. Signs on all buildings should be placed on the face of the building rather than on top. Placing signs on top on buildings creates an imposing look that Jermuk architecture should strive to avoid. Signs should also be primarily in the same color scheme as the building and/or in the list of relatively neutral colors listed above, although signs may require a little more contrast to be easily read. Bright primary colors should still be discouraged. Lettering should not be too large or too small – it should be in scale with the building. Commercial buildings may wish to have signs on or near the street or on a fence in addition to the sign on their building. In this case the same guidelines for color and readability should be followed. It is recommended that the signs, particularly those on the street or fence, be written in Armenian, Russian, and English, to assist tourists to find the locations they wish to visit. Translations should be reviewed by a native speaker prior to printing – for example, the word sanatorium, commonly used for the spas for English translations, can have a negative connotation. Signs on fences or near the street must not obstruct the sidewalk or road in anyway, and should be placed low – on eyesight level from a car or walking.

Advertisements must not be placed in particularly prominent locations, and should be prohibited at major traffic intersections. For example, there is a billboard upon entering Jermuk just after crossing Friendship Bridge. This billboard should be replaced with a more appropriate sign for tourists (such as “welcome to Jermuk”) because of its prominent location. Ideally, billboard should be removed entirely from Jermuk as they often contain bright colors and detract from the landscape and streetscape. However, if they must remain, they should be kept to a maximum size of 4 x 3 ft, restrictions regarding design and content should be imposed, and they should be placed in less prominent locations.

Street Landscaping

Street landscaping should enhance the street and sidewalks. Ideally, there will be a vegetation buffer between the road itself and all sidewalks. This buffer should be landscaped either with trees or with low plants of some kinds, such as flowers or grass. In areas where there is no sidewalk, the edges of the road should be well maintained and plants cut back so that grass and weeds do not overtake the street. In areas of the “downtown” section, if no sidewalks are present, they should be installed, but in the meantime, more structured and attractive landscaping such as trees or flower beds should be added along with curbs to help keep the plants from overtaking the road. Details about infrastructure such as streetlights are detailed under “Transport.”

Public Art

Public art can play an important role in improving the landscape and attracting visitors. Public art in Jermuk should be human scale and not taller than 15 feet. It should also integrate well with its other surroundings (again, discouraging the use of bright primary colors). The sculpture garden in the park currently is a good example of public art and can be used as an example of appropriate public art in Jermuk.

It is essential that public art be well maintained to retain its aesthetic qualities. As Jermuk is a tourist center, it is recommended that public art be fitted with a small sign or plaque that lists the artists name, the date, and title of the artwork in Armenian, Russian, and English, to serve as an additional tourist attraction. Monuments and memorials in Jermuk can also be treated as public art and cared for, designed, and maintained in the same way as public art. Additional public art, particularly water-oriented public art highlighting the town’s most important qualities, such as fountains or water-related sculptures, should be added in the spa section of town to further encourage the relaxing atmosphere through sight and sound, and add attractive features to the town.

G. Transport

Access and Road Development

The access road into Jermuk is in relatively good condition and the distance to travel to and from Yerevan is approximately 2.5 hours. The main concern then should be to maintain the roads to Jermuk in good condition, fixing any problems such as potholes or crumbling pavements as soon as it is reported. New road development, or rail development of any kind should undergo a feasibility study prior to construction to ensure that the infrastructure is

needed, would reduce travel times between Jermuk and other tourist destinations or regional centers, and fits within the vision for tourism development and environmental considerations (such as low noise levels, etc.).

The quality of the roads within Jermuk is also good, and must be well-maintained as well. The development of new roads, however, may be needed as Jermuk grows to reach its economic goals, so it is essential that the growth management strategy consider whether new roads will be required based on zoning and the expected rate of growth, and at what stage the new roads should be constructed so that the municipality can plan for those costs in the future. New road construction should be contingent upon new development expected within a 1 year timeframe to avoid construction of roads which end up leading to nowhere.

Regarding bridge development, it should be based on road development, rather than vice versa.

Traffic Management

Traffic in Jermuk is not a problem with the current population level and condition of roads. However, to ensure safety, even with this level of traffic, it is important to ensure that traffic signs are added in all appropriate locations, in Armenian, Russian, and English. This includes stop signs, yield signs (especially at traffic circles), speed limit signs, and pedestrian crossing signs.

Additionally, public transportation and non-motorized modes of transport should be promoted as much as possible, which will also help to reduce vehicle traffic.

As Jermuk is expected to grow significantly in the coming years, traffic management should also be taken into account when the growth management strategy is completed.

Planning for More Sustainable Travel and Mitigating Travel Impact

In the interest of sustainability and protecting the natural environment of Jermuk, the municipality should take the lead in encouraging environmentally-friendly transport and travel modes whenever possible. For example, if new vehicles are purchased for municipal or public use, they should be hybrid, electric, or natural gas-powered vehicles. The municipality should also ensure no plans they approve regarding transportation would result in serious environmental degradation.

Another way to help mitigate the negative impact of travel is to impose regulations which require a minimum standard regarding vehicle emissions or gas kilometerage. A regulation along these lines would require regular testing for all vehicles within the municipality (every few years, for example, or upon registration of a new vehicle) which would have a fee as well. The fees collected then can be used to improve the environment around the city, such as reforestation.

Another option for mitigating travel impacts is to promote public transportation, by offering incentive programs such as tax breaks to companies that give their employees an incentive for taking transportation instead of driving, and community outreach and education to promote the health and other benefits of biking and walking.

Air transport should be discouraged to the extent possible due to its effects on noise and air pollution. Therefore, given also the good quality of existing roads, any proposed air transport

infrastructure or services should be considered only after an in-depth market analysis considering demand is undertaken. Additionally, alternate locations, such as Yeghegnadzor may be considered to preserve the relaxing atmosphere in Jermuk.

Parking Standards

The amount of parking required for any given development or building will be dependent on the market study which should be conducted as part of the project development documents. There appears to be sufficient parking in Jermuk currently, although parking lots may be added to some areas to reduce street parking. However, both insufficient parking and an overabundance of parking can cause unique issues for urban development. Insufficient parking leads to increased traffic around the property and cars parking on the road (which sometimes may be appropriate, but in other cases causes additional congestion). An overabundance of parking, on the other hand, leads to unnecessary paving which has negative environmental effects and is an unpleasant addition to the landscape.

Regarding the structure of the parking lots, they should be located such that it does not detract from the natural landscape or streetscape and reduces its visual impact. They should be well-maintained, without major cracks or weeds. Additionally, parking spaces should be lined (many parking areas do not have markings in Jermuk) and also handicapped spaces and ramps to enter the buildings from the parking lots should be added. Finally, in terms of construction, parking lots should be built of long lasting materials to prevent maintenance issues, and if possible, environmentally friendly or porous materials can be used to further reduce impact on the environment.

Public Transportation

Public transportation should be encouraged wherever possible to achieve Jermuk's goals of sustainability and also to preserve the natural qualities of the town by reducing pollution. The amount and variety of public transportation that Jermuk may wish to consider can be reviewed through market analyses. Public transportation in Jermuk should remain relatively simple to prevent congestion and also confusion for the tourists. The current bus system should be utilized as a starting point for any changes to public transport.

Key necessities for public transport that will encourage visitors to utilize the system include clearly posted routes and fares, in Armenian, Russian, and English; predictable, appropriately spaced, and well marked bus stops through the town; and brochures showing the bus system located in visible areas within visitor accommodations (such as at the front desk). Review or addition of bus routes within and extending from the town should consider both resident and tourist needs – for example, for residents, a bus connecting the left bank and Kechut to the right bank, where most jobs are located, and for tourists, bus routes that stop near desired tourist destinations and visitor accommodations. The routes for residents and tourists should be combined where possible, but the amount and type of routes should be based on demand.

Public transportation stops must be well-marked, including color-coded signs to indicate the buses that run that route. Bus stops should also include buildings from light constructions with transparent walls or pillars, and free from advertisements. The maximum size allowed for the bus stop shelters is 6 x 2.4 meters.

Public transport should also attempt to reduce impacts on the environment. New buses or other vehicles purchased should be energy efficient, such as natural-gas powered.

Promoting Non-Motorized Modes of Transport

The promotion of non-motorized modes of transport is a necessary element of the municipality's initiative towards sustainable development. Non-motorized modes of transportation not only protect the environment, but they also reduce safety hazards and promote health.

To encourage non-motorized modes of transportation, the municipality should develop appropriate walking, biking, and horse paths throughout the city, and also require integration with such paths for new development. Walking paths may include structured paths such as sidewalks as well as hiking trails and other walkways. Sidewalks should be considered part of roads and road maintenance, and therefore included as part of all road renovation and development, with a vegetation barrier to help pedestrians to feel protected from the street. Benches should also be installed periodically along sidewalks and sidewalks well-lit (although following guidelines for reduced light pollution) for security in the evenings. Hiking paths should be promoted where logical and practical for transport. For example, a short hiking path through nature between spas or tourist attractions, or even longer hiking paths between the left and right banks of Jermuk. Pedestrian road crossing should also be added in more locations, and existing ones well-marked for safety.

Biking paths may also be promoted, with the same considerations. Given the size of Jermuk, separate bike lanes on the roads are likely unnecessary. However, the municipality will need to consider safety issues between bikes and pedestrians on sidewalks or bikes and cars on the roads, and potentially install signage or designated bike areas if safety is anticipated to be a problem. If bikes are allowed on sidewalks, however, sidewalks should be sufficiently wide to accommodate 2 lanes at once so that bikes are able to pass pedestrians safely. The other option is to restrict bikes to the road, and if safety on the road is an issue, add a small shoulder or potentially a bike lane. Additional study should be conducted after the initiatives begin to determine what safety concerns there may be and take the most appropriate actions. Biking initiatives should also take tourist needs into account in their planning – for example, rental bikes may need to be made available, as well as bike parking locations at spas, the park, or other locations.

Horses and horse carriages are not an ideal form of transportation within the municipality, and would better serve tourist functions on specified trails. The reasoning for this is that paths that horses follow become dirty very quickly and unattractive then to tourists. Therefore, horse trails, if added as a non-motorized mode in Jermuk at some point, should be kept separate from other trails, and considered primarily as tourist attractions.

New development should participate in the promotion of non-motorized transport by being required to integrate with sidewalks, walking paths, biking paths, etc. This means that their project does not obstruct any existing paths, and/or restores the path if temporary obstruction was required during construction. New development should also ensure that if they will be adjacent to existing sidewalks and other paths that the sidewalks in the architectural design lead logically to these existing paths. To promote the addition of sidewalks, the municipality may also require that new development be required to add the sidewalk as a donation to the community if one does not already exist. However, sidewalks along roads should be primarily the municipality's responsibility for consistency of design and to ensure good maintenance. Nonetheless this may be an option if necessary.

Aviation Development

As mentioned briefly in the above section, and as put forward by the 2004 Master Plan, air transport should be discouraged to the extent possible due to its effects on noise and air pollution. Therefore, given also the good quality of existing roads, any proposed air transport infrastructure or services should be considered only after an in-depth market analysis considering demand is undertaken. Additionally, alternate locations, such as Yeghegnadzor may be considered to preserve the relaxing atmosphere in Jermuk.

If, however, an airport is constructed in Jermuk, it should be as far away from the city center as possible, reduce noise to the extent possible, have a low-profile design that blends into the landscape, contain a restroom, and be exceptionally well-maintained, since it will be the first view of Jermuk or possibly Armenia that some tourists would see. It should also have a sign that can be seen from the runway area that says “Welcome to Jermuk” and other low-profile but welcoming features appropriate for visitors. Lighting for the exterior of the airport should be light-pollution reducing, and adequate parking must be provided. The airport must also follow international standards for air safety and control. The shortest possible runway should be constructed that still allows for safety (since the runway is additional pavement which will take away from the overall landscape). For ease of rolling luggage, sidewalks any walkways should be added from the runway to the terminal and to the parking lot and stairs should be avoided. The exterior of the airport should be landscaped appropriately, and the airport should furthermore not be built in a location that would require significant clearing of trees.

Curb Cuts, Street Lights, and other Streetscape Design Guidelines

Curb cuts should be restricted to one per property, and in the case of many small properties spaced close together, curb cuts should be shared to reduce the number of curb cuts overall and streamline entrances and exits to parking areas. This helps to reduce congestion overall as well.

Streetlights should be designed to reduce light pollution, by being domed to face down, and not being too tall, for example. Streetlights should also be designed to fit in with the character of the town and reduce their visual impact on the landscape – they should be barely noticeable. Colors of the streetlights should be neutral colors that blend in such as brown or sage green. Streetlights should be spaced such that which walking at night, it is possible to continue walking the entire sidewalk without ever being completely in the dark. Benches should be placed regularly along sidewalks as well and follow the same color guidelines as the streetlights. Trashcans and should also be placed conveniently along the streets to encourage proper disposal of trash and tidy streets, and also should follow the same guidelines, but be clearly marked as well.

Streets must be signed, and all building must have their address number posted on the fence, gate, or building. Street name signs should fit the standard size 15 x 50 cm. Address numbers should be no larger than 15 cm tall.

Sidewalks should be placed along all roads and be buffered from the road by a swath of vegetation. Sidewalks should be wide enough for people and/or bikes to pass each other without difficulty (approximately 5-6 ft wide). Fences or other design elements of private property that abut the sidewalk should be coded to stay within certain color and maintenance guidelines for a consistent look from the street view. To preserve the utility of the sidewalk

and to reduce maintenance, no building or development shall be allowed to place steps, fences, or other structures that spill onto the sidewalk area.

Curbs along the edge of roads should be clearly marked or outlined with stone, concrete, or other building materials and free of vegetation.

Road and Sidewalk Maintenance Guidelines

Roads and sidewalks must be well-maintained to provide a uniform and pleasant look. Good maintenance of roads and sidewalks is also essential for safety.

Roads should be fixed as soon as an issue, such as a pothole or major crack, is reported or identified by the local inspector or maintenance department. This also applies to bridges. Uneven road surfaces should be corrected as soon as possible. Roads must be kept clear of debris, vegetation and weeds. Streets should be kept clean, which may require specific maintenance by the municipality.

Sidewalks should be well-maintained including cracks and uneven surfaces being fixed quickly. Such uneven surfaces are tripping hazards and if they become excessive will discourage walking. Sidewalks should also be cleaned, by the municipality if necessary. Sidewalks must also be kept clear of debris and vegetation.

Specific maintenance guidelines should be included in the municipality's building and maintenance codes, and enforced by the planning department.

H. Communications

Communication Infrastructure Guidelines

Infrastructure for communications should not be noticeable. Lines for communication should be buried under the ground, and cell phone, radio, and other towers or large infrastructure must be placed in a way that is unobtrusive and blends into the environment to the extent necessary.

Infrastructure for communications must be maintained by the appropriate authority (State or Private Company, depending on the service) within 3 days or less of notification by the customer. Service must also be restored in 3 days or less (within 24 hours for tourist facilities, if possible) to build confidence among visitors that the quality of infrastructure in Jermuk is high.

One issue in Jermuk is the cost of certain communications. Options for public-private partnerships or other possibilities to bring the cost of communications down should be explored so that recommendations here can be implemented in practice without undue cost to businesses.

Infrastructure for communications must be included for new buildings as outlined in other sections of this document.

Telephone Access

Telephone access in Jermuk is provided by both land lines and cell phone towers. Land line service is of good quality and should be maintained as such. Cell phone service could be improved by upgrading to digital service. There are plans for this to be done, and it is recommended for those plans to be implemented.

Land line telephone service should be installed in every new building in Jermuk.

Television Access

Television access for the regular local channels is free of charge. Satellite/cable television is also available in Jermuk for a price, but the price is not excessive. Therefore it is recommended that all new hotel and spa development be fitted with satellite television services.

Internet Access

Internet access is available only via limited services and is prohibitively expensive. Jermuk should look into obtaining high-speed internet infrastructure, and also wireless internet. Public-private partnerships may be one possible option to accomplish this goal without putting the burden on businesses or real estate developers. Opportunities to reduce the cost of services should also be investigated by the municipality.

All tourist facilities should have internet access for the purpose of developing a website, and visitor accommodations should have high-speed internet for use by the guests. High-speed internet should be provided in the guest rooms if possible, although an internet café within the hotel is a transitional option. Wireless internet hubs should be considered for tourist facilities as well, including restaurants and cafes.

High-speed internet access should be provided for all new schools, at all levels, as well.

I. Health

Traditional Health Facilities and Services

Traditional health facilities and services, such as hospitals and clinics, should be updated to international health standards. Both preventative and emergency care should be available. Particularly with the addition of a skiing facility, it is essential that emergency services, including ambulatory service, be available in case of accidents. In fact, it is recommended that a nurse or doctor trained in emergency care be available on-site at the ski slopes during operating hours to ensure the highest possible level of care.

Traditional health facilities should be located primarily in the residential areas, on the left bank, however a traditional clinic of some sort should also be available near the spas in case of any complications with the spa treatments (unexpected reactions, overheating, etc.). Staff must be adequately trained in their respective professions by an accepted university or vocational program.

Hospital and Clinic Design and Maintenance Guidelines

Hospitals and clinics should be well-signed so that they can be easily located in case of emergency. They must be located in such a way as to have easy access to main routes, for ambulatory service, and sufficient parking to meet the needs of the patients so that parking issues do not cause a delay in services. Parking lots should be well-lit (utilizing low-impact lighting to prevent excessive light pollution), and parking lots and all exterior stairs and walkways should be even and free of tripping hazards. Hospitals and clinics must be wheelchair accessible.

Exterior design should be pleasing and in line with the character of the town as with other buildings. The primary difference in health facility design is that these building must be very easily accessible – wide doors to enter, preferably those that open automatically, sufficient parking and lighting, and easy access to transport networks. Hospitals and clinics should also have benches or a small garden outside for patients that may need fresh air, and a separate outdoor area for smoking. The buildings should not be more than 2 stories tall, and despite their special exterior features, should blend into their surroundings the same as other buildings, with the exception of clear signage.

The interior of traditional health facilities must be clean, equipment in working order and sterile, sufficient beds, seating, equipment and medicine to care for the resident and tourist population. All internal systems (heating, electricity, plumbing, telephone, etc.) must be in working order at all times. Air conditioning is highly recommended for health facilities. Adequate bathroom facilities must be provided. Two story facilities must have an elevator. Health facilities are also recommended to include pleasing and comfortable design where possible (secondary to the necessary cleanliness and health-focused features) to provide patients with additional comfort.

Market analysis should be completed prior to new construction to determine adequate parking, equipment, bathroom, and other facilities.

Spa Health Facilities and Services

The spas in Jermuk offer a wide range of services. However, to attract more tourists, a wider range of treatments is recommended. These may include additional relaxation and wellness treatments to provide an alternative to the medical treatments. Development including these luxury style treatments should plan for a spa area separate from the medical treatment areas. All staff must be adequately trained at an accepted university or vocational program. Smoking must be prohibited in all public areas of the spa (allowed only outdoors). In cases where the spa is part of a hotel, rooms should be designated smoking or non-smoking.

Spa Design and Maintenance Guidelines

The spa facilities vary from facility to facility. One consistency is that the equipment utilized for the spa treatments is outdated. These should be updated. The rooms the treatments are carried out in should be a sufficient size, but not overly large. The rooms should also provide for more privacy than currently exists. Each patient undergoing a spa treatment should have their own room or private space, to promote relaxation and calm. The rooms should also be clean and the equipment sterile, similar to the traditional health facilities. Spas should also put more effort than traditional health facilities into comforting décor and colors, since they have an interest in promoting relaxation. Spas should also have comfortable waiting area for patients that are waiting for their next treatment. Spas must also have proper ventilation to

prevent stale air, and natural light if possible with sufficient lighting that can be dimmed for relaxation purposes if needed.

Regarding exterior design, all spas in Jermuk are currently part of existing hotels, therefore they should follow the guidelines applicable to hotel buildings. If a spa were to be developed in Jermuk which would be separate from a hotel, it would follow the exterior design guidelines of retail and commercial spaces.

Health Standards and Requirements

Both traditional and spa facilities must operate with a high level of quality service. All staff must have degrees or certificates from appropriate and recognized schools and degree programs. Equipment must be sterile and facilities must be very clean. Outdated equipment should be replaced. It is recommended that Jermuk undertake a study of best practices in health care and health care facilities and standards to determine what their standards will be and make these standards consistent across the municipality for both traditional and spa facilities. It is highly recommended that Jermuk investigate international standards and consider adopting them. One potential model for spas to adopt standards would be a spa accreditation program, similar to the one in the UK.

Growth Management of Health Services and Facilities

The quality of health services and facilities depends greatly on whether they are sufficient for the current population. If they are not large enough, residents and tourists may not get proper care, and in emergency situations, this could result in serious injury or death. In the opposite extreme, if there is an over-abundance of facilities, it will not be economically sustainable and will consume resources that could be used for other development. Therefore, health-related development should have a market study conducted as part of the project development documents. Additionally, health should be included as an area to consider in the growth management strategy, to outline how health facilities and services will need to grow, and at what pace, with the population and increasing tourism development.

J. Housing

Residential Design and Maintenance Guidelines

Apartment and condo buildings shall be no more than 8 stories in height on the left bank of Jermuk, no more than 6 stories in height on the right bank of Jermuk, and no more than 4 stories in height in Kechut. The exterior of the buildings shall be aesthetically pleasing, and well designed by an architect to fit in with the character of Jermuk. Windows, doors, balconies and other exterior features should have consistency of design. All painted areas must be kept in good condition and peeling or flaking paint removed. Broken windows, doors, or other exterior features must be fixed within 2 weeks or according to building and maintenance codes of the municipality. The interior and exterior must be maintained to be structurally sound, and take into account building guidelines for construction in seismically active zones, where possible. Landscaping should be done to eliminate tall weeds, dead trees and shrubs, and trash. Sidewalks shall be maintained and grass and other plants must not grow over these or other exterior structures. Flower beds and other structured exterior landscaping are encouraged. All building systems (heat, plumbing, electricity) must be

maintained and functional at all times. Cabinetry, flooring, walls, ceiling, bathroom fixtures, stairwells, hallways, doors, and other internal features of the building must also be maintained according to building codes for the health and safety of residents. Sufficient parking for all residents must be provided on-site to prevent an abundance of vehicles parked on the street. The housing market analysis should determine the appropriate number of spaces per unit, however, 0.5-1 space per unit is likely to be sufficient given the public transportation availability in Jermuk. Although not currently a problem, as Jermuk grows, residential buildings should provide at least 30% of the property for open or green space. Apartment and condo building must not allow the constructed area to exceed 70% of the property area.

Apartment and condo building owners are responsible to ensure they, or a building manager, are available to manage, maintain, and fix all infrastructure and landscaping in the building according to the development guidelines and proposed building and maintenance codes to avoid fines or condemnation. In the case of condo buildings where the units are owned by individual tenants but no property owner is responsible for common areas (roof, halls, etc.) it is recommended that the municipality work with the tenants to select a building manager and set up a fund to manage the common areas to keep them up to code.

Townhouses must be no higher than 4 stories and focused primarily on the left bank of Jermuk, with some possible development on the right bank of Jermuk if there is sufficient demand. The exterior of the buildings shall be aesthetically pleasing, and well designed by an architect to fit in with the character and architectural guidelines of Jermuk. Windows, doors, balconies and other exterior features should have consistency of design. All painted areas must be kept in good condition and peeling or flaking paint removed. Broken windows, doors, or other exterior features must be fixed within 2 weeks, or according to building and maintenance codes of the municipality. The interior and exterior must be maintained to be structurally sound, and take into account building guidelines for construction in seismically active zones, where possible. Landscaping should be done to eliminate tall weeds, dead trees and shrubs, and trash. Sidewalks shall be maintained and grass and other plants must not grow over these or other exterior structures. Flower beds and other structured exterior landscaping are encouraged. Townhouses must be designed to have a small garden area constituting at least 10% of the property area. All building systems (heat, plumbing, electricity) must be maintained and functional at all times. Sufficient parking must be included in the design of townhomes – at least one vehicle per residence. Parking may be planned together in one location or a separate driveway or garage for each house. If parking is planned together as a parking lot, it must be protected from street view. Appropriate density for townhouses should be considered in the development of building and maintenance codes, but townhouses should be considered appropriate for no more than 2 families per unit. Townhouse owners are responsible for maintenance of the building and landscaping.

Single family homes must be no higher than 3 stories and focused primarily on the left bank of Jermuk and Kechut. The exterior of the buildings shall be aesthetically pleasing, and well designed by an architect to fit in with the character and architectural guidelines of Jermuk. Windows, doors, balconies and other exterior features should have consistency of design. All painted areas must be kept in good condition and peeling or flaking paint removed. Broken windows, doors, or other exterior features must be fixed within 2 weeks, or according to building and maintenance codes of the municipality. The interior and exterior must be maintained to be structurally sound, and take into account building guidelines for construction in seismically active zones, where possible. Landscaping should be done to eliminate tall weeds, dead trees and shrubs, and trash. Sidewalks shall be maintained and grass and other plants must not grow over these or other exterior structures. Flower beds and other structured exterior landscaping are encouraged. Single family homes must maintain some level of green space, therefore no more than 30% of the property may be

covered by buildings or pavement in residential zones. In the case of agriculturally zoned land, this restriction changes to a maximum of 10% of the lot may be covered by buildings or pavement. Sufficient parking must be included in the design of single family homes – the developer will provide documentation to support the amount of parking included, if any, although parking must be included if the client is expected to own vehicles. If a parking area becomes larger than 40% on a single family home lot, then it must be shielded from street view. Appropriate density for single family homes should be considered in the development of building and maintenance codes, but one family per unit shall be considered appropriate. Homeowners are responsible for maintenance of the property.

In the case of private residences (townhouses and single family homes) with adjacent residential zoning, the minimal width of the front yard to the property line should be 5 meters, and the minimal width of the side yards (in the case of single family homes only) to the property line should be 3 meters.

Housing Density & Supply

Housing in Jermuk should reflect sufficient density to prevent sprawl while still protecting the landscape. There should be sufficient supply of housing to support the current population and any expected population growth to occur in the next year. Housing supply should not exceed the population (or expected population within 1 year) by more than 5%, to prevent additional derelict buildings. Therefore, it is essential that a market analysis of housing be undertaken for Jermuk, to determine the current supply, use, and expected demand. If the market analysis shows that there is not sufficient supply for all the derelict residential building, Jermuk should consider initiatives to solve this problem either by providing assistance to property owners willing to improve their properties to attract new residents, or following the process for condemnation for owners unwilling to follow the proposed building and maintenance codes.

Increasing density by building vertically will be balanced by limiting new residential development to no more than 8 stories and the design and maintenance guidelines above will ensure sufficient parking and green space for each resident.

Housing should be focused only in the residential part of Jermuk, Kechut, and in a limited sense, in the spa section of Jermuk (if determined appropriate per the proposed housing market analysis). Housing in the sanatorium section of Jermuk may be appropriate for students, long-term visitors, or seasonal workers (both winter and summer). However, this should be determined by the housing market analysis, and no new buildings should be built until existing residential buildings are within 5% of capacity.

Housing Mix

Apartments, condos, townhouses, and single family homes can be considered for future development in Jermuk. To promote infill and reduce the vertical height of buildings, additional townhomes and single family homes in particular should be developed, if additional housing is required and these housing types are appropriate, according to the proposed market analysis. The development of townhomes and single family homes would provide additional design types for aesthetic purposes and prevent large sections of land between buildings from becoming unkempt. The availability of a variety of housing may also attract new investors and/or residents. This development should be encouraged primarily in the residential part of town and in Kechut, however, some limited development of

townhomes and apartments or condos may be appropriate in the sanatorium section of Jermuk, particularly for renters such as seasonal workers or long-term visitors.

Affordable Housing & Choice

The amount of affordable housing to be subsidized by national government, as well as the amount of the cost to be subsidized, the length of time one family or resident may take advantage of the program, and the type of housing to be subsidized, shall be determined by the proposed housing market analysis. However, it is expected that some affordable housing would be beneficial to attracting new residents, particularly new graduates from the tourism and business programs in Yerevan (which is a priority for Jermuk), and may also attract students for Jermuk's chess and ski schools, proposed new education programs in tourism, and young seasonal workers (both summer and winter) to help operate the tourist facilities during peak seasons.

Rural Housing

Rural housing shall be approved according to the development guidelines that ensure it is sustainable and does not detract from the natural environment or landscape. Rural housing shall consist, therefore, of only single family or multi-family homes, of no more than 3 stories and no more than 400 square meters. Rural housing is considered to be all housing within 10km of Jermuk, but outside of the municipality borders. Rural housing must be approved and maintained according to these development guidelines and the proposed building and maintenance codes to prevent fines or condemnation. The Municipality should seek to work with the Vayots Dzor Marzpet or other relevant government bodies to ensure that land outside of the Municipality border can be included within the same development guidelines.

Replacement Development of Residential Buildings

Jermuk should encourage replacement development, where appropriate according to the proposed housing market analysis, to eliminate derelict residential buildings. Replacement development is the demolition of an existing building which is unsuitable for living due to poor maintenance, for the purpose of building a new structure within the design guidelines outlined here and the proposed building and maintenance codes for residential buildings. For this to occur, Jermuk must improve upon and enforce its building and maintenance codes (which are recommended to include design guidelines from this document), including the procedures for condemnation of buildings. Additional detail on this is provided in the process document and action plan.

Building Conversions/Renovations of Residential Buildings

Building conversions and renovations should also be encouraged, following the same building and maintenance codes, design guidelines, and condemnation guidelines mentioned above. In cases where maintenance is not currently up to standards, property owners may be required to improve the property or renovate as needed (within a reasonable amount of time, between 1 month to 1 year, depending upon the violation) to maintain the health, safety, and quality of life of residents. Building renovations or replacement development should occur and be filled within 5% of capacity before any new residential development occurs.

Replacement development and building conversions/renovations are to have priority over new development to prevent additional impact on the environment from sprawl and new construction.

Change of Building & Land Use

It is recommended that Jermuk municipality work with the State Real Estate Cadastre to revise the zoning for Jermuk by including residential zoning where outlined above and ensuring incompatible uses (such as large-scale commercial and industrial) are clearly separated from residential areas.

K. Restaurants

Restaurant Design and Maintenance Guidelines

Restaurant design and maintenance guidelines shall follow the same guidelines as retail and commercial establishments. Signage shall be in compliance with the section listed under "Character of Town." Restaurants, however, must take extra care regarding the proper disposal of waste, recycling, and shielding of trashcans and dumpsters from the street. Dumpsters must be placed only in the area behind the building, and if located near a parking area, a fence, wall or other type of buffer should be placed between the dumpsters and the parking lot or walkways. Trash must all be disposed of inside of dumpsters. Recycling should be implemented in accordance with municipality initiatives, if existing. Restaurants must be handicap accessible. Restaurant kitchens must contain appropriate equipment for food preparation and be maintained in extremely clean conditions. Eating areas should be large enough to provide for ease of serving. Bathrooms must be added and well-maintained.

Health Requirements

Healthy food preparation is essential to the success of a restaurant, especially a restaurant serving visitors. Therefore it is recommended that the restaurants in Jermuk consider adopting internationally accepted standards for health and cleanliness of restaurants. If national standards exist, restaurants are obliged to comply immediately.

In addition to any generally accepted standards, there a number of specific requirements, which must be met (although many of these are reflected in standards as well). There must be sufficient refrigeration for the amount and type of food stored. Proper trash receptacles must be available and utilized, and trash outside must be placed in the dumpsters only. Employees must wash hands prior to food preparation and after each trip to the restroom. Employees involved in food preparation should also wear hair nets. The kitchen area must be kept in a very clean condition and free of insects and other pests. Separate areas should be designated within the kitchen if possible for uncooked and cooked meat to prevent cross-contamination. Bathrooms must be well-maintained and soap provided.

Sourcing of Food

Given that Armenia is a fertile country for agriculture, Jermuk is a tourist center, and the municipality is interested in sustainability, food should be locally sourced to the extent possible. The agricultural areas around Jermuk may be able to support additional agriculture, including fruits and vegetables, and the needs of the restaurant industry in Jermuk, and the tastes of the residents and visitors should be studied for appropriate future agricultural development. Organic foods and agriculture should also be considered to fit in with the spa and well-being lifestyle of Jermuk for tourists and residents. Jermuk water should also be available at all restaurants in Jermuk given its importance to the town.

Menu and Food Quality and Choice

Menus are an essential feature of restaurants which many establishments in Jermuk do not currently have, and all restaurants should be required to add. Restaurants in Jermuk should strive to provide the highest possible quality of food, through good sourcing of products and preparation. Restaurants, including those located within the spas may consider forming a restaurant association to provide services such as courses on food preparation and selection courses.

Choice is a constraint in Jermuk. Many restaurants, including those in the spas, do not provide any selection, but rather prepare a single meal for everyone in the hotel. This can be a negative feature for tourists, particularly if they have certain diet restrictions, such as allergies, doctor's recommendations, religious beliefs, or preferences. Therefore, all eating establishments should provide a choice of menu options at each meal, or adopt a buffet style of serving a number of items, if this would be more appropriate. Furthermore, there is no international cuisine of any kind in Jermuk. While Armenian cuisine should be promoted in tourist areas, to encourage a longer stay, especially for foreign tourists, international restaurants should be added. Therefore the municipality should consider the variety of choice offered to visitors prior to approving future restaurant development.

Décor Recommendations

Restaurant décor should be conducive to a relaxing environment appropriate for eating. However, each restaurant should consider the specific atmosphere it wishes to create. Will the atmosphere be bright, airy, and healthy, dim, cozy, and romantic, rich and luxurious, or laidback and quirky? Determining a specific style will assist restaurants to make other décor decisions so that there is a consistent message delivered to the customer. Eating areas should be clean and tables set for customers. Noise from the kitchen, music, or other causes should be kept at a reasonable level. Décor should be consistent – curtains and tablecloths should match or coordinate for example, and artwork and wall hangings should also coordinate. Unnecessary furniture for the activity of eating, such as sofas, should be removed from eating areas. Lighting should integrate with the mood and décor that the restaurant wishes to present, but should be light enough to read menus. Walls, ceilings, floors, and carpets should be maintained in good condition including fixing any cracks, holes, or tears.

L. Infrastructure

Design and Maintenance Guidelines for Pipes, Wires, Fibers and Cables

All pipes, wires, fibers, and cables must be buried underground. Leaving this type of infrastructure above ground exposes it to the elements and makes it more susceptible to damage. It is recommended that the existing natural gas pipeline section that goes through Jermuk be buried, unless this is not possible for seismic reasons. If this is the case, then the pipeline should at least be refitted to run closer to the ground, and should never be more than 1 foot above the ground. Furthermore, this pipeline, and any other pipelines that for safety reasons must be placed above ground, should be coated in a low-profile protective coating to help protect it from rust. Any future wires, cables, or pipeline should be buried underground unless safety reasons prevent this. Additionally, any new systems that are installed should be designed such that they can be relatively easily extended to new developments without significant cost.

Sewer System

The sewer system must be sufficient to safely dispose of sewage for the entire population, including visitors, at any given time. This is always a concern for health and environmental reasons, but Jermuk's unique dependence on its environment for its economic survival, means a safe and adequate sewer system is especially important. A current problem is that the sewer system is leaking into the lake. This issue, and other issues involving the leaking of sewage into the environment, must be corrected immediately, and the system monitored to ensure any future problems are corrected swiftly.

The disposal area of the sewage system should be reviewed for compliance with environmental standards. Given the importance of Jermuk's water, it is extremely important that dangerous elements not leak from the sewage disposal site into groundwater or any other water source.

It is expected that the existing sewer system in general may not be sufficient for the anticipated population growth. Therefore, the sewer system should be carefully reviewed as part of a growth management strategy.

Water Source Protection and Maintenance

As explained in the previous section, water source protection and maintenance is extremely important for Jermuk and its economy. The sewer system must be reviewed for environmental standards and non-leaching of sewer elements into ground water and monitored and maintained regularly to ensure the continued protection of this resource.

In addition to protection from the sewer system, it is important that the population, including commercial and residential areas, not pollute the land or streams. This may require adjustments to commercial, industrial, or residential sites if they are found to be polluting. New development must report on the potential effects of construction and operation of the site as part of its project documents to help the municipality to understand and manage any potential impacts on the water sources, and new development must not occur within a predefined distance from any significant water source, or as otherwise required by law. New development must also strictly comply with all plumbing, sewer, and waste disposal regulations, and the municipality must enforce these regulations.

Water conservation should also be promoted by the municipality to further protect its water resources from over-exploitation. This means that new development should install fixtures which help to reduce water usage (efficient fixtures) and visitor accommodations should adopt water-conserving practices, such as allowing guests to reuse sheets and towels, rather than replacing them daily. The Marriott Hotel in Yerevan provides a good example of this type of practice.

In addition to the practical elements of water source protection, there are tourist elements of water source protection as well. The ponds and pools around Jermuk that are considered tourist attractions, such as in the park, or the pool where the Armenian kings used to bathe, must be kept clean and well-maintained and free of trash or pollutants, to ensure that the image of Jermuk's water to tourists is pure and clean. New development must also not be built too close to any of these water-oriented tourist features, lest the natural environment and clean atmosphere of these attractions be diminished. A distance of at least 25 meters from any tourist-related water attraction featuring a natural spring area should be respected for new development.

Growth Management for Adequate Infrastructure Development

If Jermuk grows as expected in terms of residents and visitors, it can be anticipated that nearly all infrastructure will need to be expanded and/or improved. Therefore, it is essential that the municipality undertake the development of a growth management strategy to ensure good planning for adequate infrastructure, including those areas mentioned specifically above (sewer system, water source protection, and community services described below) as well as those not specifically mentioned (plumbing, electricity, phone lines, natural gas, etc.)

M. Retail

Retail Design & Maintenance Guidelines

Retail building design should follow the "Character of Town" guidelines above, regarding architecture, landscaping and maintenance. Retail facilities should be located in all areas of Jermuk, however the types of retail available should be located based on the primary uses of the neighborhood. In Kechut and the left bank, then, retail should be primarily services required by residents, such as grocery stores, general stores, hardware stores, clothing stores, laundromats, and other retail goods and services. On the right bank, there should be some of these retail establishments, in case visitors, workers, or the small resident population has need, however, the majority of retail facilities should be tourist focused, including souvenir and handicraft shops, specialized local food product shops, and travel agencies and services. Municipal officials responsible for approving development plans should take this appropriate placement of different types of retail into account.

Stand-alone retail buildings (including restaurants) should be no taller than 2 stories. If included as part of a mixed use development, retail will be allowed on the first floor only, but the building itself may be up to 3 stories tall or more depending on location.

Shop fronts should be inviting to entice customers to enter. This means that store fronts should be well-signed, well-lit, the door should be inviting, and window displays showing the merchandise should be included or added where possible. Shop fronts should also be within the general architectural guidelines in this document. Shop fronts in particular should not be

tall – one story is ideal to be at a human scale and on the same level as potential customers. Although retail buildings may be more than one story, the shop front, signage, and merchandise displays should be primarily on the first level. Shop fronts should also have pathways leading to the door from the sidewalk (if they are not directly on the sidewalk) and the front garden area should be fully landscaped.

Signs marking the name of an establishment must be placed on all retail buildings. Signs on all buildings should be placed on the face of the building rather than on top. Placing signs on top on buildings creates an imposing look that Jermuk should strive to avoid. Signs should also be primarily in the same color scheme as the building, and in relatively neutral colors, although signs may require a little more contrast to be easily read. Bright primary colors should still be discouraged. Lettering should not be too large or too small – it should be in scale with the building. Retail establishments may wish to have signs on or near the street or on a fence in addition to the sign on their building. In this case the same guidelines for color and readability should be followed. It is recommended that the signs, particularly those on the street or fence, be written in Armenian, Russian, and English, to assist tourists to find the locations they wish to visit. Translations should be reviewed by a native speaker prior to printing. Signs on fences or near the street must not obstruct the sidewalk or road in anyway, and should be placed low – on eyesight level from a car or walking.

Advertisements located throughout the town must fit with the design guidelines mentioned under “Character of Town” above.

Retailing Opportunities

There are a number of retailing opportunities in Jermuk. Currently, the primary retail services in the tourist area are restaurants and some general and resident-oriented retail services. Therefore, there are a number of opportunities for Jermuk to provide incentives for the development of souvenir shops or other tourist-oriented retail services. Tourist-oriented shops should take into account the unique characteristics of Jermuk, such as the water, the natural features, healthy food and agriculture, the ski slope, and the spas.

Retailing in Rural Areas

Retail services in the rural areas should be restricted to small operations, such as family owned agriculture and handicraft businesses only. Given the zoning of rural areas around Jermuk as agriculture and protected forest areas, serious commercial and/or industrial operations should be restricted, with the possible exception of businesses along the route to and from Jermuk to accommodate travelers. Retail in rural areas will still be obliged to follow the zoning, building and other restrictions of the rural areas.

Change of Building & Land Use

Retail use should be considered part of a new category of zoning designated “commercial” which will be then separated from both industrial and residential uses. Retail then would be restricted to certain areas and so a vibrant retail area can be developed. Retail may also be developed as part of a mixed use area, with residential and retail uses sharing a building. To help develop a retail center on the right side of Jermuk and more appropriately locate various uses, the municipality may consider incentives or assistance to businesses to relocate them within a more appropriate zone. This is unlikely to make sense for large hotels or residential buildings, but is feasible for retail and restaurant establishments and can help

to separate uses appropriately and in a way that would promote tourism development and a pleasing town character for Jermuk.

N. Education

Growth Management Pertaining to Primary and Secondary Education

Given the municipality's goals for tourism, population, and income growth, there is a need for a growth management plan for Jermuk. Development and construction of primary and secondary education facilities should closely follow the proposed growth management plan, which will also draw from the proposed housing market analysis to estimate population growth.

Primary and Secondary School Services

Primary and secondary schools in Jermuk should focus on providing quality education to meet future economic needs. New development of schools should include a review of the curriculum and facilities to carry out the curriculum. Subjects that should be incorporated into the curriculum to improve the quality of education and skills of graduates include computer literacy, physical education/health, and language training. These skills carry across many professions, and are essential for tourism in Jermuk. Therefore, the municipality should focus on improving internet connectivity in Jermuk and also begin a campaign to raise funds to add computer labs to the schools, beginning with secondary schools. Jermuk should also include sufficient sports fields and equipment in new schools. Jermuk should also begin a campaign to attract teachers skilled in these subjects to its schools. The ideal campaigns for improving education would include public-private partnerships for equipment and teacher incentives (such as donation of computers, donation of employee time to teach a computer class, affordable housing for teachers, etc.). However, depending upon the governing structure and funding of schools, these campaigns may require assistance from the National Government.

Specific Schools for Children - Facilities and Services

Jermuk should continue to develop specific schools which will help support skills that can later be used to develop Jermuk's tourism economy. These schools should be located to promote the learning of the subject, for example, the art school could be located near the art museum, the sports school in the sports complex, a natural resource school at the youth camp, etc.

Facilities and Services for Vocational Training for Tourism Related Industries

Specialized vocational schools for tourism-related services have been recommended for Jermuk and the surrounding area. For maximum effect, these schools could be clustered in the sanatorium part of town. This will help to bring in new students and young people who will most likely prefer to be in the most active part of town, and near to their school and work. An alternative, particularly in the short term, may be to locate vocational education facilities in Vayk or Yeghegnadzor where existing institutions can host the training. As mentioned in the housing section, some mixed use development may be useful in the right bank of Jermuk

to cluster apartments, affordable student housing, and related commercial activities near to the vocational schools as well. Together, these features will have a positive effect on drawing in new students who may ultimately stay in Jermuk and contribute to the economy.

The municipality may consider working with existing tourism or health schools in Yerevan to add a branch in Jermuk, which may help to attract students from Yerevan, and also to ensure some consistency among tourism program curriculums in Armenia.

Design and Maintenance Guidelines for Schools

Schools shall be no higher than 4 stories. Primary and secondary schools should be located in the residential part of Jermuk and in Kechut, while the vocational schools could be located in the sanatorium part of town to encourage connections with future employers and attract students. Specialized schools such as art or natural resource management should be located wherever appropriate – such as near to the art museum or the lake.

The exterior of the buildings should be functional but aesthetically pleasing. Windows, doors, sidewalks, and other exterior fixtures must be kept in the utmost of working condition to prevent any injury to students. A fire/emergency escape plan should be made for all school buildings and emergency exits located frequently throughout the design. In addition, extra care should be taken to incorporate earthquake-resistant design and construction. Landscaping should be done to remove any dead trees or shrubs, remove tall weeds, and ensure plants do not take over sidewalks or other exterior fixtures. School buildings are encouraged to add specific local planting with signage that can be used by teachers to promote natural resource education. Playgrounds and fields must be added for all primary schools, and sports fields must be added for all secondary schools, to encourage healthy living at school and opportunities to exercise.

Interior systems and infrastructure must be fully maintained at all times to prevent any health or safety issues. School cafeterias, if provided, should follow the same health standards requirements outlined under “restaurants.” Also, all new school construction will require internet access for at least one room to serve as a computer lab, as soon as internet connectivity is available in Jermuk.

O. Economy and Employment

Commercial and Industrial Design and Maintenance Guidelines

Commercial building design should follow the “Character of Town” guidelines above, regarding architecture, landscaping and maintenance. Commercial establishments should be located in all areas of Jermuk, however the types of commercial services available should be located based on the primary uses of the neighborhood. In Kechut and the left bank, then, commercial facilities should be primarily services required by residents, such as grocery stores, general stores, hardware stores, clothing stores, laundromats, and other goods and services. On the right bank, there should be some of these commercial establishments, in case visitors, workers, or the small resident population has need, however, a majority of commercial establishments should be tourist focused, including hotels, spas, restaurants, souvenir shops, and travel agencies and services. Municipal officials responsible for approving development plans should take this appropriate placement of different types of commercial establishments into account. For example, hotels and spas should not be built in Kechut as it would be an impractical and inefficient use of land.

Stand-alone commercial buildings should be no taller than 6 stories or 18 meters. Note that restaurants and retail have specific height requirements in addition to this maximum height. The maximum height should be applied to hotels, spas, and similar establishment that can sustain a larger structure only. Additionally, the municipality should take into account the location of other buildings of similar height and make an effort to locate buildings of similar heights together. For example the tallest buildings should be clumped together in one area rather than a single 6 story building being surrounded by one-story buildings. Commercial buildings must limit building and paved areas to 70% of the property, and the remaining 30% must be green space.

The facades of commercial buildings should be aesthetically pleasing and inviting to customers. This means that fronts of the buildings should be well-signed, well-lit, and doors and windows should be in good repair and doors should be interesting and/or inviting. Building facades should also be within the general architectural guidelines in this document. Commercial buildings should also have pathways leading to the door from the sidewalk (if they are not directly on the sidewalk) and the front garden area should be fully landscaped.

Signs marking the name of an establishment must be placed on all commercial buildings. Signs on all buildings should be placed on the face of the building rather than on top. Placing signs on top on buildings creates an imposing look that Jermuk should strive to avoid. Signs should also be primarily in the same color scheme as the building, and in relatively neutral colors, although signs may require a little more contrast to be easily read. Bright primary colors should still be discouraged. Lettering should not be too large or too small – it should be in scale with the building. Commercial establishments may wish to have signs on or near the street or on a fence in addition to the sign on their building. In this case the same guidelines for color and readability should be followed. It is recommended that the signs, particularly those on the street or fence, be written in Armenian, Russian, and English, to assist tourists to find the locations they wish to visit. Translations should be reviewed by a native speaker prior to printing. Signs on fences or near the street must not obstruct the sidewalk or road in anyway, and should be placed low – on eyesight level from a car or walking.

Advertisements for commercial establishments located throughout the town must fit with the design guidelines mentioned under “Character of Town” above.

Commercial buildings should have a garbage disposal area behind the building that is still easily accessible for garbage pick-up. If adjacent to a parking lot or other area to be utilized by visitors, the garbage area should be screened in some way. Parking must be sufficient to discourage on-street parking and congestion, and the proper amount of parking should be determined by market analysis. The construction of commercial buildings must follow all environmental and safety regulations. Commercial buildings should have a fire escape plan and install fire prevention infrastructure as required by law, and also be built to account for seismic activity to the extent possible. Interior structures and systems must be maintained.

Industrial building design should follow the “Character of Town” guidelines above to the extent possible, but it is recognized that industrial needs will require different architecture. However, the maintenance guidelines will still apply. Industrial buildings may be built as required to serve their function within existing laws and regulations with the following guidelines to ensure that industrial buildings also blend in with the environment to the extent possible.

The exterior of industrial buildings, including the walls and roof, should be constructed based on the same color scheme outlined in the architecture guidelines - neutral colors such as browns, creams, grays, rose, burgundy, sage or moss greens, and slate blues. Industrial

buildings should be located only in one area of Jermuk, and this location (to be determined) should be clearly separated from residential areas, and clearly separated and out of view of tourist areas. Jermuk may wish to create something of an industrial park, to encourage clustering of industrial uses. Municipal officials responsible for approving development plans should take this appropriate placement of industrial buildings into account and only approve future development of industrial uses within the location to be selected.

Industrial buildings should be no taller than 4 stories or 12 meters. Industrial buildings must limit building and paved areas to 90% of the property, and the remaining 10% must be green space. The fronts of the buildings should be well-lit, and doors and windows should be in good repair. Industrial buildings must be surrounded by a fence all the way around. Industrial buildings should also link up to the road or sidewalk appropriately, ensuring its fence does not obstruct walkways or streets. Signs marking the name of an establishment must be placed either the fence or the building of all industrial buildings. Signs should be taller than the roof of the building. Signs should also be primarily in the same color scheme as the building, and in relatively neutral colors, although signs may require a little more contrast to be easily read. Bright primary colors should still be discouraged. Advertisements for industrial buildings located throughout the town must fit with the design guidelines mentioned under "Character of Town" above.

Industrial buildings should have a garbage disposal area that is still easily accessible for garbage pick-up. Any waste created by the industrial use which cannot be picked up by the regular garbage disposal service must be disposed of by the property owner by taking it to the dump or landfill regularly. Parking must be sufficient to discourage on-street parking and congestion, and the proper amount of parking should be determined by market analysis. The construction of industrial buildings must follow all environmental and safety regulations. Industrial buildings should have a fire escape plan and install fire prevention infrastructure as required by law, and also be built to account for seismic activity to the extent possible. Equipment, floors, walls, ceiling, and bathrooms and other interior structures within the industrial building must be safely maintained.

Commercial and Industrial Density

Commercial and industrial uses should be encouraged to be built densely to protect the natural environment and prevent sprawl. The goal for achieving density for commercial and industrial uses then is to focus on infill development, rather than any further spreading out of the town. However, sufficient green space must be provided on each property and park areas created to ensure that density does not lead to the over-paving of Jermuk. Density of commercial and industrial buildings is further restricted by the building height restrictions outlined for each type of use.

Commercial density should be a goal on the right bank broadly, and in the residential areas of the left bank and Kechut, commercial areas should be designated to a specific area and built relatively densely within that area. On the right bank, some mixed use commercial and residential uses is recommended. The concentration of industrial density is recommended to reduce the impact of industrial uses on the environment and to keep industrial uses easily separated from other uses.

To best manage density issues for commercial and industrial development, a market analysis should be completed to determine appropriate development of this type in the near-term and incorporate this information into a growth management strategy for the town.

Employment Priorities

Employment priorities for Jermuk are clear – to create jobs. To do this, it is essential that the economic activities of Jermuk be focused. For Jermuk, this means a focus on tourism-related industries, natural resource protection, and healthy living and wellness industries. To encourage employment, the municipality should consider some of the education and other guidelines listed in the core strategy and other documents of the LDF. Additionally, when considering new development, one concern of the municipality should be how many jobs the development will create and how many of those jobs will go to local residents. In the case of hiring of local residents, the city may require the developer to allocate a certain number of jobs for residents and/or provide training, or consider other incentives to develop the workforce.

Of course, to create jobs which will help develop the workforce, the first step is to attract new development in the first place. Therefore, the municipality should encourage investment and new development, including renovation and re-development, as much as possible. Incentive packages such as assistance in funding or financing, reduced taxes, etc. should be considered. Improving the quality of life through many of the other guidelines sections in this document will also help to attract new residents, entrepreneurs, and investors. Although many restrictions are outlined in terms of design and maintenance in this document, the municipality is in a position to approve variances to the regulations should a certain development provide economic opportunities which would outweigh the impact on the aesthetic qualities. However, in considering variances, the municipality should take a comprehensive approach and realize that approving a variance for certain changes or very significant changes from the guidelines will likely have not only aesthetic effects but also economic effects by reducing the quality of the tourist experience.

Enterprise Expansion and Diversification

Enterprise expansion will be necessary for Jermuk to reach its growth goals. Existing business should be encouraged to carry out a market analysis or hire a business development consultant to assist them with a plan for expansion. A municipality growth management strategy would greatly assist the businesses to carry out this activity, as the collection of data regarding the city's growth would then be already collected and analyzed. In addition to completing a growth management strategy, the municipality may also wish to consider providing incentive packages to existing businesses to carry out these activities, such as a tax break, or working with the national level government to help procure the technical assistance. Existing enterprises should also be informed of the LDF and other planning and growth documents and regulations which would affect them and how they may be able to grow in the future so that they can plan early to minimize difficulties or confusion during the expansion process.

Enterprise diversification will also be required to help grow the tourism industry. Given the natural landscape and commitment to sustainability, natural resource management, nutrition and natural food products, low-impact green technologies may be a good fit with the municipality's other needs, interests, and vision. To encourage expansion of existing industries, the municipality may wish to put together a creative incentive package that would be particularly interesting to specific industries, such as free access to certain city owned natural resources required for production for a period of time, business financing or support, and/or marketing. Incentive packages should then be packaged and marketed through the local government and other regional and national government agencies.

To promote appropriate zoning and use of land, and as a potential incentive for investors, the municipality should purchase land (at market rates) in areas where additional businesses or tourist facilities are needed, in order to compile appropriate lot sizes for sale (either at market rate or at a reduced rate) to investors.

Also note that specific opportunities for diversification and planning initiatives to support that diversification have been described in the restaurants, retail, spa, education, culture, leisure, and recreation.

Commercial Priorities

Commercial priorities for planning and the consideration of development proposals, in accordance with Jermuk's vision for its future, are as follows:

- Increase number and diversity of retail establishments
- Increase number and diversity of restaurants
- Increase number and diversity of tourist activities and attractions
- Promote consistent commercial activity year-round
- Promote renovation, updating, and redevelopment of commercial enterprises not in compliance with development guidelines, especially large spas and hotels
- Promote density of commercial uses specifically in the right bank of Jermuk
- Attract new investment using marketing and incentives if necessary
- Increase employment using incentives if necessary
- Procure or promote business development services
- Conduct growth management strategy which will assist businesses with their strategies for expansion

Industry Priorities

Industrial priorities for planning and the consideration of development proposals, in accordance with Jermuk's vision for its future, are as follows:

- Keep the number of industrial activities limited and keep any accepted industrial uses restricted to balance and support tourism activities, and provide year-round employment
- Promote renovation, updating, and redevelopment of industrial enterprises not in compliance with development guidelines
- Assist current industrial uses within the center of town to relocate to a new location away from tourist and residential uses
- Increase employment using incentives if necessary
- Procure or promote business development services
- Conduct growth management strategy which will assist businesses with their strategies for expansion

Rural Employment and Economic Opportunities

Economic opportunities in the rural areas are likely to be restricted based on zoning. However, there are a number of economic activities that have been described throughout the core strategy and the development guidelines which can be encouraged by the municipality to promote rural employment. These include the expansion of agriculture, the development of handicrafts, and natural resource management. Jermuk municipality should coordinate with the Marz to develop the agricultural and forest protected areas in a way that is also congruent with adjacent areas.

Replacement and Conversion of Commercial and Industrial Buildings

Existing commercial and industrial buildings will be largely outside of the desired zones and design guidelines. Therefore, as described under the priorities sections, the municipality should provide incentives and assistance to these establishments to renovate, bring their buildings up to code, and relocate (particularly industrial uses), if possible. However, commercial and industrial businesses will not be required to relocate as that imposes an unfair burden on their operations. However, they will be required to live up to the maintenance codes within a period of time to be determined by the municipality, and should they ever decide to relocate within the municipality, they will be required to move within the appropriate zone at that time.

Changing Building & Land Use

Commercial use should be considered part of a new category of zoning designated “commercial” which will be then separated from both industrial and residential uses. Industrial will continue to be a zone, but will be redefined to include all industrial use, as separate from commercial. This includes factories of any kind, including the water bottling plant. Both commercial and industrial uses will be restricted to certain areas as described above to help create a pleasant atmosphere in Jermuk, separate uses appropriately, and make the more efficient use of land. As mentioned above, the municipality may consider incentives or assistance to businesses to relocate them within a more appropriate zone. This is unlikely to make sense for large factories or commercial buildings in the short term, but is feasible for smaller establishments and may ultimately help their business, if they are located in a more appropriate area.

P. Agriculture

Agricultural Land Use Guidelines

The agricultural land located within Jermuk’s borders should remain protected for this purpose, and encouraged to be utilized as active farms. However, to preserve the natural landscape, conservation and agricultural zones should potentially be re-zoned, to ensure uses such as the cattle farm in Kechut can be appropriately linked up to the sewer system and therefore prevent pollution. Additional study on the part of the municipality should be undertaken to determine where within the municipality farm expansion would have a positive or negative effect of the overall landscape. For example, active farms and the development of orchards may be useful infill between the left and right banks and Kechut, but it may be more appropriate for natural resource management and the beauty of the landscape to keep the higher altitudes free of highly active agricultural activity. However, the exact impact on current residents is unclear, so this must be considered. Residents currently working farms on agriculturally zoned land should not be required to move or to stop agricultural operations. One option the municipality may have is to simply grandfather in existing residents, but public comment is needed to determine the most appropriate action in this area.

Once the appropriate zoning balance and location between agriculture and conservation is reached, the municipality should work with residents living in the agricultural zones to

encourage them to manage productive farms, by assisting with contracts for agricultural products to restaurants or other commercial enterprises in the town. Small incentives such as seed distribution to assist with the start-up of unproductive farms may also be provided through other sectors of government and/or donors.

Regarding construction and development on agricultural land, the only development that should be approved is residential and agricultural development. Some commercial development may be approved along roadways for the development of small retail shops, restaurants, or other tourist services. Buildings and paved area should constitute no more than 10% per acre of land to preserve the agricultural nature of the land use.

Farm Diversification Activities

The primary activity after ensuring appropriate zoning and productive use of farmland is to promote diversification so that farms may help to promote the vision of increasing tourism in Jermuk. Farm diversification activities which may help support this goal, and well as provide additional and more consistent year-round income for farmers is to expand to fruit and vegetable production, organic foods, or specialized food products, such as honey, jam, or health supplements. Diversification activities should be undertaken carefully to ensure that changes in use do not have a detrimental effect on the environment. The municipality may assist farmers to diversify by working with hotels, restaurants, and other businesses to draw up contracts with the farmers to supply their operations, working with tour guides to develop agriculture-related tourism products such as tours, or assisting with the procurement of assistance from other government organizations.

Promotion of Healthy Lifestyles through Agriculture

Agriculture contributes significantly to Jermuk's vision as a place for healthy living. Many farm diversification opportunities are towards healthy options such as organic foods, as described above, as is the municipality's role to assist in this diversification.

Additionally, sustainable agriculture should be practiced within Jermuk to protect the environment and promote health. Jermuk should coordinate with the Ministry of Agriculture and any relevant donor programs to develop an appropriate strategy to implement an initiative in sustainable agriculture.

Q. Community Services

Fire and Police Protection

The municipality will need to invest in improving the fire brigade and also ensure that new development is compliant with fire safety standards to prevent unnecessary injury or death. The appropriate size and growth strategy for a fire brigade will need to be determined through further study, which may be fulfilled by the completion of a growth management strategy. In addition, a fire hydrant system will need to be installed to accommodate the fire brigade. Hydrants must be placed in locations where they can be accessible at all times, and placed such that any building within the densely populated right bank, left bank, and Kechut can be reached by the hydrant service. New developments may require extension of this service, which should also be considered in the growth management strategy.

There is very little crime in Jermuk, and the current police force is adequate. However, similar to the fire brigade, if the population of Jermuk increases as expected, community services will also need to grow, and additional police officers will need to be hired. The exact needs should be studied through a growth management strategy.

Community Facilities

Best practice in urban planning requires public participation. However, civic involvement in Jermuk is currently low. To improve community involvement, cohesion, and improve community life overall, community facilities should be planned for as part of development and re-development programs. Libraries, the sports complex, parks, and community centers should all be well-maintained, added as needed to serve the population, developed to provide appropriate community services, and should be open to the public free of charge or at subsidized costs. Community facilities must follow all other design guidelines, and shall be designed specifically under the “commercial” guidelines. A growth management strategy will also study what community facilities might need to be added as the population grows over time.

Garbage and Recycling Collection and Storage

The municipality has recently begun a garbage collection system which will significantly improve the cleanliness of the town overall and reduce pollution in and around the town. All new development must include plans to link up with the garbage collection system, by having an easily accessible area for dumpsters or other garbage storage, and ensuring that garbage storage is in appropriate containers that cannot be accessed by animals and keeps the garbage dry. Garbage storage in the exterior of buildings should be shielded from street view, but should still be able to be accessed by garbage collection workers. Property owners are responsible for ensuring that garbage is placed in the proper containers for easy pick-up by workers.

The garbage collection service should cover the entire Jermuk municipality, and garbage should be picked up a minimum of once a week in primarily residential areas (Kechut and the left bank), and every 2-3 days in the commercial areas (right bank). Residents located outside of the Jermuk municipality, and therefore the garbage collection area, are responsible for disposing of their garbage by taking it to the dump/landfill/garbage disposal area. Trucks used for garbage collection should be tight enough that there is no concern about dry or liquid garbage leaking en route to the disposal area.

The disposal area for garbage should be a covered area, such as a landfill. Garbage should not be left open to the elements. The disposal area(s) must make provisions for preventing leaching of any hazardous materials into the ground and/or natural water sources. The landfill area should be surrounded by fencing, and the fencing should be maintained, for safety.

Jermuk should also consider a recycling program to promote sustainability in the long term. A recycling program can provide additional income to a community through the sale of the materials for reuse by other commercial interests, and also promotes environmental awareness and appreciation among the residents as well as visitors. A recycling program would require the installation of additional, separate receptacles for recyclable materials, which would also be collected by the garbage disposal department, but on a different day to ensure all materials are kept separate. It is recommended that the municipality develop a

study on this initiative to determine what would be required specifically for the Jermuk context and whether it would be economically and financially feasible.

Streetscape Maintenance

This community service is covered under the “Transport” section.

R. Leisure/Recreation

Recreation Facilities Design and Maintenance Guidelines

Recreation facilities should follow the same design and maintenance guidelines outlined under the “commercial” section above to the extent possible. However, recreation facilities will vary widely as they serve a range of interests and activities. Nonetheless, they should follow the design guidelines for color, building height, blending into the landscape, signage and advertisements, parking, safety, etc as outlined above.

When considering applications for the development of recreation facilities, the municipality should consider both the design (including the unique needs of the recreation facility which may require special consideration) as well as the use. The use of the recreation facility should be in line with the vision of Jermuk. Therefore, appropriate recreation facilities for development would be a golf course, ice skating rink, water sports facilities, hiking trails, theater, a national park, yoga class facilities, meditation center, etc. all of which are recreational activities which fit into a healthy and active lifestyle. An amusement park, for example, would be inappropriate for the atmosphere Jermuk is trying to create. Recreation facilities may furthermore have unique safety needs and requirements, and impacts on the environment. Recreation facilities should be located appropriately as well, based on the expected user and the resource needs of the facility.

Investment in recreational facilities is one area that is badly needed in Jermuk, and so the municipality should put particular focus in trying to encourage investment in these facilities, and/or revamping those facilities which belong to the State or the municipality itself. Whatever the specific needs of the development, the municipality must consider appropriate ways to accommodate the investment, if it is decided to be within the guidelines of the vision.

Parks, Playgrounds, and Green Space

Parks and green space are necessary to retain the natural beauty of Jermuk. Guidelines for providing green space and landscaping on private property has been outlined throughout this document. Parks are public spaces that are the responsibility of the municipality or other government entity. The large existing park on the right bank is a good model for green space in Jermuk. However, parks should be created in residential areas as well for the enjoyment of residents, and an additional park on the right bank would be an added bonus.

The entrance to city parks should be clear and well-signed. The city parks should provide benches, clear, well-maintained walkways, landscaping along the edges of the walkways, lighting for the evening (although lighting in the parks should be minimal – less than street lighting requirements), trashcans, and encourage wildlife. The activities in the existing park area such as the paddleboats and spring water spouts are also a good example of

integrating tourist-oriented features. Additional integration may be considered for new parks, such as outdoor chess tables and chairs to integrate with the chess school, or fountains.

In addition to the city parks, which are relatively structured, to promote the natural environment and add activities for tourists, a national or regional park proposal should be developed with the Marz or National Government. A national or regional park that is open to the public would provide a different park experience, with more natural walkways and less formal infrastructure. The development of a national or regional park would include hiking trails, an information center with information on the geology, flora, fauna, mineral water, and other aspects of the environment, clean and well maintained restrooms, parking, and ranger services, and other features or requirements as may be standard for Armenia.

In addition to parks, playgrounds are needed for the health and enjoyment of children. Playgrounds for children should be placed in the residential parts of Jermuk, that is, the left bank and Kechut. Nearly all parks created in these areas should include some sort of playground area, since this is where the children of Jermuk live. Playgrounds should not be included in the parks on the right bank however, as these parks will be intended primarily to accommodate spa-goers and should promote a calm and relaxing atmosphere.

The municipality should ensure that they have adequate natural resource management expertise to maintain the parks for both humans and animal life. Parks and playgrounds for the residential areas will need to grow as the population grows. The municipality should also consider locations for future parklands, in the event that significant population growth puts a strain on the existing parklands. This may be further examined in a growth management strategy.

Nightlife

Nightlife is one area that is significantly lacking in Jermuk and could help to increase tourist revenues. However, Jermuk should not become a bar or casino town, so careful thought must be put into the development of appropriate nightlife to fit in with the vision.

Nightlife facilities, which may include bars, theaters, evening coffee shops, concert venues, and restaurants, should follow the “commercial” design guidelines. Any new development in nightlife facilities should be considered carefully for how it will fit in with the overall atmosphere of Jermuk, similar to the recreation facilities. Nightlife facilities should be located on the right bank of Jermuk. Nightlife facilities should have low noise impact and any loud noise that does occur (such as from concerts, etc.) should be over by a set time in the evening, such as 11 pm. Nightlife facilities should also offer healthy options, if they are food and/or drink establishments, for those who are following a certain diet or regime during their stay in Jermuk, and other “healthy living” services should also be considered. Most nightlife development for Jermuk should be designed to promote the overall atmosphere and therefore provide relaxed activities and atmosphere, rather than the hectic, loud, and disorienting nightlife available in the city, which many visitors will be trying to escape.

S. Culture/Religious

Historic Landscape

The landscape in Jermuk must be protected as it is this feature that the rest of the attractions are based on. The landscape is mountainous with a valley, river, lake, and springs, with forested areas as well as areas of low vegetation resulting in a barren (yet beautiful) look.

To preserve the natural landscape of hills and mountains, development and construction on the sides and tops of hills and mountains should be kept to a minimum, and only necessary developments or homes (on privately owned land, and in accordance with the agricultural or forest-protected zoning) should be built. Buildings, towers, or other structures that would stick out from the mountains would detract from the landscape. In addition, the same precautions should be taken for parts of the landscape which can be seen from Jermuk and present the “barren” look, because development in these areas will be especially noticeable and interrupt the natural flow of the landscape as well.

Forested areas should be protected according to zoning regulations, but low-profile (up to 3 stories or 8 meters tall) development would not necessarily be a detriment to the landscape, as the trees would help to hide the building in a view of the landscape overall.

The water – springs, stream, and lake – should be protected in the sense that alterations to their flow or shape should be prohibited. Therefore, particularly in the case of the lake, any new development or renovations near the edge will need to be carefully designed to ensure protection of the shoreline.

The gorge where the river flows should also be protected in terms of landscape. Development along the gorge’s edge is necessary and practical given the current positioning of the town, however, buildings should be set back from the edge of the gorge a safe distance (to be determined by assessments during the project proposal stage) to ensure that no drilling, utilities installation, or other construction will cause pieces of the gorge to crack off, causing damage to the landscape, but also for safety and environmental reasons. Additionally, no wires or other infrastructure should cross the gorge other than the existing bridges.

Historic Preservation

Historic preservation refers to the protection of buildings which have historic (or cultural) significance for the municipality. Many of the buildings in Jermuk which could be considered to have this designation already do. Nonetheless, general provisions for historic preservation should be reviewed for all new development which may affect a preserved building or structure, as well as renovations for registered buildings.

The importance of historic preservation is to ensure that the original character of a location is not diminished due to reckless urban development. In terms of new development, it should have no structural, permanent effect on any historic buildings. In this sense, Jermuk is unlikely to have a problem in the near future because buildings are not connected, but this could be a consideration for the long term as infill and mixed use development becomes more prominent to prevent sprawl.

Regarding renovations to existing buildings, the goal should be to restore the original character to the building. Changes to the building may still be determined to be in line with

the original character, but these will largely be modernizing updates (adding or upgrading utilities, new kitchen facilities, new spa facilities, etc.) which do not change the basic nature of the building. Major additions or changes to the structure are generally prohibited in cases of historic preservation as they do change the basic aspects of the building which a historic designation would try to protect. Certain changes such as painting over an original exterior or removing original doors, floors, or other historically significant features of the building should be highly regulated.

Therefore, it is recommended that the municipality put into place a simple approval process which would require a review of historic designated properties renovation requests, as well as institute a requirements for a statement from all new development proposals stating whether there could potentially be any impact on historic structures, and if so, how.

Protected Structures

There are a number of protected buildings and structures in Jermuk which include the Armenia spa, the Olympia spa, Tulis Hotel, Mineral Water Structure, Friendship Bridge, and Art Gallery (others outlined in the Action Plan). This is a relatively complete list for Jermuk, however, the municipality should consider from a tourists point of view what buildings are worth protecting, and consider if any other buildings or structures should receive this designation to protect tourist attractions. To do this, the municipality should draw up a list of criteria, which will also help with the future designation of appropriate structures. If no specific guidelines are given from the regional or national government regarding how to protect designated buildings and structure then the municipality should also develop criteria guidelines to direct their future decisions regarding new development near protected buildings and renovations.

Water-Oriented Attractions

Water-oriented attractions are the primary attraction in Jermuk, and include the spas, the waterfall, and the lake. Water should be promoted throughout the town to reinforce the main attractions through the use of fountains around town, good signage including brochures with explanations at all sites, and the development of additional water activities such as water sports. All water oriented activities and sites should be well-maintained and accessible to all visitors, including the disabled to the extent possible. Water in fountains or man-made pools should have systems included to keep the water from becoming stagnant which can attract mosquitoes and other problems. Natural pools which are stagnant may need additional maintenance to keep them mosquito and algae free. All water attractions should be protected from leaching of hazardous materials from waste or sewage as described under "infrastructure" and "community services." Ponds and lakes should be kept clean to protect the image of Jermuk.

Monuments and Memorials

Monuments and memorials shall be designed, treated, and maintained based of the guidelines for "public art" above. Monuments and memorials may be considered for historic or cultural preservation. New development should not obstruct the view of, or public access to, monuments and memorials. Monuments and memorials should have benches or seating for relaxation and enjoyment of the monument. Finally, the municipality should take care to not crowd monuments and memorials in the town.

Churches

The two churches in Jermuk do not have any particular cultural or historical significance. Churches should therefore simply be maintained according to the general guidelines above. Churches should follow the design guidelines for “commercial” buildings outlined above, with the exception of the signage section and the location element. The location of churches should be on the left bank and in Kechut, rather than on the right bank of Jermuk, given that they are a resident service rather than a tourist attraction. Armenian churches in Jermuk should follow their traditional architecture and construction to contribute to the overall atmosphere of the town. Non-Armenian churches should follow the general design guidelines outlined for “commercial.”

Art Museum and Movie Theater

The art museum and movie theater should be maintained according to the general guidelines in this document, and specifically, the “commercial” guidelines outlined above. Displays, interior features and design, and attractions must be well-maintained to entice visitors on a regular basis.

Festivals and Cultural Events

Jermuk currently has a winter festival. This festival should have its own website managed by the municipality and increased marketing to draw winter tourism. The municipality should actively seek to attract visitors, attractions, and shows to make the winter festival a well-known event both within and outside of Armenia. New and existing tourist facilities should promote this and other festivals or cultural events through their websites and brochures. A large festival such as the winter festival may require additional services and maintenance, therefore the municipality may consider a short training course prior to the event to prepare potential short term assistants for these roles. The town should be decorated with banners on streetlights, and other special signs and lighting to give a feeling of festivity.

In addition to this (hopefully soon to be) large annual event, the municipality should work with local art and sports schools, the art museum, and other local organizations to put on regular cultural performances, reenactments, and events for tourists. To accommodate these types of events, the municipality should also consider appropriate venues around town such as small outdoor theaters and stages.

T. Environment

Energy Efficiency and New Technologies for Environmental Sustainability

Jermuk is interested in energy efficiency and therefore should strive to incorporate energy efficiency into all municipal activities as well as requiring energy efficiency for new development and renovations. This may include requiring energy efficient appliances, proper insulation, airtight windows, etc. in new projects. Exterior lighting must utilize energy-conserving bulbs and fixtures. In addition, the municipality should encourage, or potentially provide incentives for, the inclusion of hi-tech energy efficient solutions such as solar panel installation, utilization of geo-thermal heating systems, or tankless water heaters, if available.

Many energy efficient solutions are low-cost and save a developer costs long-term. However, the adoption of newer and more high-tech technologies such as solar panels, geothermal heat, or the purchase of hybrid cars will be more difficult for individual families or companies to adopt. Therefore, the municipality should take the lead in this area, as a way to encourage best practices in “greening” Jermuk.

Landscape Character & Protection

See “historic landscape” section above.

Biodiversity

Biodiversity should be protected as part of the natural environment. The forest-protected areas, together with some conservation of the other landscapes, such as the lake and areas of low vegetation will ensure that a variety of habitats are protected. The municipality should not approve any development in these zones unless it is on privately owned land and within zoning restrictions, or there is expected to be a significant economic or social benefit, outweighing the losses. In addition, any particular habitat or features that promote biodiversity that may not be in protected areas should still be protected to the extent possible where new development or re-development is to occur, by incorporating the feature into the design of the project if possible, or relocating or recreating the feature if not possible to protect it.

Biodiversity can be further protected through parks, by incorporating informational plaques in parks about common flora and fauna that can be found in the park, and in the case of larger regional or national parks, information centers where visitors can learn about the biodiversity of the area.

Forest Protection

Forest-protected zones should be conserved by prohibiting development on forest-protected land, with the following exceptions – homes and structures within zoning regulations on privately owned land, park development (hiking trails, natural resource development, etc.), scientific research (which should have a low-impact), or special situations where a project will provide significantly more economic and/or social benefits than losses. In the event of any development of forest-protected zones, building and design guidelines provided under “historic landscape” should be adhered to. Any removal of trees should be balanced by requiring the developer to replant trees lost, and the project design should ideally avoid the removal of trees in the first place. In addition, the municipality should focus on “greening” by planting trees and landscaping within the town center, and always maintaining trees that are within its control.

Water Conservation, Drainage, and Protection of the Source

Water source protection and maintenance is extremely important for Jermuk and its economy. The sewer system and garbage collection system must be reviewed for environmental standards and non-leaching of sewer elements into ground water and monitored and maintained regularly to ensure the continued protection of this resource.

In addition to protection from the sewer system, it is important that the population, including commercial and residential areas, not pollute the land or streams. This may require adjustments to commercial, industrial, or residential sites if they are found to be polluting.

New development must report on the potential effects of construction and operation of the site as part of its project documents to help the municipality to understand and manage any potential impacts on the water sources, and new development must not occur within a 25 meter distance of any significant water source, or as otherwise required by law. New development must also strictly comply with all plumbing, sewer, and waste disposal regulations, and the municipality must enforce these regulations. New development must also provide a plan for drainage, to ensure there is no risk of flooding, the sewer and plumbing systems are adequate, and the natural water resources are not polluted. New development should not be allowed in areas of the gorge where a flood risk from the Arpa River exists.

Water conservation should also be promoted by the municipality to further protect its water resources from over-exploitation. This means that new development should install fixtures which help to reduce water usage (efficient fixtures) and visitor accommodations should adopt water-conserving practices, such as allowing guests to reuse sheets and towels, rather than replacing them daily.

In addition to the practical elements of water source protection, there are tourist elements of water source protection as well. The ponds and pools around Jermuk that are considered tourist attractions, such as in the park, or the pool where the Armenian kings used to bathe, must be kept clean and well-maintained and free of trash or pollutants, to ensure that the image of Jermuk's water to tourists is pure and clean. New development must also not be built too close to any of these water-oriented tourist features, lest the natural environment and clean atmosphere of these attractions be diminished. A distance of at least 25 meters from any tourist-related water attraction featuring a natural spring area should be respected for new development.

Hazardous Installations

Hazardous installations must be avoided in all development, renovations, and re-development. This is particularly a concern for the environment, which is the basis of the economy as well, and so guidelines regarding the sewer and garbage collections systems must be strictly followed. Industry in Jermuk should be limited to prevent health, safety, and environmental hazards, and when industry is established, it must follow environmental outlines for the development as laid out by the government of Armenia as well as the municipality. All property owners and developers are responsible for completing construction projects within the environmental and safety guidelines agreed upon with the approval of the permit, and for completing the project within the designated location and timeframe. Construction projects must not be left unfinished for extended period of time as this poses not only a safety hazard, but also unfinished projects may leave the environment exposed to certain chemicals or other materials included as part of the building process which are not intended to be left exposed. Any hazardous currently identified must be corrected to eliminate the health, safety or environmental risk immediately.

Other health, safety, or environmental hazards such as damaged infrastructure, foundations, or other potential risks should be eliminated as soon as possible by property owners, following the proposed building and maintenance guidelines.

Lighting Design Guidelines

Lighting in Jermuk should focus on safety and minimizing light pollution. Lighting guidelines for specific types of building, depending upon the specific needs, have been provided above to provide safety to customers and residents.

Many of the guidelines above explain that a building or street should be well-lit, however, lighting should be added in such a way that there is minimum impact on the nighttime environment. Therefore, lighting should follow guidelines for reducing light pollution. The guidelines outlined by the International Dark Sky Association are recommended for guiding the addition or development of exterior lighting, streetlight, and parking lot lighting in Jermuk. These guidelines can be found online, but the main elements are as follows:

- Downward directed light
- Protect privacy of neighbors by reducing light overflow
- Glare reduction
- Reduced lighting in areas with wildlife
- Institute time controls for lighting
- Keep lighting levels reasonable for safety needs

Noise Guidelines

Noise in Jermuk should be kept to a minimum given that the character of the town depends on a relaxing environment. To evaluate the noise impact of new development, the developer should provide a statement regarding the expect noise types and levels resulting from the final use of the project. A general guideline for the municipality should be that no single property or development may exceed 55 decibels in the daytime and 45 decibels at night. Also, any uses that require a certain level of noise which may be beyond these guidelines, such as industrial uses for examples, must be restricted to normal working hours. This is also a good case for separating uses, particularly industry, as well. Noise levels should be enforced by the municipality.

Some additional specific guidelines for noise have been outlined in other part of this document, such as “construction methods” and “nightlife.”

Air Quality Guidelines

Air quality in Jermuk must remain as pure as possible to help contribute to the reputation of Jermuk as a place for health. To achieve this, guidelines under “transport” and “energy efficiency” should be followed to reduce vehicle travel and ensure reduced emissions and energy efficiency where vehicle travel is used. Also, the continued protection of forest-protected zones and increasing tree and other vegetation plantings within the city are necessary to help filter the air. Industry and commercial uses should be restricted to a maximum pollution level, which should be specifically outline by law, and strictly enforced. To monitor town-wide air pollution, a regular testing system should be instituted by the municipality. A guideline for air quality is the view of Jermuk from the top of the ski lift which should not be obstructed by pollution.

Waste Management & Collection

See “sewer system” and “garbage collection” sections above.

Conservation Areas and the Potential of the Development of a National Park

As mentioned in other sections of this document, appropriate zoning for rural areas should be reviewed, to provide for additional forest and other landscape conservation and more appropriately locate active farms.

To conserve protected areas, the municipality should enforce, and is obligated to enforce according to the Law of Self-Governance, misuse of conservation areas. This includes unapproved logging, hunting, and building, or other activities which would affect the environment or biodiversity. The municipality should consider the addition of experts in natural resource management to protect and maintain the conservation areas.

Community education can potentially play a large role in preventing misuse of conservation areas and raising awareness of natural resource management and the environment in Jermuk. The addition of a regional or national park could greatly contribute to this goal of the municipality, as a park of this nature is the ideal form of development for natural hiking trails, ranger services and talks, an information center about wildlife, etc. The municipality should therefore work together with the Marz and the National Government towards the development of a park of this nature which will greatly contribute to awareness of the environment by residents as well as tourism development, by increasing attractions for visitors.

Mitigating the Impact of Development in Jermuk

To mitigate the impact of development, increasing tourism, and population growth in Jermuk, it is essential that good practices be put into place which protect the environment (environmental impact assessments for development, protection of conservation areas, enforcement, etc.) and also help to manage growth going forward. Given the huge increase in visitors expected over the next few years, there will be a real strain on existing facilities and services, as well as the environment. A growth management strategy should be developed by the municipality to plan and prepare for development as it happens, so that it can be well managed, and prevent haphazard development which causes sprawl, disregards environmental concerns, and degrades the natural tourist attractions of a locality.

In addition, existing infrastructure, particularly waste disposal such as the sewer system and garbage collection system, must be put into good repair, following practices which prevent leaching of hazardous materials into the ground and water. Additional guidelines for these systems can be found under “community services” and “infrastructure.”

Finally, adoption of good environmental practices, such as energy efficiency, water conservation, minimal impact on the landscape, etc. as described elsewhere in this section, will ensure that future renovations and development respect the environment and result in a lower impact on the natural resources.

Development in Rural Areas

The agricultural and forest-protected (conservation) land located within Jermuk’s borders should remain protected for this purpose. Agricultural areas should be encouraged to be utilized as active farms (organic, if possible, to protect the environment) and forest-protected areas should be left undeveloped. However, to preserve the natural landscape and

environment, conservation and agricultural zones should potentially be re-zoned. Additional study on the part of the municipality should be undertaken to determine where within the municipality the re-organization of agricultural or conservation land would have a positive or negative effect on the environment. For example, active farms and the development of orchards may be best located between developed areas to keep the higher altitudes free of highly active agricultural activity and also to better control any environmental effects (sewer systems, etc.). However, the exact impact on current residents and the use of their land is unclear, so this must be considered as part of any re-zoning effort.

Regarding construction and development on agricultural land, the only development that should be approved is residential and agricultural development. However, some commercial development may be approved along roadways for the development of small retail shops, restaurants, or other tourist services. Control of pesticides and other farm effluence should be considered to protect the environment. Buildings and paved area should constitute only 10% per acre of land to preserve the agricultural nature of the land use.

Forest-protected zones should be conserved by prohibiting development on forest-protected land, with the following exceptions – homes and structures within zoning regulations on privately owned land, park development (hiking trails, natural resource development, etc.), scientific research (which should have a low-impact), or special situations where a project will provide significantly more economic and/or social benefits than losses. In the event of the approval of some of these exceptions, low-profile (up to 3 stories) development should be the maximum height. Any removal of trees for all development, including in rural areas, should be balanced by requiring the developer to replant trees lost, and the project design should ideally avoid the removal of trees in the first place.

To preserve the natural landscape of hills and mountains, development and construction on the sides and tops of hills and mountains should be kept to a minimum (in both agricultural and forest-protected areas), and only necessary developments or homes (on privately owned land, and in accordance with the agricultural or forest-protected zoning) should be built. Buildings, towers, or other structures that would stick out from the mountains would detract from the landscape. In addition, the same precautions should be taken for parts of the landscape which can be seen from Jermuk and present the “barren” look, because development in these areas will be especially noticeable and interrupt the natural flow of the landscape as well.

The water – springs, stream, and lake – should also be protected in the sense that alterations to their flow or shape should be prohibited. Therefore, any new development or renovations in rural areas which will potentially affect water resources will need to include a review of the impact with the proposal for development to ensure protection of these resources.

U. Civil Society

Community Facilities

See “community services” section above.

Social Inclusion

To promote an active and cohesive community, it is important that all groups in the community have an opportunity to be heard when it comes to planning decisions and regulations which may impact their properties. Therefore, the municipality, as part of the planning process, must reach out to as many people as possible, and making a special effort to draw into the process social groups which may have historically (or even currently) been excluded, such as farmers, the disabled, women, the poor, etc. Additional information on how this can be achieved is outlined in the other documents of the LDF.

Disabled Access to Facilities

Design and planning must take unique concerns into account as well. As mentioned in other parts of this document, access for the disabled should be included in all new development which is open to the public – that is, commercial facilities, spas, health facilities, apartment buildings, etc. Access features for development include the following:

- Handicapped-designated parking spaces close to the entrance of buildings
- Ramps on the exterior of buildings to facilitate entrance from the parking lot
- Elevators for buildings that are more than one floor, are facilities for public use (this includes commercial uses and workplaces), and have any major feature required to utilize the facility to its fullest on the second floor or above. Ramps may be used as alternatives.
- Doors and hallways that are wide enough for a wheelchair to pass through

Promoting Community Participation in Planning Activities

Community participation in planning activities, as mentioned in other parts of the LDF, is a best practice that is recognized around the world. To promote community participation in areas that have not historically been significantly involved in planning, the municipality may use some tools to help involve the community.

The first tool is the utilization of community associations or neighborhood groups. The existing mechanisms for community involvement in planning and local governance are the Community Union of Armenia, which has branches throughout the country, and the Community Finance Officers Associations, which is organized in essentially the same way. The branches of these organizations in Jermuk should be actively engaged as they already have a mandate to participate in local governance and planning activities, and if no branch exists, a branch should be created. In addition to these nationally organized community associations, the municipality should coordinate a workshop or course on civic involvement, which will allow the community to understand their role in the planning process, how to voice their concerns, and assist them to develop neighborhood associations to participate in the planning process.

V. Governance

Process of Governance for Planning Activities in Jermuk

See the “Process Guidelines” document included with the LDF.

W. Business Environment and Financing

Funding for Public Infrastructure and Maintenance

Taxation is currently managed by the National Government. However, property taxes and 15% of all income taxes collected in a community are automatically delegated into that community's budget. In addition, municipalities are allowed to collect income from their property and enterprises (such as fees for enterprise registration, notary services, garbage collection, etc.). There is currently an apparent contradiction with another law which states that fees and duties from municipal services be fixed – the municipality must work with the National Government to ensure that this contradictory law is superseded by the law that allows the municipalities more flexibility, as this would ensure that the municipality can have some control over the size of its budget and therefore the types of services it can provide. However, all of this funding (property taxes, 15% of income tax, and fees) constitutes only about 30% of the municipality budget. The rest of the budget comes from subsidies from the National Government. Due to the time involved and requirements of the National Government, local budgeting mechanisms are not very effective and this is a very major constraint for planning in municipalities.

Municipal governments must continue to work with the National Government to create a more effective system, which provides flexibility, allows the municipality to determine its own priorities and projects without national level approval, ensures timely and predictable allocation of funds, and promotes long-term financial planning. Without these elements, the municipal government will not only be unable to carry out a major urban development program successfully in the short-term, but they will also be unable to effectively manage in general, even those responsibilities delegated to it through the Law of Self-Governance.

In managing the budgets, once they have been procured, the municipality should allocate as needed to necessary items (salaries, community services, upkeep of municipal property, etc.) and then determine appropriate allocations for planned programs such as incentive programs for businesses, re-development of municipal property, development of new attractions or services, etc. The budget should be devised by a financial officer based on anticipated needs for the coming year. This officer should submit the budget to the council for approval, who then obtains final approval from the mayor. Any approvals beyond the level of the mayor will restrict the municipality's ability to carry out projects in a timely and appropriate manner, and therefore the municipality must work with the regional and national government to change these regulations going forward.

Incentives for Investors/Businesses

As mentioned in various locations throughout this document, financial or other incentives for investors or businesses are a tool that the municipality can use to attract the type of investment that they want and need, according to their master plan and tourism development goals. The development of financial incentive packages can only be accomplished with a proper budgeting system as described above, to ensure any promise made to companies can be followed through. Incentive packages should be designed such that they require a significant enough investment from the property owner or business to ensure that it is not considered a hand-out or subsidy, or else the municipality may find itself with more requests than it can handle. The priority order of incentive packages for Jermuk should be renovations and maintenance upgrading and enforcement, tourist attractions, other tourist-related businesses, and finally other businesses. In some cases, requests for grants from the national government may need to be made to secure funding for incentive packages,

particularly early on, as Jermuk is a small municipality and even with a good budgeting system, may have difficulty providing sufficient funding for incentive programs, and also in some areas it may be more appropriate for the funding to come from government ministries, such as Agriculture or Economy for certain developments.

Coordination between the Municipality and Businesses

The municipality needs to encourage a good business environment for any business, including tourism, to grow. This requires coordination between the municipality and businesses, both existing and new. It is important that planning staff, the council, and the mayor understand business needs and concerns so that they can appropriately address them in planning, and be better equipped to assist the businesses with conforming to the municipality's requirements (such as preparation of project documents, design guidelines, how to apply for an incentive package, etc.). The municipality should designate one person within the planning department to play this role of coordination with the businesses and act as a liaison. This liaison should also put together brochures explaining procedures and requirements pertaining to businesses and ensure that the business association or specific businesses that may be affected are involved in the planning process. Jermuk should furthermore do everything in its power to improve its business environment and work with the regional and national governments to improve those aspects of the business environment which are outside of their authority.