IV. INFRASTRUCTURE *(Amended Ord. No. 351, 428)*

The basis for all development in the Specific Plan area will be the availability of infrastructure. The Specific Plan Area is currently primarily vacant and under-developed. Infrastructure development has been generally limited to that needed for specific small-scale development proposals.

Services for water supply and distribution, wastewater collection and treatment, industrial gray water, storm sewer, trash collection and disposal, natural gas, electric, telephone, cable TV/internet, parks, fire protection, airport improvements, and roads will be coordinated between the developers, and the appropriate private and/or public service providers to the North Apple Valley Industrial Specific Plan area. Details related to existing utilities and public facilities, as well as necessary improvements, are discussed below.

A. Circulation, Roads and Alternative Transportation

Existing roads in the North Apple Valley Industrial Specific Plan area are in many cases "paper roads" which have not been fully developed, widened, or paved. This is especially true in the northern portion of the Specific Plan area. In addition, many of the roads shown in the General Plan to occur across the entire Specific Plan Area are fragmented: they exist in one location, but do not occur in others. This is primarily a function of the limited development which has occurred in this area of Town to date.

1. Road Design Standards

The Town's General Plan establishes standards for roads with various functional classifications as follows:

Alternate Divided Major Arterials have a minimum 142-foot right-of-way and include at least the characteristics of Divided Major Arterials.

Divided Major Arterials transport vehicles from the freeways to both major and secondary arterials. They have a minimum 128-foot right-of-way consisting of a minimum of six traffic lanes, two ten-foot parking lanes, and a twelve-foot wide continuous left turn lane or median strip. Traffic signals are often located at major intersections, and parking restrictions generally apply at intersections. Curbs, gutters, and sidewalks are required on all divided major arterials.

Major Roads have a minimum 104-foot right-of-way that is made up of at least four traffic lanes, two parking lanes, and a twelve-foot wide two-way left turn lane or median strip. Traffic lights are located at primary intersections, and parking restrictions are generally in place at

intersections. Sidewalks are generally required on major roads. Major Roads distribute traffic from freeways and divided major arterials to secondary roads.

Secondary Roads provide connections between major roads, and route local traffic to larger streets. They have a minimum right-of-way of 88 feet. Secondary roads may not be required to include curbs and gutters in Apple Valley's low-density residential areas, but are required to do so in industrial areas such as the North Apple Valley Industrial Specific Plan. Within the Specific Plan area, Secondary Roads will not include sidewalks.

Local Industrial/Commercial Streets have rights of way of 66 feet, and are able to accommodate the increased trip generation associated with industrial areas, and the turning radius needed by delivery trucks. It is expected that local streets in the North Apple Valley Industrial Specific Plan area will be constructed to the standards for Local Industrial/Commercial Streets. Within the Specific Plan area, Local Industrial/Commercial Streets will not include sidewalks.

The following discussion addresses existing roadways, and their General Plan build out designation.

2. North-South Circulation

Currently there are no north-south roads within the North Apple Valley Industrial Specific Plan Area, that run continuously from the north boundary of the Specific Plan to the south boundary, with the exception of Dale Evans Parkway and Central Road which form the western and eastern boundaries of the Specific Plan area.

North-south access will be particularly challenging in the Specific Plan area due to the planned extension of the High Desert Corridor, the location of the airport, and the siting of the WalMart distribution center. The WalMart property is located on the south side of Johnson Road and extends from Dale Evans Parkway to Navajo Road. There can therefore be no north-south through-streets in the western half of the Specific Plan Area.

The High Desert Corridor will result in the interruption of most north-south streets which could occur, including Comanche Road, Dakota Road, Ramona Road, and Navajo Road. Dale Evans Parkway will provide through access, and an interchange to the corridor, as will Central Road.

The location of the airport in the eastern half of the Specific Plan Area restricts north-south access even more severely in the eastern half of the Specific Plan area than it does in the western half of the Specific Plan area. Somis Avenue, which is located east of the airport and west of Central Road, has the potential to be improved and expanded to provide north-south access in the eastern end of the Specific Plan Area. However it is located only one quarter of a mile from Central Road, and the benefits for through traffic will be limited.

The following describes the north-south roadways in the Specific Plan Area.

Dale Evans Parkway is designated in the Apple Valley General Plan as an Alternate Divided Major Arterial along the western boundary of the Specific Plan Area, with a 142-foot right of

way, and a paved area of 112 feet. Dale Evans Parkway will therefore become an essential access route for the Specific Plan Area. Dale Evans Parkway is currently misaligned, and jogs at Waalew Road. It is proposed to be realigned south of the Specific Plan Area, to connect directly to its extension south of Waalew Road. This segment is shown in the General Plan as becoming a Divided Major Arterial with a right of way of 128 feet to include six traffic lanes, two parking lanes, and a median strip.

Dale Evans Parkway extends north of Quarry Road (past the northern boundary of the Specific Plan area), to an interchange with Interstate 15.

Central Road runs along the eastern edge of the Specific Plan area, and is paved for this entire length. Central Road is designated as a Major Road from Johnson Road northward to Quarry Road. As such it requires a 104 foot minimum right of way and 80 feet of paving, consisting of at least four (4) traffic lanes, two (2) parking lanes, and a continuous left turn lane or median. South of Johnson Road, Central Road becomes a Divided Major Arterial and will have a right of way of 128 feet and a paved surface of 112 feet. This section will, therefore, have a minimum of six traffic lanes, two ten-foot parking lanes, and a twelve-foot wide continuous left turn lane or median strip. Central Road will eventually have traffic signals at major intersections, parking restrictions at intersections, curb, gutter, and sidewalks.

Navajo Road will become a major component of the area's circulation system due to its location midway between Dale Evans Parkway and Central Road. Navajo Road is currently unpaved throughout the Specific Plan area. The portion of Navajo Road that is within the Specific Plan area and south of the airport is not a General Plan road. That portion that is north of the Airport, from Fresno to Johnson Road, is designated as a Divided Major Arterial, with a 128-foot right of way. From Johnson Road to Quarry Road, Central is designated a Secondary Road, with an 88-foot right-of-way, and a 66-foot paved width, including two traffic lanes and on-street parking. Traffic signals will be located at major intersections, and parking restrictions will apply at intersections, as well.

In the long term, Navajo Road cannot be extended south of Fresno Road, due to the location of both the planned High Desert Corridor and airport facilities.

Comanche Road occurs as an unpaved roadway from Papago Road (its southern boundary with the Specific Plan) to Burbank Avenue. It recurs 1.0 mile to the north at Doberman Street and continues to a point just north of Cordova Road, where it ends. Comanche Road is not a General Plan road, and is planned for improvement as a local street.

Dakota Road/Dachshund Avenue: Dakota Road extends from Waalew Road to Hemlock Road as an unpaved roadway. It will be blocked by the future extension of the High Desert Corridor. It recurs between Falchion Road and Fresno Road, again as an unpaved roadway. It then resumes between Garnet Street and Gustine Street. To the north, and in the same north south alignment, Dachshund Avenue occurs. Dachshund starts at Livermore and extends just north of Burbank Avenue. It then recurs at Corona Avenue and extends for just one block, falling short of Lafayette Street, and then resumes at Johnson Street, immediately north of the WalMart distribution facility, and extends northerly to Cordova Road. With the recent completion of the

WalMart distribution facility, Dakota Road will not be able to provide uninterrupted north-south access through the Specific Plan Area.

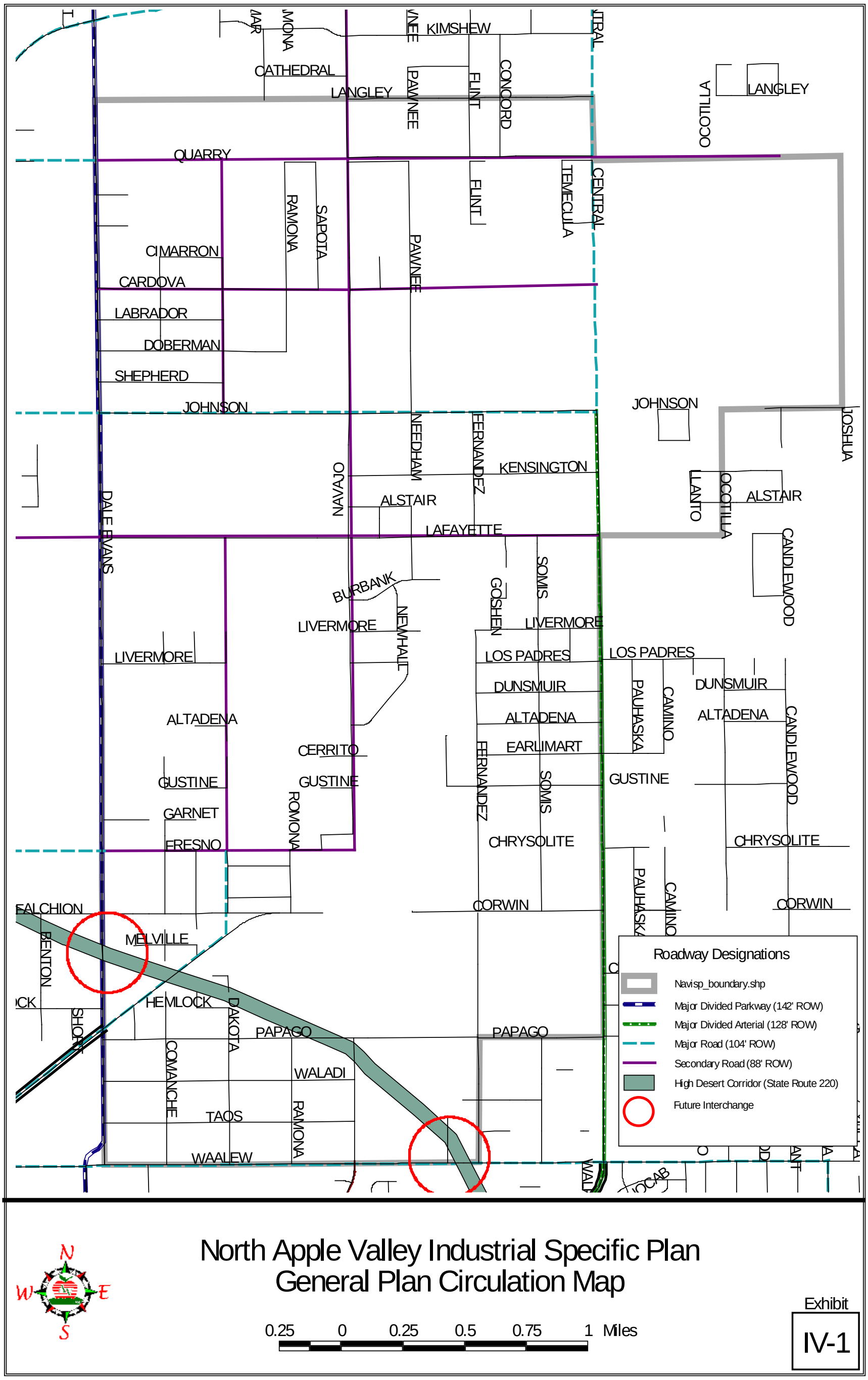
Dakota Road is designated a Secondary Road in the General Plan, from Corwin Road northward to Quarry Road. As such it will include an 88-foot right-of-way and 64 feet of paved surface, including two traffic lanes and two parking lanes.

Ramona Road currently occurs from Waalew to just south of the airport's 8-26 crosswinds runway, where it ends. It then resumes to the north between Corwin Road and Fresno Road. Ramona Road is not a General Plan road and is currently planned as a local street. The only section of Ramona Road that is paved lies between Corwin Road and Fresno Road.

Pawnee Road/ Needham Avenue/ Rialto Avenue. Pawnee Road is aligned with Needham Avenue and Rialto Avenue about one half mile east of Navajo Road. Pawnee Road is unpaved, and it is not a General Plan road. It can not be extended further south due to the airport. Pawnee then recurs in several sections: one south of Waalew Road; one south of Otoe Road; and again close to Thunderbird Road.

Fernandez Avenue is an unpaved road that runs from Quarry Road at the northern boundary of the Specific Plan Area southward to Kensington Street. It then resumes between Lafayette Street and Corwin Road on the east side of the airport. Fernandez Avenue could proceed further south if realigned around the airport. Fernandez is not currently a General Plan road.

Somis Avenue/Temecula Road. Somis Avenue is an unpaved local street. It currently occurs from Corwin Road northward to Johnson Road. Since it occurs east of the airport, it could be extended to provide north-south access within the Specific Plan Area.


KIMSHEW
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CARDOVA
LABRADOR
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NAVAJO
ALSTAIR
LAFAYETTE
BURBANK
LIVERMORE
ALTADENA
CERRITO
GUSTINE
GARNET
FRESNO
FALCHION
MELVILLE
HEMLOCK
PAPAGO
WALADI
TAOS
WAALEW
KENSINGTON
NEEDHAM
FERNANDEZ
LOS PADRES
DUNSMUIR
EARLIMART
CHRYSOLITE
CORWIN
PAUHASKA
CAMINO
CANDLEWOOD
JOSHUA
LLANTO
OCOTILLA
RAMONA
SAPOTA
PAWNEE
FLINT
CONCORD
TEMECULA
CENTRAL
GOSHEN
SOMIS
NEWHALL
BENTON
SHORT
COMANCHE
DAKOTA
Roadway Designations
Navisp_boundary.shp
Major Divided Parkway (142' ROW)
Major Divided Arterial (128' ROW)
Major Road (104' ROW)
Secondary Road (88' ROW)
High Desert Corridor (State Route 220)
Future Interchange
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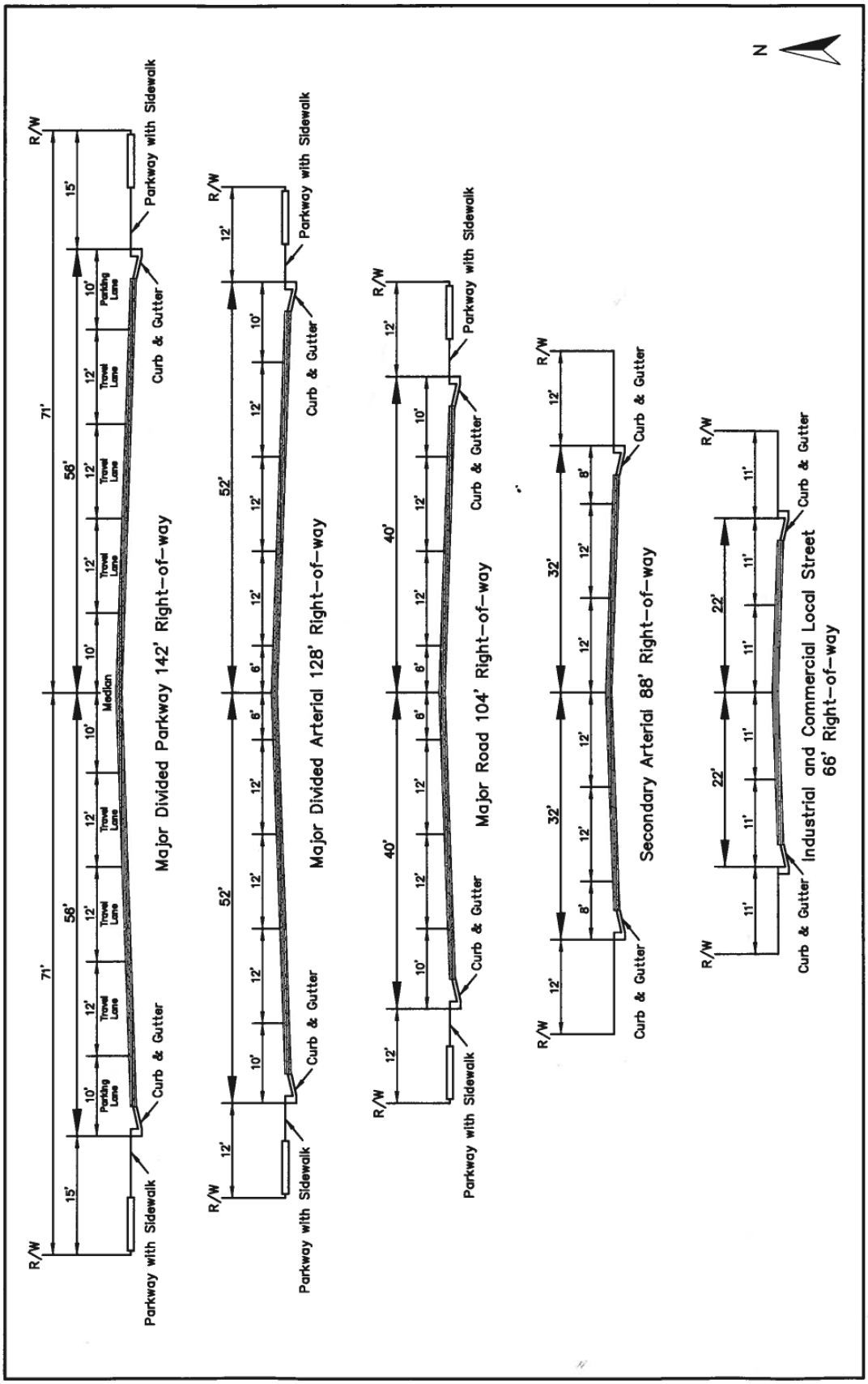
North Apple Valley Industrial Specific Plan
General Plan Circulation Map
0.25 0 0.25 0.5 0.75 1 Miles
Exhibit
IV-1


IV–2
N
North Apple Valley Industrial Specific Plan (Amended Ord. No. 381)
General Plan Roadway Cross Sections
Apple Valley, California
Major Divided Parkway 142' Right–of–way
Major Divided Arterial 128' Right–of–way
Major Road 104' Right–of–way
Secondary Arterial 88' Right–of–way
Industrial and Commercial Local Street
66' Right–of–way
R/W
Curb & Gutter
Parkway with Sidewalk
Median
Travel Lane
Parking Lane

3. East-West Circulation *(Amended Ord. No. 381, 428)*

The only roads that currently bisect the full width of the Specific Plan Area from Dale Evans Parkway to Central Road are Papago Road (which in some locations demarcates the southern boundary of the Specific Plan area), Quarry Road and Johnson Road in the northern third of the Specific Plan Area. Many of these roads are blocked by the airport, and will never connect from east to west. Those east-west roads that are blocked by the airport include Corwin Road, Gustine Street, Altadena Street, Los Padres Road, and Livermore Street.

Waalew Road is perhaps the primary road in the southern portion of the Apple Valley Specific Plan Area. It occurs from Dakota Road to Fernandez Avenue, and in this area, forms the southern boundary of the Specific Plan. Waalew Road is currently paved, and is designated a Major Road including a 104-foot right-of-way, and a paved width of 80 feet, including a four traffic lanes, two parking lanes, and continuous left turn lane or median strip.

Waladi Road runs from Dale Evans Parkway to Navajo Road. This road could be extended to Fernandez Avenue or Central Road. Waladi Road is not paved and it is not a General Plan road.

Papago Road extends from Dale Evans Parkway eastward to Central Road and beyond. It forms the southern boundary of the Specific Plan area in the far eastern portion of the Specific Plan area. Papago Road is not paved and it is not a General Plan road.

Corwin Road is currently the primary entrance to the Apple Valley Airport. The portion of Corwin Avenue to the southwest of the airport is currently paved, and is shown as a Divided Major Arterial in the Town General Plan, requiring a right-of-way of 128 feet with 112 feet of paved surface. Corwin Road will be dead-ended by the High Desert Corridor, however, and Fresno Road will become the major access road to the airport.

Corwin Road recurs to the east of the airport to Central Road and beyond. Corwin Road east of the airport is not a General Plan road, and it is not currently paved.

Fresno Road is currently unpaved and is shown on the General Plan as a Secondary Road from Dales Evans Parkway to the airport, with an 88-foot right-of-way and a 64-foot paved width. Fresno is not designated east of the airport.

Gustine Street is located both to the east and to the west of the Apple Valley Airport. East of the airport it runs from Hemet Street eastward across Central Road. Gustine Street is currently unpaved, and is proposed as a Secondary Road from Somis to Central. As such, it will have a right-of-way of 88 feet, and a minimum paved surface of 64 feet. From Somis to the airport, and from the airport to Dale Evans Parkway, Gustine is not a General Plan road.

Los Padres Road is just south of Livermore Street. It occurs eastward from Dale Evans Parkway to the airport. It then resumes to the east of the airport from Fernandez Avenue to Central Road. Los Padres Road is not a General Plan road and it is currently unpaved.

Altadena Street occurs west of the airport between Comanche Road and Dakota Road. East of the airport, Altadena Street occurs between Fernandez Avenue and Central Road. The section of Altadena Street located between Somis Avenue and Central Road is shown in the General Plan as a Secondary Road. Although currently unpaved, this section of Altadena is planned for an 88-foot right-of-way and a paved surface of at least 64 feet. It will have two (2) lanes of traffic and (2) two parking lanes.

Livermore Street occurs to the east of the Apple Valley Airport, as well as to the west. Livermore Street cannot be extended across the Specific Plan Area. Livermore Street is not a General Plan Road and it remains unpaved.

Burbank Avenue/ Hawthorne Road. Burbank Avenue on the west side of the airport is roughly in alignment with Hawthorne Road on the east side of the airport. Burbank Avenue is not a General Plan road and it is unpaved.

Lafayette Street begins at Dale Evans Parkway and stops at Dachshund Avenue. It resumes again at Navajo Road eastward to Joshua Road. The Town's General Plan indicates that Lafayette Street will be a Secondary Road between Dale Evans Parkway and Central Road. Although presently unpaved, Lafayette Street will have a right-of-way of 88 feet and a paved surface of 64 feet. This will allow for two (2) lanes of traffic and two (2) parking lanes.

Kensington Street extends eastward from Pawnee Road (also known as Needham Avenue and Rialto Avenue) to Central Road. Kensington does not extend westward within the Specific Plan area. Kensington Street is not paved and it is not a General Plan road.

Johnson Road is depicted in the Town's General Plan as a Major Road. It runs without interruption from Dale Evans Parkway eastward to Central Road. Johnson Road the primary east-west route in the Specific Plan area located north of the airport and south of Quarry Road. Johnson Road is currently paved from Dale Evans Parkway to Navajo Road. As a Major Road in the Apple Valley General Plan, Johnson Road will have a right of way of 104 feet and a paved surface of 80 feet across the entire width of the Specific Plan area from Dale Evans Parkway to Central Road. Johnson Road will have a minimum of four (4) traffic lanes, two (2) parking lanes, and a continuous left turn lane or median. This road will have traffic signals at major intersections such as Navajo Road.

Cordova Road is in the northwestern portion of the Specific Plan area. It extends for approximately one third of the two-mile width of the Specific Plan area. It is currently unpaved, however it is a General Plan Secondary Road across the entire Specific Plan area. As such, it will have an 88-foot right-of-way, a minimum paved surface of 64 feet, two lanes of traffic, and two parking lanes.

Quarry Road forms the northern boundary of the Specific Plan area, as well as the northern boundary of the Town of Apple Valley. Quarry Road is shown in the Town's General Plan as a Secondary Road, however it is privately owned. This road is a primary entrance to the Specific

Plan Area. Secondary Roads have 88-foot rights-of-way, a minimum of 64 feet of paved surface, two (2) lanes of traffic and two (2) parking lanes.

4. High Desert Corridor*(Amended Ord. No. 381)*

The High Desert Corridor will bisect the southwestern portions of the North Apple Valley Industrial Specific Plan area. The corridor is planned as a relocation of the existing State Route 18, and will include a 300-foot right-of-way at all locations except ramps and intersections, where the right-of-way will be wider. On and off ramps for the High Desert Corridor are being planned for both Dale Evans Parkway and Choco Road. Waalew Road will be an at-grade intersection.

The Corridor will connect the southeastern portion of Apple Valley with Interstate 15 through a freeway, rather than through the major arterial roadway that currently occurs through the Town. The Corridor will provide access between the Victor Valley and the Antelope Valley (which includes communities such as Lancaster and Palmdale). The Corridor will also provide the Specific Plan Area with a second regional access to the Los Angeles and Inland Empire areas, as well as the Barstow, Central Valley and Nevada markets to the north.

The following roads are inside the Specific Plan area, and will be blocked by the construction of the High Desert Corridor. Rather than having overpasses constructed, at-grade dead ends will be designed for each of the following roads:

- Ramona Road will have two dead ends, one at Papago Road, and the other at Waladi Road.
- Navajo Road will have two dead ends, one at Waladi Road, and the other at Taos Road.
- Dakota Road will have a dead end at Papago Road.
- Corwin Road will have a dead end south of the High Desert Corridor –north of Papago Road, west of Comanche, and east of Dale Evans Parkway. Corwin Road will also have a dead end north of the High Desert Corridor on Comanche Road.
- Comanche Road will dead end on the south side of the Corridor just north of Papago Road, and on the north side of the Corridor at Corwin Road.
- Papago Road will have a dead end on the west side of the Corridor at Dakota Road, and on the east side at Ramona Road, and
- Waladi Road will have a dead end west of the Corridor, and adjacent to Ramona Road.

In the Specific Plan Area, the High Desert Corridor will extend in a northwesterly arc from the intersection of Waalew Road and Carmel Road in the south to the intersection of Dale Evans Parkway with Corwin Road in the west (as illustrated on Exhibit IV-1, General Plan Circulation Map).

Land uses in the Specific Plan area located south and southeast of the bypass will be primarily comprised of commercial and professional offices, rather than the industrial uses that will prevail throughout the majority of the Specific Plan area.

5. General Plan Roads *(Amended Ord. No. 428)*

The majority of roads in the North Apple Valley Industrial Specific Plan area are not included in the Town's Streets and Roads Plan, and it is this Plan (along with the Town's annual budget and multi-year Capital Improvements Program) that guides investment in infrastructure. The roads included in the Streets and Roads portion of the Town's General Plan are:

- **North-South Roads**
    - Dale Evans Parkway, an Alternative Divided Major Arterial that extends for the length of the Specific Plan area, and beyond.
    - Central Road, a Divided Major Arterial from Johnson Road southward to Waalew Road and points farther south; and as a Major Road from Johnson Road northward to Pahond Road and ending at Stoddard Wells Road.
    - Navajo Road, a Divided Major Arterial from Corwin Road to Johnson Road, and a Secondary Road from Johnson Road to Quarry Road.
    - Dakota Road, a Secondary Road between Quarry Road and Corwin Road.
    - Somis Road, west of Central Road is a Secondary Road between Corwin Road and Johnson Road.
- **East-West Roads**
    - Corwin Road is not a General Plan road on the east side of the airport. The portion of Corwin to west of the airport is shown in the General Plan as a Divided Major Arterial.
    - The High Desert Corridor is also a General Plan Road. Engineers have yet to finalize the plans for this Corridor, but it is expected to be larger than any other roads in the Specific Plan area, and will have a minimum right of way of 300 feet.
    - Fresno Road is located on the west side of the Airport, and is a Secondary Road.
    - Gustine Road is a Secondary Road for the distance between Somis Avenue and Central Road.
    - Lafayette Street is a Secondary Road from Dale Evans Parkway to Central Road.
    - Johnson Road is a Major Road from Dale Evans Parkway to Central Road.
    - Cordova Road is a Secondary Road from Dale Evans Parkway to Central Road.

- Quarry Road is a Secondary Road along the entire northern boundary of the Specific Plan area.

Quarry Road is currently a private road owned by CEMEX through its Black Mountain Quarry operations, located east of the Specific Plan area. As such it is not eligible for state or federal funding for road improvements, despite the fact that it appears on the Town's General Plan for Roads as a Secondary Road.

Quarry Road ultimately must be brought into the Town's roadway system in order to allow funding from public sources, and provide a viable roadway for the northern boundary of the Specific Plan Area.

General Plan of Roads Amendments Required to Implement the Specific Plan
Implementation of the Specific Plan is not expected to require amendments to the Circulation Element of the Town General Plan. The current Circulation element provides adequate access and roadway capacity for the buildout of the Specific Plan and the Town General Plan and projected regional growth.

Intersection and Roadway Realignments needed inside the Specific Plan area
The Specific Plan Traffic Impact Report has determined that the type, intensity and distribution of land uses within the Plan area will be adequately served by existing and planned intersection and roadway alignments as set forth in the Town General Plan.

6. The Mojave Northern Mining Railroad

The Mojave Northern Mining Railroad is adjacent to and immediately north of Quarry Road. This railroad is inside the Town's northern boundary. The railroad, owned by the owners of the Black Mountain Quarry, originates at the Black Mountain Quarry and heads westward into Victorville and across the Mojave River where it meets the Burlington Northern Santa Fe Railroad along Route 66.

7. Mass Transit

The great majority of mass transit routes in Apple Valley are located in the more populous southern areas of the Town. Mass transit is coordinated by the Victor Valley Transit Authority. Proposed mass transit corridors are located on the eastern and northern perimeters of the Specific Plan area along Central Road and Quarry Road.

The Circulation element of the Apple Valley Master Plan indicates that Apple Valley Airport is the site of a mass transit terminal. Two planned mass transit routes begin from this point. The first runs westward along Falchion Road to the Town's boundary with Victorville and Hesperia area. The second runs along Corwin Road in a southwesterly direction toward the Victorville and Hesperia areas, including connections to St. Mary Desert Hospital, Victor Valley Community Hospital, Route 66, and the Amtrak station in Victorville.

This route along Corwin Road is further subdivided, for as it reaches Dale Evans Parkway another proposed mass transit route heads southward toward the heavily commercial Bear Valley Road area, and uses such as Victor Valley College, the Quad Cities Center, Kiowa Plaza, Granite Hills High School, and Apple Valley High School.

8. Bike Paths

As the North Apple Valley Industrial Specific Plan is being designed as an industrial park, the priority to have bike paths here is lower than it would be in a residential or open space area. Although Apple Valley has numerous bike paths, none of these are in the Specific Plan area except for a Class I bike path that runs north and south on Dale Evans Parkway, and another Class I bike path on Waalew Road. Thus, no bike paths penetrate the interior of the Specific Plan area, and the two (2) bike paths are located on the southern and western perimeters of the Specific Plan area.

As the area builds out, planning for bicycle-riding workers on Class II (on road striped lanes) should be incorporated into roadway planning.

B. Public Services and Utilities

1. Water Services

Apple Valley Ranchos Water Company is the private water supplier whose district includes all of the North Apple Valley Industrial Specific Plan Area. The Apple Valley Ranchos Water Company has no exact plans for expansion of its water lines inside the North Apple Valley Industrial Specific Plan Area[1]; however, it will provide water line extensions in any portion of the Specific Plan area as demand grows.

Water pressure at the airport is higher than in most sections of Apple Valley, and this should be helpful in terms of supplying the airport with water and with fire fighting services. The Town of Apple Valley consists of twelve water pressure zones. The portion of the Specific Plan area located north of Los Padres Road is in Pressure Zone A (also known as the Stoddard pressure zone). The portion of the Specific Plan area located south of Los Padres Road (including all of the airport) is in Pressure Zone B (also known as the Bell Mountain pressure zone).

The ten-inch water line along Central Road is supplied from water wells to the north of the airport. Water lines that supply the airport itself originate from west and south of the airport.

Thirteen of the wells in Apple Valley are located near the Mojave River and the Town's border with Victorville. There are also eight wells south of the Specific Plan area, and two of these are within a few blocks of Waalew Road. Fire service does not require any significant infrastructure beyond the provision of water lines and connections to various industrial, commercial, and residential customers. If industries in the Specific Plan area are provided with water, then fire service is also available in the same area.

[1] Personal communication, Apple Valley Ranchos Water Company General Manager Jack Clarke, February 2006.

Several miles of additional water mains and extensions will be needed within the North Apple Valley Industrial Specific Plan area to serve the airport industrial park prior to build out. There is a new twelve-inch water main in Johnson Road to serve the WalMart. (There are no water or sewer mains along Dale Evans Parkway.)

Existing water mains in the Specific Plan area include the following:

Fourteen-inch water lines are currently located in the following areas:

- On Waalew between Ramona and Navajo
- On Comanche between Papago Road and Burbank Avenue
- One block south of Papago Road between Dakota Road and Navajo Road
- On Fresno Road from the water tank near Dakota Road eastward into the airport, and
- On Johnson Road between Somis Road and Central Road.

Twelve-inch water lines are currently located in the following areas:

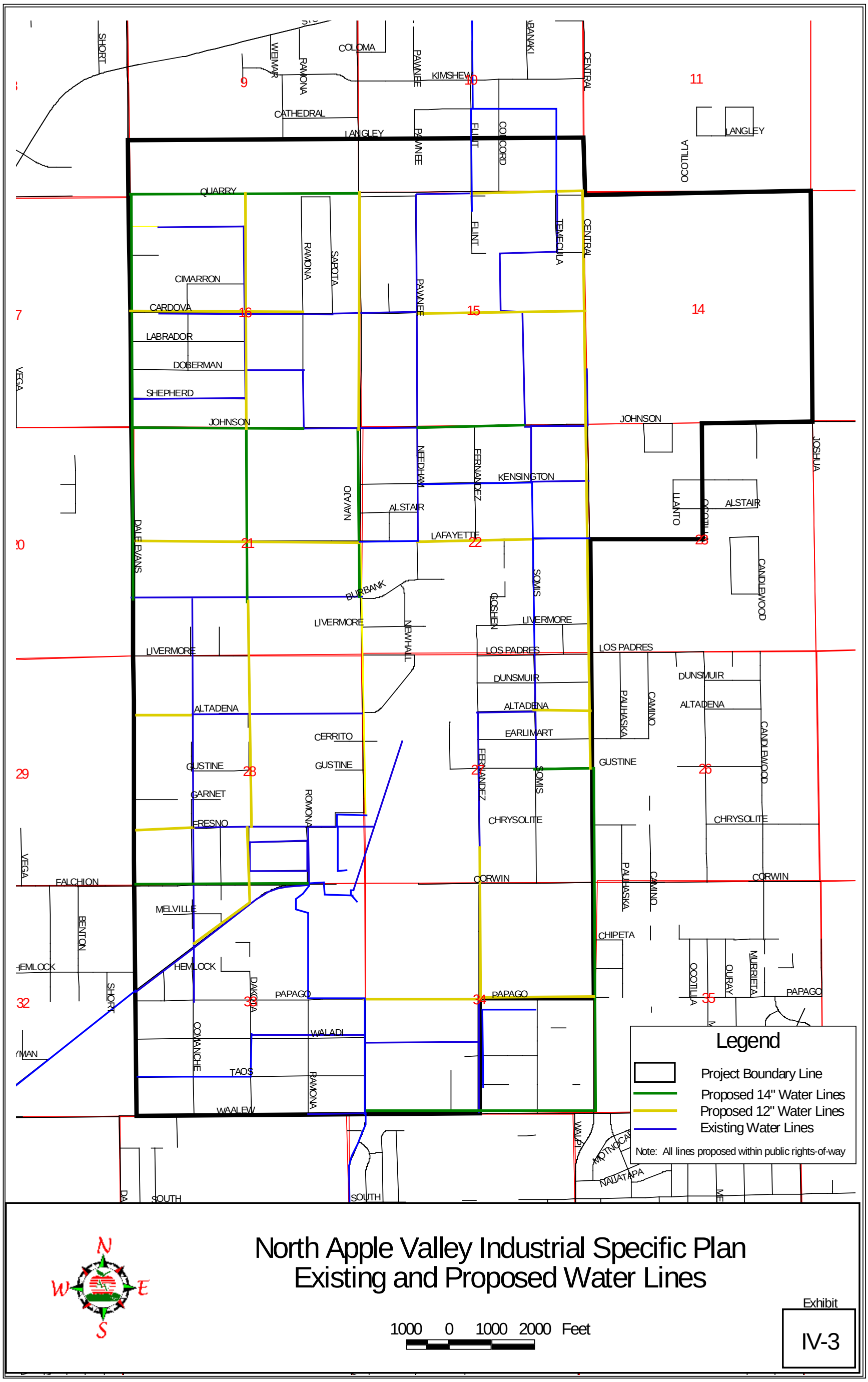
- Corwin Road to the western airport boundary
- On Ramona Road from Corwin Road to Fresno Road
- On Fresno Road from Comanche Road, eastward to the water tank near Dakota Road
- Along the western edge of the southern half of the airport's major runway
- In the Ticonderoga/ Founders Loop area
- Along Altadena from Comanche to Navajo Road
- Along Navajo from Fresno Road to Lafayette Street
- Along Burbank Avenue from the Bell Mountain water tank (west of Dale Evans Parkway) to Navajo Road
- Along Johnson Road from Ramona Road to Pawnee Road
- Along Pawnee Road from Lafayette Street to Quarry Road
- Along the roads that extend northward from Somis Road between Kensington Street and Quarry Road
- Along Kensington Street from Pawnee Road to Navajo Road
- Along Quarry Road between Navajo Road and Flint Road
- Along Cordova Road between Sapota Road to Pawnee Road
- Along Kensington Street from Somis Road eastward to the Bureau of Land Management Fire Prevention facility on the east side of Central Road
- Along Somis Road from Los Padres Road to Gustine Street
- Along Altadena Street from Somis Road to Fernandez Avenue, and
- Along Fernandez Avenue from Altadena Street to a point about three-eighths of a mile south of Gustine Street

Ten-inch water lines are currently located in the following areas:

- Along Fernandez Avenue in a portion of the area between Papago Road and Waalew Road
- Along Waladi Road between Navajo Road and Fernandez Avenue, and
- Along Central Road from Doberman Street to Johnson Road

Eight-inch water lines are currently located north of the WalMart warehouse/distribution facility, in the northwestern portion of the North Apple Valley Industrial Specific Plan area. Specific locations for these eight-inch water lines include:

- Dachshund Avenue from Shepherd Street to Tecaya Road
- Along Ramona Road from Johnson Road to Doberman Street
- Along Cordova Road from Sapota Road to a point half way between Comanche Road and Dale Evans Parkway
- Along Tecaya Road from Dachshund Avenue westward to a point just beyond half way between Comanche Road and Dale Evans Parkway
- Along Doberman Street from Dachshund Avenue to Ramona Road, and
- Along Shepherd Street from Dale Evans Parkway to Dachshund Avenue.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OCOTILLA
QUARRY
TEMECULA
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DOBERMAN
SHEPHERD
VEGA
JOHNSON
NEEDHAM
FERNANDEZ
KENSINGTON
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LIVERMORE
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CORWIN
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BENTON
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HEMLOCK
DAKOTA
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COMANCHE
WALADI
TAOS
WAALEW
MURRIETA
OURAY
SOUTH
Legend
Project Boundary Line
Proposed 14" Water Lines
Proposed 12" Water Lines
Existing Water Lines
Note: All lines proposed within public rights-of-way
N
W
E
S
North Apple Valley Industrial Specific Plan
Existing and Proposed Water Lines
1000 0 1000 2000 Feet
Exhibit
IV-3

2. Sewer Services *(Amended Ord. No. 428)*

a. Victor Valley Wastewater Reclamation Authority

Apple Valley is located in the Victor Valley Wastewater Reclamation Authority area. Members of the Victor Valley Wastewater Reclamation Authority (VVWRA) include the Town of Apple Valley; the Cities of Hesperia and Victorville; Service Area 64 (the Spring Valley Lake area); and Service Area 42 (the Oro Grande area).

The VVWRA was formed by the Mojave Water Agency to help meet the requirements of the Clean Water Act and to provide wastewater treatment for the growing area. The Authority's first treatment plant began operating in 1981, providing treatment for up to 4.5 million gallons of wastewater per day. Since that time, VVWRA has had several plant upgrades and several capacity increases. Current sewer treatment capacity of the VVWRA facility is 14 million gallons per day, and plans are currently being developed to process as many as 22 million gallons per day of wastewater. The Town of Apple Valley is presently 37% sewered, and this is expected to increase to over 50% by 2020. Of the 12.55 million gallons per day processed by the regional plant, 2.04 million gallons (or 16%) is from Apple Valley.

Prior to 2004, the flow of wastewater to VVWRA was increasing at four to five percent a year. VVWRA indicates that the growth rate has increased to about 25% annually. The Town of Apple Valley in 2005 has over 60,000 residents, and covers 78 square miles, of which about 15% is currently developed. Estimates of flow for Apple Valley's sewered population are based on 80 gallons per person per day.

A majority of the treated wastewater is discharged into the Mojave River, and a smaller amount is used to irrigate landscaping at a nearby golf course. User charges are based on volumes of wastewater requiring treatment, and surcharges are added for wastewater having concentrations of BOD (Biological Oxygen Demand) over 200 milligrams per liter; concentrations of TSS (total suspended solids) above 250 milligrams per liter; and concentrations of NH3 (ammonia) in excess of 20 milligrams per liter.

The VVWRA Master Plan has recommended that a sub-regional wastewater treatment plant be constructed in Apple Valley. Other strategies including additional interceptor lines and expansion of the regional treatment plant in Victor Valley would allow economic development to occur in the Northern Apple Valley Specific Plan area.

b. Regional System Expansion Plans

To meet immediate needs until 2012, the Regional Treatment Plant in Victorville and the interceptor sewer system will be expanded to convey and treat up to eighteen million gallons per day of wastewater. Additional relief sewers, peak flow pumping facilities, off-line storage, or a combination of these will be needed to transport this additional flow to the regional plant.

Otoe Road has been identified as the likely location of a new wastewater plant to serve Apple Valley. Design capacity has been listed at 1.5 MGD, and the cost has been estimated at $22.5 million[2]. Solids generated by the Apple Valley facility may be discharged back into the regional interceptor system for treatment by the regional plant in Victorville. Recycled water produced by the Apple Valley treatment plant may be discharged into one or more remotely located percolation basins during wet weather periods, when irrigation demands are minimal.

A four MGD local reclamation facility will be constructed in Apple Valley by 2009. Solids generated by this local facility will be discharged into the regional interceptor system, with a small transport flow for treatment at the regional Victorville Plant. Distribution piping will be constructed for each local facility to transport recycled water to major customers, and to the remotely located percolation basins.

From 2012 to 2020, the capacity of the local facility in Apple Valley will be expanded if rapid growth continues. This includes the local treatment facility, pumping stations, and percolation ponds. It is expected that by 2020 the capacity of the regional treatment plant will be expanded to 22 million gallons per day (MGD) to serve needs of the region. The Authority may also need to purchase properties suitable for future expansion of the regional plant, local reclamation facilities, pumping stations, distribution systems, percolation ponds, and various storage and maintenance buildings.

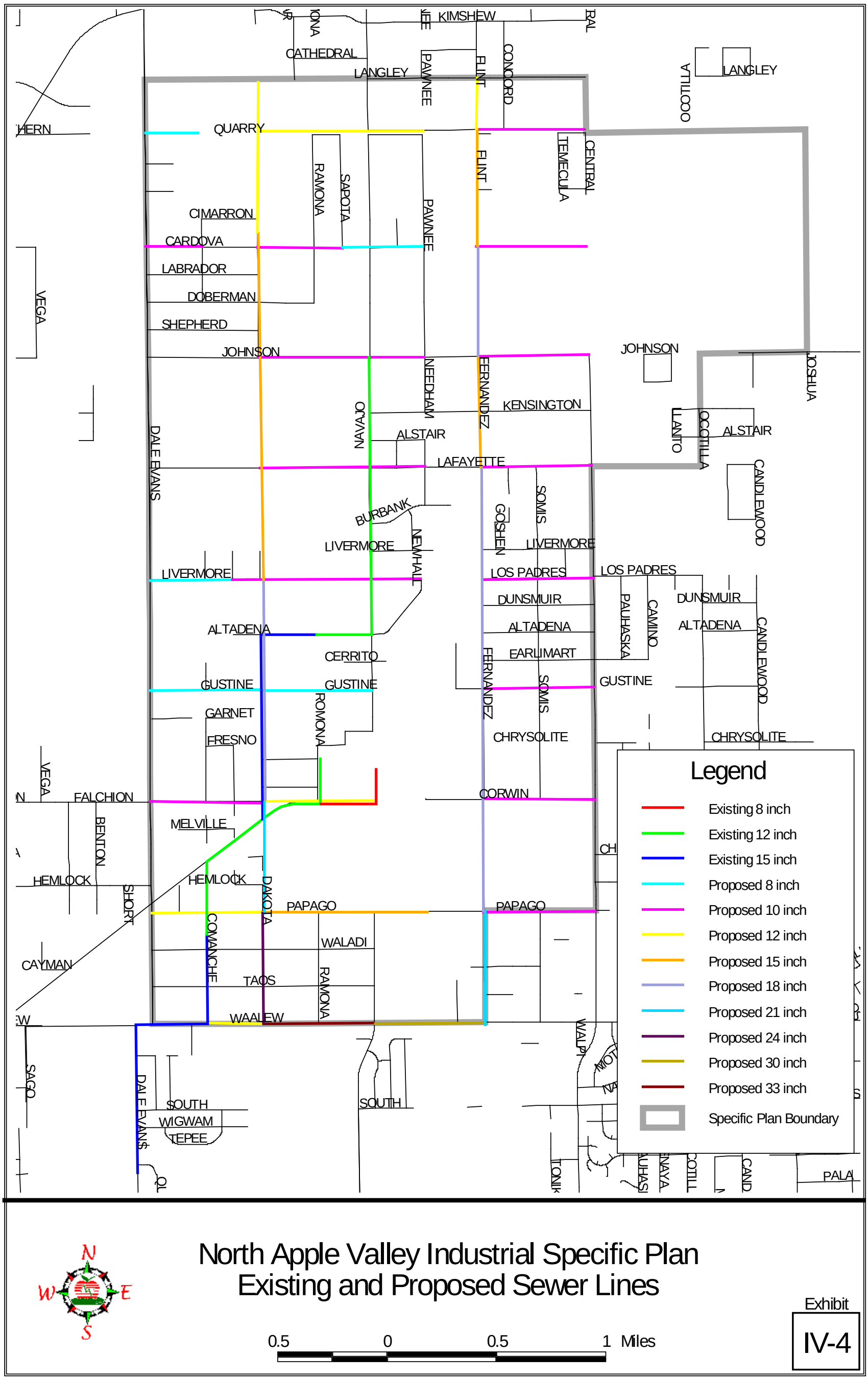
c. Sewer for the Specific Plan Area

All of the sewer lines currently occurring and proposed in the North Apple Valley Industrial Specific Plan area are shown on Exhibit IV-4. These lines are centered on the western edge of the Apple Valley Airport and its primary north-south runway, and they extend as far north as Johnson Road. There are no sewer lines on Dale Evans Parkway within the Specific Plan area.

There are several connected sewer lines along the west side of the Apple Valley Airport. From the north, these include: a twelve (12)-inch sewer line running along Navajo Road from Johnson Road to Altadena; this line then cuts westward along Altadena to Dakota Road. The sewer line increases in size to fifteen (15) inches and goes southward along Dachshund Road to Corwin Road. From here an eight (8)-inch collector line extends eastward to Ramona Road. The main line in Corwin Road is twelve (12) inches. This line proceeds south along Comanche Road where it is fifteen (15) inches. The sewer pipe then extends west along Waalew Road, and southward toward the more densely developed center of Town. These lines were sized with the airport industrial park in mind, and should be sufficient to serve much of the growth in the North Apple Valley Industrial Specific Plan area for some time.

These sewer lines were sized and built with the airport industrial park in mind, and are considered to be sufficient for development in the early phases of build out of the North Apple Valley Industrial Specific Plan. The WalMart warehouse/distribution facility at Johnson Road and Dale Evans Parkway is served from the southeast corner of its property by lines which extend from the twelve (12)-inch sewer line on Navajo Road.

[2] "Adopted Policy for Serving the Growth of the Community," by the Victor Valley Wastewater Reclamation Authority, August 2005.



North Apple Valley Industrial Specific Plan
Existing and Proposed Sewer Lines

Exhibit
IV-4

d. Industrial Gray Water

Industrial sewage from the North Apple Valley Industrial Specific Plan area will be treated according to the requirements of the Victor Valley Wastewater Reclamation Authority. In many cases, this will involve the installation, use, and monitoring of oil and grease traps; the creation of a sampling station where the manufacturers as well as VVWRA can test samples of effluent at any time; and other measures that are unique to the particular industry or manufacturer. Generally, all waste from manufacturers comes into the sewer lines and makes its way to the regional treatment facility.

However, in some industries there may be "gray water" or water that is still clean that does not need to be treated, and therefore does not need to be sent to the regional wastewater facility. Examples of this include boiler blow water, and water that is used for cooling purposes. According to the Reclamation Authority, it is the manufacturer's responsibility to recycle or use this water in some way. The manufacturer might choose to use such gray water for onsite landscaping or irrigation purposes. If the manufacturer chooses not to do so, it will still have the option of sending this gray water into the sewer collection system to be treated along with the more traditional wastewater stream.

3. Solid Waste

Solid Waste and recycling services in the Town of Apple Valley are contracted by the Town through Burrtec Waste Industries of Fontana, California.

Solid waste from Apple Valley is hauled to the Victorville landfill which is part of the San Bernardino County landfill system. The closing date for the Victorville landfill is estimated to be 2055. The County is currently moving towards the acquisition of additional acreage at the landfill to expand capacity. Burrtec personnel have indicated that no additional infrastructure is needed to handle waste from an industrial park at the Apple Valley Airport[3].

Mark Dvorak of San Bernardino County Solid Waste Department has indicated that the County's landfill in Victorville is permitted to accept up to 1,600 tons of solid waste per day. There are two or three days each month when it comes quite close to meeting that limit, however, the typical amount of waste accepted is approximately one thousand tons per day.

The Victorville landfill accepts industrial waste as long as it is non-hazardous. Hazardous industrial waste is collected by private contractors and disposed of elsewhere by County approved hazardous waste disposal firms. Production and disposal of hazardous waste brings about the involvement of the San Bernardino County Fire Department. Collection of this commercial and industrial hazardous waste is coordinated through the County Fire Department, and one of the more commonly used areas for such disposal has been Cattleman's Hill in Central California.

[3] Personal communcation, Robert Rios of Burrtec Waste Industries in Victorville, CA.

4. Flood Control and Hydrology

a. Local Topography Drainage

The Apple Valley watershed is located in the high desert of southern California, and encompasses 98 square miles that drain into the Apple Valley Dry Lake. The Apple Valley watershed boundary is generally defined by the Ord Mountains to the south, the Granite and Fairview Mountains on the east; and Black Mountain on the north. A portion of the westerly boundary is defined by Bell Mountain and by Catholic Hill (just south of Corwin Road and east of Rimrock), while the remaining westerly boundary follows a ridgeline between Apple Valley and Victorville. Apple Valley has steep impervious mountains with incised channels on the perimeter of the watershed, and the remainder of the watershed is valley floor which slopes gently to the dry lake.

Almost all waters in Apple Valley, except the extreme northwest, drain into the Apple Valley Dry Lake. The portion of Apple Valley that does not drain into the Apple Valley Dry Lake is in the northwest corner of the Specific Plan area, north of Johnson Road and west of Central Road.

Apple Valley Dry Lake is located about one and one quarter miles south of the Apple Valley Airport's crosswinds (east-west) runway. The dry lake area extends about a mile to the south, over a mile to the west, and almost two miles to the east. The Town has a history of flooding problems in and around the dry lake.

The north community is generally defined as the area of the Apple Valley Dry Lake watershed lying to the north of the dry lake. The area encompasses about 26 miles (about 26% of the total Apple Valley Dry Lake watershed).

The North Apple Valley Industrial Specific Plan area drains naturally from the northeast to the southwest, and slopes are generally one percent or less throughout the area. The intersection of Quarry Road and Central Road is the highest point in the Specific Plan area at 3,200 feet above sea level. The corner of the Specific Plan area at Papago and Central Road has an elevation of 2,997 feet. On the west side of the Specific Plan area, the intersection of Quarry Road and Dale Evans Parkway is at 3,051 feet above sea level, and the corner at Papago Road and Corwin Road is at 2,947 feet above sea level. The southernmost points in the Specific Plan area are along Waalew Road between Fernandez Avenue and Dakota Road, with elevation is in the range of 2,918 to 2,930 feet.

b. Apple Valley Master Plan for Drainage

The Town's current Master Plan for Drainage includes designs and costs for concrete drainage channels throughout Town (referred to in the Master Plan as Alternative 2). These were estimated to cost about $353 million at the time of development of this Master Plan in 1988, and would cost close to a billion dollars today[4]. This would provide a fully urbanized underground storm drainage system, similar to the downtown areas of the City of San Bernardino and Orange County.

[4] Personal communication, Deputy Town Engineer Richard Pederson, February 2006.

The other alternative included in the Master Plan for Drainage is referred to as Alternative 1. This is a much less expensive alternative, which maintains natural drainage channel alignments and enlarges them. Current policy for development projects in the Specific Plan Area will require that development retain storm flows on-site, and limit the impacts to regional flood control systems.

Existing and Proposed Drainage Infrastructure

Many drainage courses exist in Apple Valley, however, very few of these are located in the North Apple Valley Industrial Specific Plan area, because the northern part of the Town is relatively undeveloped, and because the portions of the Town where flooding is of the greatest concern are outside the Specific Plan area. This includes the Apple Valley Dry Lake which is south of Waalew Road, and the portions of the Town located closer to the Mojave River. All of the Specific Plan area lies higher in elevation than these more flood-prone areas.

The Town's Master Plan for Drainage proposes numerous drainage courses and regional drainage facilities in the northern part of Town. Those with the prefix "N" lie north of the Apple Valley Dry Lake. Maintenance of, and improvements to, these flood control facilities will expedite development of the North Apple Valley Industrial Specific Plan area. The flood control facilities include:

Facility N-01 is an unimproved, open channel, and collects runoff from eight different sources in Fairview Mountain, all of which are diffused on the valley floor. The interception of this runoff from a 3.3 square mile area provides flood protection for buildings east of Central Road.

Facility N-02 is a shallow earthen channel adjacent to the airport, that runs through the majority of the Specific Plan area from Central Road (north of Johnson) to Waalew Road (west of Navajo Road). Runoff transported by Facility N-02 originates from the south side of Black Mountain and from the northeast side of Fairview Mountain, and covers an 8.7 mile area.

Facility N-03 is a riprap-lined channel that transports runoff from the industrial area east of the airport, and merges with facility N-02 south of Papago Road.

Facility N04 is a fully leveed channel that conveys runoff southward from Black Mountain which is located north of the Mojave Northern Railroad. Channel N-04 drains an area of 7.6 square miles. A debris basin has been recommended for the railroad, because upstream of the railroad lines, there many drainage paths through the Black Mountain area.

Facility N-05 is an earthen channel (a portion of which has a riprap lining) that transports runoff generated entirely from the industrial area north of the airport. It merges with N-04 just south of Gustine Street where an earthen levee collects flows.

Facility N-06 carries runoff generated by Bell Mountain, Little Bell Mountain, and Catholic Hill – all on the western edge of the Specific Plan area. Channel N-06 drains 1.6 square miles of tributaries. It is a natural earthen channel in some areas; has riprap in other sections; and is fully leveed in its southernmost sections. Containment levees are needed on the east side of the upper

portions of the channel. In addition debris basins may be required, since the natural channels that drain Bell Mountain are intercepted.

Facility N-07 is a riprap-lined channel that carries runoff from Little Bell Mountain and Catholic Hill. This channel parallels Corwin Road and merges with N-06 at the intersection of Corwin Road and Papago Road. This facility requires a containment levee along Corwin Road to channelize flows, and a debris basin will be needed since the natural channels that drain Catholic Hill are intercepted.

Design Standards

The Town's Master Plan for drainage recommends maintaining natural drainage alignments whenever possible, and utilizing improved earthen channels unless flow velocities require the channels to be lined with riprap or concrete. Underground, urban-style storm drains have generally not been recommended. Channel alignments that are already present should continue to be used. The high percolation rates in local soils enable flash flows to subside within the channel system, often dissipating before reaching the dry lake. In addition to regional facilities, on-site retention will continue to be required for individual projects, to ensure water reclamation and conservation; control of nuisance flows such as runoff from over-irrigation of landscaping; flood control; and flood channel erosion control.

The high desert area receives little rainfall, but is subject to intense short duration rainstorms that can cause significant flooding, especially near the dry lake. Future development must meet certain drainage criteria prior to the issuance of building permits. *Design standards for property owners* shall include the following:

- Building pads must be elevated two feet above the existing ground elevation with drainage swales graded around buildings unless they can be shown to be outside of the 100 year floodplain.
- No buildings may be constructed within 200 feet of any known watercourse, or within 50 feet of anticipated or existing drainage rights-of-way.

Design standards and actions involving the Town shall include the following:

- The Town should begin to purchase rights of way and accept dedications for drainage channels. If a proposed development lies within the way of a drainage facility identified in the Town's Master Plan for Drainage, no building permit should be issued until the Town has received the associated dedication or a drainage easement.
- Debris basins should be constructed along the east side of Bell Mountain (just west of Dale Evans Parkway) as development in and around the Specific Plan Area occurs. Basin construction could be funded by the Town in conjunction with the San Bernardino County Flood Control District.
- Detention basins should be considered for several regional channels if rights of way can be obtained in a timely manner to facilitate their construction. The County Flood Control District should have primary funding responsibility, as the tributaries and runoff areas for drainage channels that impact the Specific Plan Area are generally located well outside the Town limits.

- Natural channel alignments should be maintained unless redirecting flows proves to be economically beneficial. The main drainage facilities in the northern portion of Apple Valley are primarily open channels where slopes are generally less than one degree, and where there is a high potential for debris production.
- Open channels should be designed for clear water flow with no debris, due to assumed upstream debris basins.
- All improved channels must be fenced for safety.
- There will be a 15-foot access road along each side of every improved channel.
- Improved earthen channels shall generally be very shallow with trapezoidal 3:1 side slopes.

5. Natural Gas

Southwest Gas has one gas main along the eastern edge of the North Apple Valley Industrial Specific Plan area on Central Road. The gas main along Central Road is supplied gas by the Pacific Gas & Electric Company through a PG&E main in Quarry Road on the Town's northern boundary. At the intersection of Quarry Road and Central Road, Southwest Gas connects with PG&E's Victorville "C" gas main.

From there, the gas main travels southward along Central Road to Papago Road, and continues southward beyond the North Apple Valley Industrial Specific Plan area to Waalew Road, and into the southern portions of the Town of Apple Valley. The pressure in this eight inch steel gas main is 240 pounds per square inch (psi).

There are several sites along Central Road where pressure can be stepped down from 240 psi to between 40 and 60 psi for distribution to industrial, commercial, and other users. These sites are at the intersections of Central Road and Johnson Road; Dexter Lane (just south of Central Road); Cayman Road (just south of Virginia Park); and Waalew Road.

Other gas lines in and around the North Apple Valley Industrial Specific Plan area include the following.

- Johnson Road and Dale Evans Parkway: This distribution line is immediately north of the Wal*Mart warehouse facility. In an east-west direction, it runs from Dachshund Avenue to Dale Evans Parkway, and at that intersection extends northward along Dale Evans Parkway to Quarry Road and then further north. Both distribution lines are made of polyethanol (PE) and are capable of carrying pressure of up to 60 psi. They currently carry pressure of 40 to 55 psi. The line along Johnson Street is four inches, and the line along Dale Evans Parkway is six inches.

- Along the portions of Corwin Road that are west of the airport but east of Ramona Road, and along the portions of Albany Road that are north of Corwin but south of Fresno Road, there is a polyvinylchloride (PVC) gas distribution line that supplies several of the airport-related facilities. This distribution line carries a maximum pressure of 40 psi. This line is four inches and electric and telephone lines are co-located in the same trench.

- Clustered just to the west of the Falchion/Corwin line is a group of four-inch polyethanol (PE) pipelines that carry gas at a pressure of 40 to 55 psi. These lines run along Ramona Road from Fresno Road to a point just south of the east-west runway; along Founders Road from Ramona to Dakota; along Ticonderoga Road from Ramona to Dakota Road; and along Dakota Road from Ticonderoga to Founders Road.

- Along Ramona Road is a four inch steel pipe carrying gas at a pressure of 40 psi. This distribution line begins on Ramona at a point just south of the east-west runway, and extends southward to Waalew Road.

- Along Carmel Lane, from Waalew Road to Papago Road, in the southern portion of the Specific Plan area, is a two inch steel gas distribution line carrying pressure of 40 psi.

- There is also a two-inch polyethanol gas line running along Taos Road for one block west of Ramona Road. This line carries pressure of 40 to 55 psi.

Proposed Gas Infrastructure
Southwestern Gas will expand its delivery system throughout the Specific Plan Area to serve the airport industrial park during the build out process. Pipeline extensions will be paid for by individual property owners, and are billed based upon a formula involving customer usage, account type, and the linear footage of pipeline that must be extended to service the incoming business or other account.

The plan of Southwest Gas for the Specific Plan Area is to upgrade all of its distribution lines to polyethanol (PE) pipe, and to carry pressure of 60 psi in all of these lines. Infrastructure improvements will be borne by Southwest Gas and its users.

6. Electric Service

Southern California Edison is the electric supplier for all of the Town of Apple Valley including the North Apple Valley Industrial Specific Plan area. Four major electric transmission corridors, each with 115 kV lines, cross through the Town and provide power to local businesses, manufacturing plants, institutions, and homes. Currently all new electric lines of 66kV or less are placed underground within the Town boundaries.

Industries that choose to locate in the North Apple Valley Industrial Specific Plan area should be encouraged to utilize solar panels and other types of alternative energy. Although the solar panels will constitute an added up-front expense for industrial developers, the investment provides financial returns similar to (and generally considerably in excess of) traditional bonds or annuities.

Southern California Edison administers a range of energy conservation programs for its consumers, including financial incentives to use high efficiency heating and cooling equipment; to use energy saving household appliances; and to conserve energy through programs such as peak shaving.

7. Telephone, Cable Television and Internet

Charter Communications supplies cable television, high speed internet, and telephone services. All Charter lines are aerial, and are on poles, and in all cases Charter is co-located with the lines of Southern California Edison.

Charter's current infrastructure in Apple Valley is almost all south of the North Apple Valley Industrial Specific Plan area. The few existing lines inside the Specific Plan area are as follows:

- From a point just north of Taos Road southward along Dakota Road to Waalew Road, extending westward along Waalew Road toward Corwin Road and Victorville.
- From a point just north of Taos Road southward along Ramona Drive to the point half way between Taos Road and Waalew Road.
- From a point just north of Taos Road southward along Navajo Road to a point just north of Soboba Road, and then eastward along the south side of Waalew Road.
- Between Taos Road and Waalew Road (and parallel to these roads), from Dakota Road to Navajo Road.

Charter Communication's lines have the capacity to provide service to about six hundred more customers (whether industrial, commercial, or residential) using existing lines[5]. Additional lines will be constructed in the North Apple Valley Industrial Specific Plan area once demand is in place to support this additional infrastructure. Charter also has plans to install a fiber optic line along Dale Evans Parkway, from Waalew Road to Johnson Road. Unlike Charter's other lines, this line will be run underground. Cable and Internet lines are installed at the cost of the user.

8. Fire Prevention *(Amended Ord. No. 428)*

The Apple Valley Fire Protection District (AVFPD) is an independent jurisdiction that has legally separate status from both San Bernardino County and from the Town of Apple Valley, and its western boundary is the Mojave River. The district extends as far as the dry lakes toward Lucerne Valley.

Water is supplied to the fire district primarily by the Apple Valley Ranchos Water Company. There is a water storage tank at the north end of the district and there is another at the airport. Additional water tanks include the Bell Mountain Water tank just west of the intersection of Dale Evans Parkway and Burbank Avenue and a tank on Fresno Road just east of the Dakota Road. There are twelve and sixteen-inch water lines near the airport which can be used for fire fighting purposes (please also see the discussion of water supplies above).

[5] Personal communication, Joe Bertola, Jr., Design Engineer for Charter Communications, Victorville, CA, February 2006.

The Fire Protection District has six (6) fire stations, staffed by paid, professional officers and support personnel. Four of the stations are staffed 24-hours per day, seven days per week, for emergency response. Two of the stations are staffed as needed by on-call firefighters. The fire stations that are closest to the airport include: one at Yucca Loma Lane, Central Road, and Highway 18 – this station also serves as the Fire District headquarters; another station near the intersection of Highway 18, Wakita Boulevard, Standing Rock Avenue, and Central Road; and a third at the intersection of Highway 18 and Tao Road, less than one half mile south of Corwin Road. The fire station at Tao Road and Highway 18 currently serves the new WalMart Distribution Facility on Dale Evans Parkway. All of these stations are located south of the southernmost boundary of the Specific Plan Area.

There is a seasonal fire station operated by the Bureau of Land Management on the east side of Central Road, just northeast of its intersection with Hawthorne Road. This fire station is outside the Town limits and is only used to respond to wild fires. It would not respond to a fire within the Specific Plan Area.

As the Specific Plan Area builds out, it is likely that a new fire station may need to be built inside the Specific Plan area, or somewhere in the northern portion of the service area of the Apple Valley Fire Protection District. Fire District personnel have indicated that it is possible that a new fire station north of the airport would be built and financed through a Mello-Roos Community Facilities District. This could potentially be a special district or fire district that is separate from the existing Apple Valley Fire Protection District. A new and separate fire district could potentially narrow the group of businesses and taxpayers supporting this district from all of those within the existing 206 square mile area, to only those within the Specific Plan Area.

The Police and Fire Protection Element of the Town of Apple Valley General Plan indicates the potential to construct an eighth fire station on approximately twelve (12) acres at the southwest corner of Johnson and Navajo Roads. The new station, if developed would be in association with the existing Victor Valley College fire training facility.

Water mains that supply industrial and commercial users, as well as those that serve residential users have sufficient size and pressure to provide water in fire prevention and safety operations. Water pressure in the area of the airport is higher than it is in most other sections of Apple Valley. The required flow to fight fires is based upon the type of construction of a building and the size of a building. Specifics of this can be found in Table 3A in the Appendix of the Fire Protection Codes manual. As an example, the WalMart warehouse/distribution facility at Johnson Road and Dale Evans Parkway was required to provide 3,750 gallons per minute for a duration of four hours, for fire fighting purposes.

Additional storage tanks to provide water to fight fires within the North Apple Valley Industrial Specific Plan area will also need to be constructed as the industrial park approaches buildout.

The National Fire Protection Association has recommended that there should be at least one full time firefighter for each 1,500 residents in a fire protection district. As the Apple Valley population increases over time as a result of the gradual buildout of the airport industrial park, additional firefighters will need to be hired. The current funding formula for the Apple Valley

Fire Protection District for commercial as well as residential properties is $.0009 per each dollar of assessed property value[6]. A property assessed at $2,000,000 would thus pay a fee to the Fire Protection District of $1,800 per year.

9. Airport

The Apple Valley Airport is owned by San Bernardino County and is administered by the San Bernardino County Department of Airports. Other airports that are operated and maintained by San Bernardino County include those at Baker, Barstow-Daggett, Chino, Needles, and Twentynine Palms. Services available at the Apple Valley Airport include fuel, maintenance, charters, rentals, and flight training. San Bernardino County is actively involved in planning, interpreting, and implementing Federal Aviation Administration protocols.

The Apple Valley Airport can be accessed most directly from Corwin Road on the west side of the airport currently. Future plans for the High Desert Corridor will require the relocation of the airport's access to Fresno Road. Almost all existing and planned airport-related buildings are located on the west side of the airport – and are just west of the taxiway for Runway 18-36. Existing buildings within the airport property include the airport terminal; an airport maintenance building; as well as FBO hangars and T-hangars.

Planned buildings and uses in this area (along the western edge of the taxiway for Runway 18-36) include future executive hangars (just north of runway 8-26); a future law enforcement facility; a commercial aviation development area; several T-hangars; an apron infill area; and a service road that closely rings both of the airport runways (including the runway protection zones). The law enforcement facility and heliport are currently being constructed immediately south of the airport terminal.

Airport officials hope to purchase several parcels of property that are adjacent to the airport's existing lands. These include a 59.88 acre parcel to the southwest of the airport located just north of Papago Road and east of Dakota Road; a 170 acre property northwest of the airport; and a five acre property northeast of the airport, part of which is included in the runway protection zone at the north end of runway 18-36.

Runway 18-36

The Apple Valley Airport has two runways. The larger runway is called Runway 18-36 and it is aligned from north by northeast to south by southwest. This runway is 150 feet wide and 6,498 feet long. The runway has a right-of-way of 1,000 feet, and the runway itself lies in the center of this right-of-way.

Approaches to Runway 18-36 require a visibility of at least one mile. The runway and taxiway pavement are both constructed of asphalt. There is an additional 1,700-foot long runway protection zone at the north end of the runway. At the south end of Runway 18-36, there is a 1,000 foot runway protection zone, and to the south of this is an additional 1,000+ foot obstacle free zone.

[6] Personal communication, Mark Reynolds, Finance Director, Apple Valley Fire Protection District, February 2006.

Runway 8-26

Runway 8-26 is located at the southern end of Runway 18-36. Runway 8-26 runs directly east to west. This runway is 60 feet wide and 4,099 feet in length. The runway and taxiway pavement are both made of asphalt. At both the east and the west ends of Runway 8-26, there are runway protection zones that are 1,000 feet long, and no less than 500 feet wide.

Funding of Improvements

Improvements to the airport itself are generally funded through the grant process. The federal government generally pays for ninety percent of approved airport upgrades and infrastructure; the state and local government (in this case the County) will pay for the remaining portion of improvement costs.

Utilities Under the Runway

There is no formal FAA prohibition on boring utility lines underneath airport runways[7]. It is possible that build out of the area will require the undergrounding of utilities through airport property to assure cost effective extension of these facilities.

Local utilities have already targeted the airport runways in Apple Valley for underground utility lines. At the western end of Runway 8-26 (the east-west crosswinds runway), both Southwestern Gas and Apple Valley Ranchos have lines underneath the runway protection zone. In both cases, the company's lines were designed to stay as close to Ramona Road as possible while avoiding the runway itself, and shifting slightly westward to occupy the space underneath the protection zone. Verizon has also indicated that it expects to eventually run its lines underneath the airport runway, and that it would most likely collocate with Southern California Edison's electricity lines.

[7] Personal Communication, Richard Dykas, Supervisor of the Capacity Section of the Western Pacific Region of Federal Aviation Administration (FAA), Los Angeles, February 2006