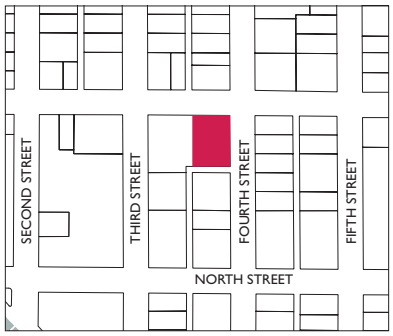
PUBLIC FACILITIES, SERVICES & INFRASTRUCTURE 9

This chapter provides recommendations for improvements to public facilities, services and infrastructure.

A. Parks and Open Space

FIGURE 9-1 Plaza Location



Civic Plaza

A new civic plaza is proposed on the existing Community Center parking lot, the location of which is shown Figure 9-1. This concept is detailed in Chapter Three of this Specific Plan. This plaza will provide a new amenity on Fourth Street and will create a new central public space for the entire Downtown. The civic plaza will also be suited to hold events, such as farmers' markets and other similar activities. This improvement should be phased with a comprehensive expansion of the existing Civic Center, which would include a strategy to provide replacement parking for the parking spaces currently located at this site.

Downtown plaza.

Downtown plaza.

Whitmore Park.

Whitmore Park Improvements

New landscape improvements are proposed for Whitmore Park, including a landscaped enclosure at the western edge to provide increased enclosure for the park, provide a physical buffer between the park and the freeway, and help mitigate freeway noise. A new landscape enclosure and other park improvements should be designed according to Crime Prevention Through Environmental Design (CPTED) and should allow for visibility into Whitmore Park from surrounding roadways. CPTED principles are discussed in greater detail in Section B of Appendix A of this Specific Plan. Improvements should be designed to preserve and enhance existing features, such as the barbeque area, war memorial, and gazebo. It is recommended that improvements to Whitmore Park be undertaken by the City in the middle phases of the fifteen year implementation schedule for the Specific Plan, which is detailed in Chapter Ten, Implementation. Cost estimates and potential financing strategies are also provided in Chapter Ten.

Whitmore Green

A new green space is proposed for the Whitmore Mansion site. This new green space will complement the existing Whitmore Park and provide an important new amenity for this portion of the Downtown. Provision of this space may require a public private partnership to ensure public access. It is proposed that the Whitmore Mansion continue to function as a special event center for Ceres. As Downtown redevelops and parking demand for functions at the Mansion increase, shared parking opportunities should be explored with the school properties across the street. Parking facilities for School District properties are generally unused in the evening.

Water Tower Pocket Park

A new small park is proposed along Fifth Street, adjacent to the historic Whitmore House and Museum and the Ceres Water Tower. This park would provide a neighborhood amenity and celebrate these historic structures. It would also act as a pedestrian and bicycle connector between Fifth Street and Sixth Street. A new park at this location should be designed according to Crime Prevention Through Environmental Design (CPTED) principles, which are discussed in greater detail in Section B of Appendix A in this Specific Plan.

Neighborhood Park.

B. Libraries

Gondring Memorial Library.

The Gondring Library is located at the southwest corner of the Third Street/Magnolia Street intersection. This existing library is approximately 4,500 square feet. A library is a healthy civic use for Downtown and it is recommended that the existing library be replaced with a new facility with increased capacity.

Stanislaus County's 2006-2007 Capital Improvement Plan identifies Ceres as the future location of a 25,000-square foot regional library facility. Building on this, a new library is recommended for the west side of Second Street, across from the existing courthouse facility. A new library at this location will become the western bookend of an expanded Civic Core and will provide a meaningful terminus for the pedestrian paseo.

C. Public Services

Many of the public safety facilities are located in the Downtown on the west side of Third Street, between Magnolia and North Streets.

Fire Station #1.

Fire Service

Fire Station #1, the City's recently constructed Downtown station, has adequate capacity to serve the needs of development anticipated by the Specific Plan. Fire Station #1, located within the Downtown, would serve new development associated with the Plan, with Station #4 providing backup if needed. Emergency service is a critical advantage in that these services would be quickly available to increased resident numbers anticipated to occur with implementation of this Specific Plan. Given this location, new development within Downtown would likely be served within the average response time, or less. New residents and commercial, office, and civic space recommended in the Specific Plan would require the hiring of additional personnel. However, the additional firefighters could be accommodated within Station #1 and the other stations, which are not fully staffed. This fire station will remain in place through implementation, and any expansion of the existing Civic Center should take into account and be closely coordinated with fire service operations.

Ceres Police Building.

Police

The Police Division's headquarters is located within the Public Safety Building on Third Street in Downtown and includes Administrative Offices, the Investigative Bureau, the Patrol Bureau, the Record Bureau, the Volunteers in Public Service Training, Community Service Officers, the Central Dispatch Office, a parking facility, and a storage area for equipment. This provides an extremely important resource for Downtown

as it redevelops and increases in density, and demand increases for police services. This valuable Downtown resource should remain in place through implementation, and any expansion of the existing Civic Center should take into account and be closely coordinated with police operations.

D. Educational Facilities

This section discusses the future of education facilities in and near Downtown.

Downtown School District Facilities

Walter White Elementary, Argus Continuation/Endeavor Alternative High School and a number of school district administration buildings are located in Downtown. The school properties are generally bounded by Sixth and Ninth Streets at the west and east, respectively. Magnolia and Lawrence Streets form the northern and southern boundaries. It is proposed that these academic uses continue to function as schools and administration buildings. City staff should work with the school district to identify opportunities for student activities and to ensure that any property improvements are consistent with the vision for Downtown. If school facilities are relocated in the future, City staff should work with the school district on property conveyance. If redeveloped, school properties could present an array of development opportunities for Downtown.

Ceres High School

Ceres High School is located just north of Downtown, across Whitmore Avenue. Although Ceres High School does not serve students living in the Specific Plan Area, the school is a key institutional use in Downtown and its impact should be considered as new development and public improvements take place. As such, improvements to Whitmore Avenue in Downtown should be coordinated with the School District, to ensure safety and seamless integration with student transportation services. City staff should work with Ceres High School to identify opportunities for student activities and property improvements which are consistent with the vision for Downtown.

Ceres High School.

Future School Capacity

Build out of the Specific Plan will add students to schools that already exceed capacity. To mitigate this, developers for projects within the Downtown will be required to pay school impact fees.

E. Utility Infrastructure

This section provides an overview of the utility infrastructure improvements that will be required to support the development anticipated from the Specific Plan. Recommendations for storm drainage, wastewater and water utilities are provided. Additional details regarding existing infrastructure and improvements to accommodate Specific Plan implementation can be found in the Downtown Ceres Specific Plan/EIR Infrastructure Summary Memo prepared by Jacobs Engineering Group in 2009. Chapter Ten, Implementation, provides details about the cost of all proposed infrastructure improvements described below. Since utility infrastructure issues are often a citywide issue, Downtown-specific infrastructure improvements should be re-evaluated as system improvements are made in other parts of the city. All new development in Downtown will pay impact fees toward funding required infrastructure improvements.

Water

Domestic water is provided to Downtown by the City of Ceres municipal water system. Wells are Ceres' only water supply source.

Water System Assessment

The existing water system was examined and the following assessments were made:

- The City of Ceres water system has enough volume to serve the Downtown Specific Plan study area in average day and maximum day demands.
- The City of Ceres water system does not have sufficient pressure to serve the Downtown Specific Plan Area under fire flow demands.
- In order to increase pressure in the study area, the City should install additional pumps, renovate the existing water tower or construct a new water tower.
- Upgrades to a number of pipes will be required, and two options are presented in the study mentioned above. It is recommended that the City implement Option 2, upgrade pipes in Magnolia Street, since that will result in easier construction and fewer direct connections to be replaced.

TABLE 9-1 Specific Plan Area Water Demand

	Average (gpm)	Peak (gpm)
Existing	144	440
Proposed	178	540

Table 9-1 shows existing water demand in the Downtown and projected demand under implementation of the Specific Plan in gallons per minute (gpm).

Recommended Water System Improvements

Two options are presented for upgrades to the existing water infrastructure system to ensure adequate capacity under implementation of the Specific Plan. Option 1 includes removing the existing 6-inch water pipes within the Fourth Street/Fifth Street Alley, North Street, Second Street, and Magnolia Street, and replacing them with an 8-inch main connection to the existing 10-inch main in Lawrence Street. The Central Avenue pipe would be replaced with a new 12-inch main. Table 9-2 shows the improvements recommended in Option 1. Costs to implement Option 1 are contained in the Downtown Ceres Specific Plan/EIR Infrastructure Summary Memo prepared by Jacobs Engineering Group in 2009.

TABLE 9-2 Recommended Improvements to Water System (Option 1)

Pipe Location	Improvement Limits	Length of Pipe (ft)	Existing Diameter (in)	New Diameter (in)
Fourth / Fifth Street Alley	Lawrence Street to North Street	515	6	8
North Street	Fourth / Fifth Street Alley to Second Street	500	6	8
Second Street	North Street to Magnolia Street	600	6	8
Magnolia Street	Second Street to Central Avenue	350	6	8
Central Avenue	Magnolia Street to Whitmore Avenue	550	6	12

A second option for water system improvement is to remove the existing 6-inch water pipes within Magnolia Street and Central Avenue and replace them with 8-inch and 12-inch connections respectively to the existing 8-inch main in Ninth Street. Table 9-3 shows the improvements recommended in Option 2. Costs to implement Option 2 are contained in the Downtown Ceres Specific Plan/EIR Infrastructure Summary Memo prepared by Jacobs Engineering Group in 2009.

TABLE 9-3 Recommended Improvements to Water System (Option 2)

Pipe Location	Improvement Limits	Length of Pipe (ft)	Existing Diameter (in)	New Diameter (in)
Magnolia Street	Ninth Street to Central Avenue	2,630	6	8
Central Avenue	Magnolia Street to Whitmore Avenue	550	6	12

Although Option 1 would have lower materials costs, improvements would traverse an alley. It is assumed that Option 1 will require more reconnections to existing services. In addition, there are sewer and dry utility connections within a number of alleys in the Downtown. Replacement of the water pipe within the Fourth Street/Fifth Street Alley may become cumbersome once the existing utilities and direct service connections are encountered. As stated above and for these reasons, Option 2 is recommended for Downtown.

Regardless of which improvement option is implemented, a new water tank or potable well may need to be installed to accommodate demand for increased water pressure under implementation of the Specific Plan. The citywide water system should be carefully considered upon design of a new water tank. It is proposed that the existing water tower be retained for the character and aesthetic value it adds to Downtown.

The estimated cost to implement Option 2 improvements to support implementation of the Specific Plan is presented in Chapter 10, Implementation.

Stormwater

Storm drainage in Downtown is managed via overland flow in gutters, an underground storm drainage pipe system, several dry well systems, and various french drain systems. Storm drainage system capacity is currently inadequate to convey the 10- and 100-year storm events. Furthermore, a French drain was recently installed on Ninth Street, which makes this area one of the most well-drained areas in Ceres.

Stormwater Infrastructure Assessment

After review of the existing and proposed conditions, the following issues have been identified and will be further discussed in this section:

- Where a storm drain system exists, pipes should be upgraded to carry the 10-year (10 percent chance of recurrence) storm.
- Downtown areas currently served by existing dry well systems are currently experiencing localized flooding. The existing dry wells should be repaired to improve functionality of the system. In some locations a backup French drain system should be installed.

Recommended Stormwater Infrastructure Improvements

Table 9-4 shows recommended improvements to ensure adequate flow under current conditions and with implementation of the Specific Plan.

TABLE 9-4 Recommended Improvements to Drainage System

Improvements	Location	Quantity	Unit	Existing Diameter (in)	Proposed Diameter (in)
Pipe Upsize	**Central Street** - Magnolia Street to Whitmore Avenue	550	LF	18	24
Pipe Upsize	**Whitmore Avenue** - Third Street to Second Street	600	LF	30	36
Pipe Upsize	**Whitmore Avenue** - Second Street to El Camino Lift	600	LF	30	48
Pipe Upsize	**Lawrence Street** - Fifth Street to Fourth Street	400	LF	18	24
Pipe Upsize	**Lawrence Street** - Fourth Street to El Camino Lift	250	LF	18	36
Pipe Upsize	**El Camino Avenue** [1] - Second Street to Detention Basin (Pine Street)	700	LF	18	36
Drainage Swale	**Fifth Street**	1,600	LF	——	——
Drainage Swale	**North Street** - Both Sides	1,900	LF	——	——
Drywell Repair	——	1	AL	——	——
French Drain	**Magnolia Street**	500	LF	——	24
Abandon Storm Drain	**Pine Street** - Across Highway 99	500	LF	18	——
Bore and Jack Storm Drain	**Pine Street** - Across Highway 99	500	LF	——	24
Manholes	——	20	EA	——	——
Drainage Inlets	——	13	EA	——	——

[1] Requires horizontal directional drilling under Highway 99.

The dry wells in Magnolia Street have a relatively large cumulative contributing stormwater shed, and thus this area should have a backup French drain system installed. However, streetscape improvements are planned for North, Third, Fourth, and Fifth Streets, and these areas are good candidates for the backup French drain system as well.

The City's Street Maintenance Department has indicated that the dry well drainage systems have been underperforming, in that the street tends to flood in areas served by these systems even in storm events that do not produce exceptionally large flow rates. One reason that the dry well systems are failing is that the systems were not well maintained until recently. The systems are fairly old, and some are starting to need replacement (e.g. corrugated metal pipe is rusting). In addition, the Street Maintenance Department fields many customer complaints regarding areas served by these systems. If these systems are to remain in place, the following actions should be taken to ensure their future adequacy:

- Analyze each rock well drain system and determine which are failing and need replacement.
- Replace damaged or rusting pipes.
- Perform outreach (e.g. mailers or newspaper notices) to educate customers on what dry wells are, how they work, and how to keep them functioning.
- Connect dry wells which handle flows from larger stormwater sheds to French drain systems.

Dry well systems are a "green" solution to stormwater and allow drainage to percolate into the soils and recharge groundwater aquifers. These dry well systems should be maintained to prevent inundation of the storm water pipe system and downstream basins. Table 9-4 describes improvements that could be made to the dry well system to improve performance.

The estimated cost for stormwater infrastructure improvements to support implementation of the Specific Plan is presented in Chapter 10, Implementation.

Wastewater

Sewer demands in Downtown are serviced by the City's municipal sewer system and wastewater treatment plant. The sewer system serving Downtown discharges to the Pine Street Lift Station.

Wastewater System Assessment

The existing sewer system was examined and following assessments were made:

- The City of Ceres Waste Water Treatment Plant and the Pine Street Lift Station have adequate capacity to serve the Downtown.
- The pipe conveying effluent from the Pine Street Lift Station to the Waste Water Treatment Plant lacks capacity to serve the downtown area and other contributing sewer sheds and will need to be upgraded.
- Several wastewater pipes within the Downtown lack capacity and will need to be upgraded.

Table 9-5 shows existing wastewater flows in the Pine Street Lift Station sewer shed and the estimated flow increase from implementation of the Specific Plan.

Recommended Wastewater System Improvements

Table 9-6 shows recommended improvements to ensure adequate capacity and flow under current conditions and with implementation of the Specific Plan.

TABLE 9-5 Sanitary Sewer Flow

	Water Shed	Acres	Average Dry Weather Flow (gpd)	Peaking Factor	Peak Dry Weather Flow (gpd)	Peak Wet Weather Flow (gpd)
Existing	Pine Street Lift Station	375	549,066	3	1,647,198	1,656,267
Proposed	Pine Street Lift Station	375	689,415	3	2,068,245	2,079,632

TABLE 9-6 Recommended Improvements to Sewer System

Pipe Location	Improvement Limits	Length of Pipe (ft)	Existing Diameter (in)	New Diameter (in)
Fourth / Fifth Alley	North Street to Park Street	1,118	6	8
Ninth Street [1]	Magnolia Street to Roeding Road	2,095	8	10
Roeding Road	Ninth Street to Sixth Street	954	8	12
Sixth Street	Roeding Road to Park Street	392	8	12
Sixth Street	Magnolia Street to Roeding Road	1,693	8	10
Park Street	Sixth Street to Fourth/Fifth Street	608	8	15
Across Highway 99	Park Street to Pine Street Lift	336	12	18

[1] As an alternative to replacing the 9th Street main, a new line could be installed on Magnolia Street, from 9th Street to 6th Street and the 6th Street main could be upgraded from an 8-inch to 12-inch pipe. This would disrupt fewer services.

When designing improvements to the existing infrastructure, a field survey should be completed to ensure all contributing upstream sewer sheds have been accounted for in the downstream pipes and to verify sizes and slopes of existing pipes compared to current and needed capacity. In addition, existing sewer shed boundaries should be maintained to minimize the need for infrastructure upgrades downstream of the project area. Trenchless inspection of the system (i.e. TV inspection) should be utilized to determine the condition of the existing infrastructure with regard to cracks, tree root intrusion, corrosion, and other factors which could cause increased infiltration, and therefore decreased capacity, to the system.

Replacement of the sewer main from the Downtown to the sewer lift station will require horizontal directional drilling across Highway 99. The existing 12-inch pipe would most likely be abandoned in place. The existing pipe should be filled with controlled low strength materials or capped at each end. Another possibility would be to retain the existing pipe, but a secondary pipe would still be required.

During peak demands and peak wet weather demands, the Pine Street Lift station's outfall pipe from the lift station to the wastewater treatment plant is inadequate to convey the amount of effluent being pumped by the lift station's pumps. Other sewer sheds besides Downtown's combine with the outfall pipe and a larger scale study would be required to adequately size the remainder of the outfall pipe. Solving this problem will require a citywide effort, and costs are not included in this analysis. This issue is anticipated to be addressed with a wastewater master plan, scheduled to be prepared in 2010.

The estimated cost for wastewater infrastructure improvements to support implementation of the Specific Plan is presented in Chapter Ten, Implementation.

Dry Utilities and Undergrounding

Electricity, natural gas, telephone, internet and cable television are available in the Specific Plan Area. Utility providers for electricity, natural gas, telephone, internet and cable television do not currently have plans for future improvements. These services follow demand and providers are prepared to provide adequate service to new development that occurs under the Specific Plan.

Utility undergrounding is recommended as appropriate. Undergrounding overhead utilities visible from Fourth Street should be a priority. Any utility undergrounding should be undertaken in coordination with new development and additional public improvements to ensure efficiency. While it is a long term goal of the Specific Plan for Downtown utility wires to be undergrounded where feasible and for developers to consider undergrounding in coordination with construction, decisions regarding details of utility undergrounding will be considered and evaluated on a case-by-case basis in consultation with City staff.

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