

➤ Infrastructure Element





Infrastructure - Sanitary Sewer Sub-Element

GOAL: The goal of the sanitary sewer and lift station network is to protect the health of the residents and to preserve the environment by collecting, treating and disposing of wastewater in a fashion that is cost-effective and that encourages orderly growth.

OBJECTIVE1: The City shall correct existing deficiencies and increase the capacity of the sanitary sewer system to meet projected demands as they occur.

POLICY 1.1: The useful life of the current system shall be preserved and made more efficient through a preventive maintenance program.

STANDARD 1.1.1: Annual work program includes periodical inspection of lift stations and force mains, gravity sewer system and manholes, and replacement or repair of needed facilities.

POLICY 1.2: The City shall require that new facilities and improvements to existing facilities meet the projected demands.

STANDARD 1.2.1: Lift stations continue to pump peak flow with the largest pump out of service.

STANDARD 1.2.2: Maximum velocity in force mains shall be 5fps, flowing full. Gravity sanitary sewers flow approximately one-half full at peak flow.

STANDARD 1.2.3: Cleansing velocity in gravity sewers of approximately 2 fps.

STANDARD 1.2.4: Existing facilities to limit infiltration/inflow entering the City's wastewater collection system to less than 1000 gallons per day per inch mile (GPDIM). New facilities to limit infiltration/inflow entering the City's wastewater collection system to less than 600 gallons per day per inch mile (GPDIM).

POLICY 1.3: The City shall improve the existing sanitary sewer system.

STANDARD 1.3.1: Improvements recommended by Boyle Engineering Corporation in "Sewer Collection System, Manhole, Valves, and Lift Stations Evaluation Final Report", Chapter 7, updated April, 1997 are to be included in a capital improvements program, as appropriate.

STANDARD 1.3.2: Within the five-year capital improvement program, include completion of a backup power supply to ensure that all major lift stations can be operated simultaneously.

POLICY 1.4: If the capacity the City reserved at Iron Bridge wastewater treatment facility is not sufficient to serve the future service area assigned, then the City shall implement a flow reversal to the Altamonte Springs wastewater treatment facility, as approved by the Federal and State government.

STANDARD 1.4.1: Determine actual capacity allocation at Iron Bridge for the future service area by December, 2002.

STANDARD 1.4.2: If capacity at Iron Bridge is insufficient, then one of the Flow Reversal Alternatives recommended by Boyle Engineering in the updated study dated April 1997, shall be completed by the end of December, 2007.

POLICY 1.5: Monitor the sewer collection system to ensure efficient expansion and maintenance.

STANDARD 1.5.1: Every five years, the documentation on the condition of the sewer shall be updated.

STANDARD 1.5.2: Catalog sewer flow monthly to determine if capacity is being reached and to assess any problems.

STANDARD 1.5.3: Submit annual progress reports to City Council to evaluate work program for sewer system.

STANDARD 1.5.4: Within regulations for all new development and redevelopment, require certified "as built" drawings of underground utilities to be given to the Public Works Department by the developer to update the sewer system inventory.

STANDARD 1.5.5: Practice a drill annually to ensure adequate service during power failure.

POLICY 1.6: The City shall ensure that adequate treatment capacity is available to serve the present and future demands as they occur.

OBJECTIVE 2: The City shall protect the environment from wastewater pollution.

POLICY 2.1: The City shall require that all residents and owners of developed property connect to the sanitary sewer system when capacity becomes available for the respective area.

STANDARD 2.1.1: Maintain list of property owners using septic tanks in Maitland in office of the Public Works Director.

STANDARD 2.1.2: Maintain guidelines under which property owners currently using septic tanks connect to the City sewer where the sewer line is accessible and when capacity becomes available.

STANDARD 2.1.3: Waive the City connection fee for persons currently using septic tanks, whose infrastructure is in place and who elect to hook up to central sewer before December, 2003.

POLICY 2.2: The City shall give priority for sewer system expansion to neighborhoods currently serviced by septic tanks.

STANDARD 2.2.1: Within the capital improvements program, sewer system extensions to areas on septic tanks are given priority over extension to new development except in instances where developer or area residents fund extension in its entirety.

POLICY 2.3: The City shall permit septic tanks only in areas where such installation would not be harmful or potentially harmful to lakes, canals or groundwater, and where sewer connection is not possible.

POLICY 2.4: No package plants will be allowed in the City.

OBJECTIVE 3: Revenues produced by rates shall cover expenditures for the sanitary sewer system.

POLICY 3.1: The City shall adjust rates for sewer service to pay for maintenance and general service costs.

POLICY 3.2: For capital costs, the City shall require new developments to fund needed improvements to service the respective project.

POLICY 3.3: For capital costs, the City shall use debt service, increased rates, or assessments to fund needed improvements to service the respective project beneficial to the area.

STANDARD 3.3.1: Debt service, increased rates or special assessments are implemented to fund improvements to the sewer system serving established residences or businesses.

POLICY 3.4: For annexed areas, where Public Works extension is preferred, the City shall extend services which meet City standards.

POLICY 3.5: For annexed areas where Public Works extension is either not viable or inefficient, the City shall consider use of franchise fees and regulations to guarantee service which meets City standards.

OBJECTIVE 4: Maintain coordination with jurisdictions responsible for sewage collection and treatment in all of Maitland and its entire Planning Area.

POLICY 4.1: The City shall maintain agreements with Orlando for use of Iron Bridge wastewater treatment facility.

POLICY 4.2: The City shall ensure that agreements with Altamonte Springs are renewed and updated to service the areas not serviced by Iron Bridge for the present and future users in the Planning Areas.





Infrastructure - Solid Waste Sub-Element

GOAL: To provide solid waste collection and disposal service at the lowest possible cost to accommodate existing and future development in a manner that protects the health and safety of Maitland citizens and the business community.

OBJECTIVE 1: Maintain the level of service for solid waste collection at a range between 3.5 and 4 pounds/per person/per day.

POLICY 1.1: The City shall plan and implement an educational program to influence the citizens to reduce the amount of solid waste that is discarded.

POLICY 1.2: The City shall cooperate with Orange County or another appropriate jurisdiction in establishing and carrying out programs to recover resources from the garbage stream.

STANDARD 1.2.1: The City shall continue to fund and implement State-mandated recycling program in conjunction with Orange County or another appropriate jurisdiction.

STANDARD 1.2.2: Where possible, the City shall purchase recycled products and shall promote “buy recycled”.

POLICY 1.3 The City shall cooperate with Orange County by providing recycling volume data to enhance regional recycling efforts.

POLICY 1.4: The City shall continue to promote private sector participation in resource recovery to the extent feasible.

OBJECTIVE 2: Require all citizens and businesses participate in the garbage collection system and maintain an equitable rate structure.

POLICY 2.1: The City shall establish and maintain a rate structure that is fair to consumers and fully covers the cost of operating the solid waste management system.

STANDARD 2.1.1: Examine the rates annually.

STANDARD 2.1.2: Adjust rates as needed to cover the cost of operation.

POLICY 2.2: Rates shall be structured to reflect the relative cost of collection.

POLICY 2.3: The City shall require that all residents and businesses participate in the garbage collection and recycling systems.



Solid Waste



The City is currently served by Florida Recycling Services for solid waste collection, disposal and recycling services.





Infrastructure - Stormwater Sub-Element

GOAL: Ensure that every street in the City has safe and adequate stormwater drainage to minimize the hazardous and adverse effects of surface water and flooding while maintaining the physical and environmental integrity of the City.

OBJECTIVE 1: The drainage system shall be managed to minimize property damage, other hazards and maximize personal safety during flood conditions.

POLICY 1.1: The City shall upgrade existing drainage facilities to manage surface water quality as well as quantity where practical.

STANDARD 1.1.1: Stormwater/Lake Management Plan, Final Report, dated July 1996 shall be updated by the City every ten years and used to review the entire stormwater drainage system including the effectiveness of Best Management Practices (BMP) installed and new technologies available and will make revisions as necessary. This includes pollution abatement.

STANDARD 1.1.2: Replace storm manholes and storm inlets where deteriorated and provide additional drainage structures where needed.

POLICY 1.2: The City shall require all new development to provide storm water management facilities which maintain or improve a safe and healthy environment.

STANDARD 1.2.1: Review and update the Maitland City Code as required by the end of December, 2006.

STANDARD 1.2.2: No standing water or excessive ponding occurs on any local collector with significant traffic.

STANDARD 1.2.3: In coordination with the Comprehensive Development Plan Conservation Element, water quality in lakes shall be maintained or improved, if feasible within financial resources of the City.

POLICY 1.3: The City shall monitor and maintain the storm sewer system.

STANDARD 1.3.1: The Public Works Department shall continue to maintain existing preventive maintenance program so that all City-maintained facilities including gutters, catch basins, swales, retention and detention ponds, outfalls, and underground piping, are periodically inspected and scheduled for service.

STANDARD 1.3.2: Train and assign sufficient manpower to maintain system in working condition, by inspecting, cleaning and repairing each outfall bimonthly.

STANDARD 1.3.3: Budget sufficient funds each year to maintain the storm water management system in working condition.

POLICY 1.4: The City shall continue to fund needed storm sewer improvements.

STANDARD 1.4.1 Maintain storm system capital improvements program.





Infrastructure - Potable Water Sub-Element

GOAL: To provide sufficient volume of potable water at adequate pressure from the supply source to consumers for domestic use, irrigation, industrial, firefighting and sanitary purposes by providing facilities that consist of collection, storage, transmission, pumping, distribution and treatment works.

OBJECTIVE 1: Upon adoption of Dyer, Riddle, Mills and Precourt Plan, “Potable Water Production System and Distribution System Evaluation Update” dated August 1992, implement procedures to ensure that when a development permit is issued, adequate facility capacity is available to serve the demands created by the development. By the end of fiscal year 2002, make all improvements to correct existing deficiencies identified in the report.

POLICY 1.1: A unit average daily flow (ADF) demand rate of 350 gallons per day per Equivalent Residential Connection (ERC) has been established as the level of service standard for the potable water system and shall be used as the basis for determining the availability of facility capacity and the demand generated by a development.

The potable water system fire protection level of service is established as providing a minimum of the domestic maximum daily flow (MDF) plus a required fire flow (RFF) of at least 500 gallons per minute (GPM) in existing single family residential areas, 1000 GPM in existing duplex residential areas, and a required fire flow (RFF) as established in accordance with Annex H, Fire Flow Requirements for Buildings, NFPA 1 as adopted in the Florida Fire Prevention Code which shall be modified periodically per Chapter 633, Florida Statutes, for all new residential subdivisions, multi-family dwellings, and commercial developments. The fire flow shall be measured at a minimum rate of 25 psi residual pressure.

When determined by the City that the adopted fire flow requirements cannot be met, the City shall have the authority to accept alternative methods as it deems appropriate.

POLICY 1.2: By December 2006, the City shall develop regulations, specifications and standards for water system construction to ensure that water systems to be owned, operated and maintained by the City are designed and constructed in accordance with minimum requirements of the City. Examples of minimum requirement criteria include fire flow capability, distribution system looping for reliability and hydraulic efficiency, and minimum system pressures under different flow conditions (i.e., peak hour) as well as current Federal and State regulatory standards which may apply.

POLICY 1.3: All improvements for replacement, expansion or increase in capacity shall be compatible with the adopted level of service standard for the water facilities.

POLICY 1.4: Provision of water service shall be consistent with the future land use growth policies of the City, and shall be limited to the existing service area, or the projected service area where the City has a legal commitment to provide service.

POLICY 1.5: The City shall continue to update demand on facilities and capacity information.

POLICY 1.6: The City shall coordinate and, when necessary, negotiate interlocal agreements with local governments adjacent to its service area to ensure that their Comprehensive Development Plans and procedures are compatible with the City's regarding water service and service areas.

POLICY 1.7: The City shall continue to negotiate agreements with private enterprises to ensure that their procedures are compatible with the City's Comprehensive Development Plan regarding water service and service areas.

OBJECTIVE 2: Upon adoption of this Plan, provide potable water system improvements and expansion in a timely, cost effective and equitable manner.

POLICY 2.1: The City shall maintain consumption-based user fees which generate sufficient revenues to ensure proper operation and maintenance, expansion, development and perpetuation of the water system as well as maintenance of the water utility's financial integrity.

POLICY 2.2: The City shall require that future users of the water system shall be responsible for expansion and/or construction costs of production facilities, transmission/distribution mains and any other related improvements resulting from their impacts. These improvements shall be constructed in accordance with the City's standards and deeded to the City at no prior cost for operation and maintenance.

POLICY 2.3: The City shall operate the potable water system in an efficient manner to optimize reliable water production and delivery in accordance with all standards and regulations governing public water systems.

POLICY 2.4: Water system improvements and expansions shall be given priority for implementation using City funds based on the following criteria:

- * Public and City personnel health and safety
- * Current regulatory requirements
- * System reliability
- * System growth

OBJECTIVE 3: With the adoption of this Plan, provide existing and future users the highest quality of potable water available through prudent resource management.

POLICY 3.1: The City shall require all development to be serviced by a centralized water system and shall discourage the use of private wells for potable water supply.

POLICY 3.2: The City shall continue to actively support and join State and county efforts to define recharge areas, and to control the type and intensity of development in these areas so as to protect and conserve the City's groundwater resources.

POLICY 3.3: The City shall protect the City's water supply wells by ensuring that no chemical, biological or radiological waste is disposed of in a manner which could contaminate or harm the City's groundwater resources.

POLICY 3.4: The City shall maintain a water system cross connection control program for the purpose of detecting and preventing cross connections that create or have the potential to create an imminent and substantial danger to the public health.

POLICY 3.5: The City shall continue agreements to maintain its Potable Water Service Area within the Planning Area.

POLICY 3.6: The City shall monitor chemicals in the water supply and shall ensure safe use of chemicals.

POLICY 3.7: The City shall research alternative uses to chemicals for its water treatment.

OBJECTIVE 4: Consistent with Objective 10 of the Conservation Element, the City shall maintain a program of water conservation.

Potable Water Well 6A



Well 6A located at the City of Maitland's Ballfield Complex west of Keller Road.





Infrastructure - Pavement Sub-Element

GOAL: Maintain the City's streets in a condition that provides safe and comfortable vehicular and pedestrian travel that is efficient and cost effective.

OBJECTIVE 1: The City shall continue a roadway management program within the capital improvements program.

POLICY 1.1: The City shall monitor roadways to ensure that the adopted quality is being maintained or upgraded.

STANDARD 1.1.1: Update the Pavement Rating Condition Program annually and use as a bench mark for evaluation and base categories for the inventory and Capital Improvement Projects.

POLICY 1.2: On an annual basis, the City shall include routine maintenance and preventive maintenance within the budget to avoid continued deterioration and costly reconstruction.

STANDARD 1.2.1: Include funding in the capital improvements program to implement program.

POLICY 1.3: The City shall determine inclusion of maintenance projects in the budget based on decision-making criteria to provide for efficient and cost-effective program.

STANDARD 1.3.1: The following shall influence inclusion in the maintenance program:

- * focusing on roadways requiring reconstruction or rehabilitation to raise the overall network average pavement condition rating.
- * deferring action on roadways that are in a condition which precludes applying preventive maintenance actions, but do not, at present, necessitate rehabilitation techniques.
- * selecting projects consisting of similar work types in a given year to promote competitive bidding and lower unit costs.
- * repairing the entire length of a roadway, wherever fiscal resources permit, in a given year, except when changes in roadway conditions dictate that this approach would not be cost effective.
- * including projects as part of an area improvement where other improvements are programmed (e.g.: sidewalks, drainage, utility improvements).

POLICY 1.4: The City shall ensure that roadway maintenance programs are funded.

STANDARD 1.4.1: General revenue shall be used for maintenance and reconstruction of local and major roads.

OBJECTIVE 2: Maintain the City's roadway network at an average pavement condition rating of at least 70, as defined in the Vanasse, Hangen, Brustlin study dated March 1989.

POLICY 2.1: New development shall be required to construct roadways which meet City and State DOT standards.

STANDARD 2.1.1: Land development regulations shall include standards for roadway construction.

POLICY 2.2: The City shall ensure that maintenance, rehabilitation and reconstruction projects meet the standards established for new construction.



Keller Road



The Comprehensive Development Plan requires new development to construct roadways which meet City and State DOT standards. The photo above depicts Keller Road improvements accomplished in conjunction with the Maitland Promenade office building construction project.





Infrastructure - Fire Department Sub-Element

GOAL: To provide adequate life safety, fire protection and emergency medical services to Maitland residents.

OBJECTIVE 1: Maintain or improve the current level of service.

POLICY 1.1: The City shall hire and train enough new staff to maintain an adequate amount of personnel to service the City.

STANDARD 1.1.1: Maintain adequate staffing to deliver 4 firefighters, initially, on emergency calls within the adopted response time standard.

STANDARD 1.1.2: Maintain adequate staffing to assure an Incident Commander on emergency incidents.

POLICY 1.2: The fire department shall maintain an adequate response time for service calls.

STANDARD 1.2.1: Achieve service response time of 5 minutes for emergency calls and 10 minutes for non emergency calls for 90% of total calls in all districts.

POLICY 1.3: The City shall fund existing fire programs to maintain an adequate level of service.

STANDARD 1.3.1: All departmental programs shall be reviewed and evaluated for continuation on an annual basis.

STANDARD 1.3.2: Fund fire department programs to maintain and/or replace existing services.

POLICY 1.4: The City shall use developer agreements and other user funding sources to pay for large specialized equipment items needed on high-rise buildings.

OBJECTIVE 2: Improve the capability for coping with natural disasters such as hurricanes, tornadoes, and flooding.

POLICY 2.1: The City shall use special educational opportunities for personnel training.

POLICY 2.2: The City shall maintain programs to educate the community about disasters and appropriate community response.

STANDARD 2.2.1: Publish regular articles in newsletter and maintain telephone notification system in an effort to keep the Community informed.

POLICY 2.3: The City shall schedule public training meetings about disaster preparation.

STANDARD 2.3.1: Include scheduled training programs in MAITLAND MAGAZINE or other publications. Scheduled disaster preparedness education will be advertised on the City's internet homepage.

POLICY 2.4: The City shall ensure disaster drills maintain awareness of necessary operations during an emergency, including all City departments.

STANDARD 2.4.1: Practice a disaster drill once each year.

POLICY 2.5: The City shall periodically review and implement, as suitable, new technology, equipment and procedures designed to minimize the impact and/or recovery from natural disasters.

OBJECTIVE 3: Improve the capability for coping with man-made disasters such as domestic terrorism events, major (multiple-vehicle) traffic accidents, train wrecks or derailments, chemical or toxic waste spills and extended power blackouts.

POLICY 3.1: The City shall send personnel for specialized training.

POLICY 3.2: The City shall maintain and continually revise a Comprehensive Emergency Plan.

POLICY 3.3: The City shall apply for grants and otherwise fund equipment deemed necessary for management of man-made disasters.

OBJECTIVE 4: Expand the physical space for the department to maintain an adequate service level.

POLICY 4.1: The City shall plan and budget Fire Station #47 to be located west of Interstate 4.

STANDARD 4.1.1: Complete the facility by the end of fiscal year 2003.

STANDARD 4.1.2: Interlocal Mutual Fire and Disaster Aid agreement was signed on January 7, 1992 involving Orange County/Seminole County/Altamonte Springs/Maitland. Continually review the effectiveness of the initial agreement and modify response zones as necessary.

POLICY 4.2: The City shall plan and budget expansion of present quarters.

STANDARD 4.2.1: Construction to be completed by the end of fiscal year 2005.

OBJECTIVE 5: Expand building and fire safety activities.

POLICY 5.1: The City shall review and recommend fire safety and building design codes and standards that would reduce the risk of fire.

STANDARD 5.1.1: Revise regulations to include fire safety and building codes and standards compatible with new research.

STANDARD 5.1.2: Ensure an adequate staff of trained Fire Code and Building Code Inspectors to accomplish all plans review and inspections functions associated with new construction projects.

POLICY 5.2: The City shall maintain a program to inspect all non-residential establishments and multi-family residential developments.

STANDARD 5.2.1: Maintain performance measures for scheduling of Engine Company Surveys and Routine Fire Inspections.

STANDARD 5.2.2: Develop a computerized inspection assignment, tracking, and data-gathering program for Engine Company Surveys and Routine Fire Inspections by the end of calendar year 2005.

STANDARD 5.2.3: Ensure an adequate staff of trained Engine Company and Fire Code Inspectors to accomplish these inspections.

POLICY 5.3: The City shall continue with a program which provides smoke detectors to residents on a request basis and continue pursuit of outside grants.

STANDARD 5.3.1: Coordinate with City staff to apply for at least one program grant each year as available.

POLICY 5.4: The City shall improve residential fire safety programs to serve Maitland citizens.

STANDARD 5.4.1: Evaluate, modify and update fire prevention, life safety and education activities directed at Maitland residents.

OBJECTIVE 6: Coordinate fire services with other jurisdictions to maintain the adopted levels of service.

POLICY 6.1: The City shall maintain Mutual Aid associations with surrounding jurisdictions to provide adequate levels of service to emergency scenes.

POLICY 6.2 Periodically review response zones to insure an equitable exchange of resources.



City of Maitland Fire Station #45



City of Maitland Fire Station located within the City’s municipal complex.





Infrastructure - Police Department Sub-Element

GOAL: The goal of the Maitland Police Department is to enhance the quality of life for all residents through the protection of life and property, the preservation of peace, the protection of individual rights, and an increased sense of personal security and safety.

OBJECTIVE 1: Improve citizen awareness of and participation in public safety issues.

POLICY 1.1: The City shall continue to develop and improve programs aimed at informing and educating the citizens.

STANDARD 1.1.1: Continue to measure citizen awareness of police and fire programs and goals by means of a community opinion survey at least once each year.

STANDARD 1.1.2: Continue to review published material to find additional educational or informational resources to improve citizen awareness of public safety issues.

POLICY 1.2: The City shall continue to sponsor and fund the Neighborhood Watch and Lake Watch programs.

POLICY 1.3: The City shall continue to cooperate with other local jurisdictions to exchange ideas about public safety awareness by attending workshops and exchanging materials and ideas.

OBJECTIVE 2: The City shall maintain or improve the current level of service.

POLICY 2.1: The City shall review and evaluate for continuation all department programs on an annual basis.

POLICY 2.2: The City shall continue to try to reduce the Service Standard Index to a level appropriate for the area.

STANDARD 2.2.1: Develop uniform standards of performance measurement for various classes of employees.

POLICY 2.3: The City shall ensure that response to service calls continues to be effective.

STANDARD 2.3.1: Maintain an average response time of less than three minutes.

OBJECTIVE 3: Expand the physical space for the department.

POLICY 3.1: The City shall plan and budget space for Police Department use in conjunction with the Fire Department sub-station west of I-4.

POLICY 3.2: In conjunction with the Space Needs Plan, the City shall plan and budget expansion of present quarters.

STANDARD 3.2.1: Adopt Space Needs Plan by the end of December 2002.

OBJECTIVE 4: Maintain a communication network to link all City departments and surrounding jurisdictions.

OBJECTIVE 5: Expand crime prevention activities.

POLICY 5.1: The City shall continue investigation of design standards to be adopted that would strengthen crime prevention and household security.

POLICY 5.2: The Police Department shall continue development of specific crime prevention programs that may be suitable for funding through outside grants.

STANDARD 5.2.1: The Police Department shall request assistance from City staff to apply for grant programs as needed.

POLICY 5.3: The Police Department shall continue to develop and implement crime prevention activities.



City of Maitland Police Department



Fleet Vehicle – City of Maitland Police Department.



The City of Maitland furthers the objectives of the Police Department sub-element in development and implementation of crime prevention education through the DARE Program.

