



Staff Report

RESOLUTION APPROVING A PROFESSIONAL SERVICES AGREEMENT WITH BKF ENGINEERS FOR STORM DRAIN EVALUATION AND MASTER PLAN STUDY FOR AN AMOUNT NOT TO EXCEED \$152,000

Honorable Mayor and Council Members:

Summary

City Council approval is requested for a professional services agreement with BKF Engineers for the storm drain system evaluation and development of the storm drain master plan. The master plan is needed to guide the next multi-year phase of storm drain system rehabilitation program.

Background

The existing stormwater collection system of the City of Belmont ranges in age from 40 to 100 years and consists of approximately 50 miles of gravity storm drain mains. The pipes range in size from 8 inches diameter to 12' x 8' storm drain box culverts under the railroad track. The City collection area is approximately 3000 acres and the system serves a population of about 25,000 residents.

Basic City and storm drain information is summarized in the following table:

Item (15 Drainage Basins)	Quantity	Unit
Area within City Limits	2,955	Acres
Length of storm drains	260,000	Feet
Storm drain manholes	650	Each
Storm drain catch basins	1,900	Each
Number of pump stations	2	Each
Number of creeks	2	Each
Length of creeks	25,000	Feet

A Storm Drain Master Plan Study was last conducted in 1980 and a new evaluation is needed to guide the next storm drain capital improvement program. The existing storm drain system is old and undersized in many areas. Most of the older pipe networks were constructed with corrugated metal pipes (CMP), which have severely corroded in many areas.

A major rehabilitation project to replace the rusted CMP is needed to prevent development of sinkholes such as the one that developed recently on Coronet Boulevard. Many areas in the City also have no storm drain system which contribute to many flooding problems resulting from the lack of runoff containment within the public right-of-way. Replacement of leaking storm drain pipes and installation of new pipes to intercept surface water will substantially reduce the infiltration of storm water to underground and the sewer collection system.

The new Storm Drain Master Plan will also set up design guidelines for the City to comply with the National Pollutant Discharge Elimination System (NPDES) C3 requirements for new development projects. The State Regional Water Quality Control Board requires all local agencies to adopt a new program, design standards and hydromodification model for development project reviews related to water quality issues. The new hydromodification model will assist the City to set up guidelines for hydraulic analysis within the creek area.

Discussion

The City budgeted \$200,000 in FY05-06 to start the Storm Drain Master Planning project. In August 2005, City staff conducted a selection process to choose consultant services to update the City's Storm Drain Master Plan. The Request for Proposals stated that the consultant must include the following scope of work for completion of the master plan:

1. Kick-off meeting with City staff to review scope of work, confirm project schedules, and collect all necessary data from the City.
2. Review and confirm the accuracy of the data received from the City.
3. Assist City staff to develop new drainage design standards.
4. Review storm drain television inspection reports to determine condition and age of existing systems.
5. Supplemental surveys to field check data in areas where the accuracy of the estimated elevations may adversely affect the storm drain modeling results.
6. Prepare hydrologic calculations consistent with current local methods.
7. Prepare computer model of the existing storm drain system.
8. Modeling of Belmont and Laurel Creeks to be linked to the storm drain system so that backwater effects can be analyzed.
9. Assist the City in developing plans and goals to meet NPDES requirements.
10. Identify and prioritize improvement projects based on degree of flood hazard, age, and condition of pipes. Projects include improvements to existing system, street improvements, possible detention basins, and new storm drain design. Improvements to be designed so that the 100-year event is contained within the public right-of-way, per FEMA National Flood Insurance Program.
11. Outline standard Best Management Practices (BMPs) for proposed development, redevelopment, and maintenance.

12. Prepare a prioritized storm drain Capital Improvement Program (CIP) which includes improvement pipe sizes, estimated costs, flow rates, and system capacity.
13. Outline yearly maintenance and replacement schedules and costs for the storm drain system.
14. Prepare a storm drain budget plan for the City and outline funding possibilities for the CIP and annual maintenance program.
15. Provide basic storm drain model training to the City staff once model is finalized.

Six qualified civil/storm engineering consultants submitted proposals to the City:

1. BKF Engineers
2. Nolte
3. Winzler & Kelly
4. RBF Consulting
5. Dodson Engineers
6. Wilsey Ham

A City staff procurement committee consisting of the City Engineer, Senior Engineer/Storm Program Manager and Assistant Engineer independently screened and ranked these proposals based on the following criteria:

- Team Experience for Similar Services
- Team Members Experience
- Project Approach
- Understanding of City's Needs
- References

After discussing the results of this screening evaluation, the procurement committee decided to invite BKF Engineers, Nolte and Winzler & Kelly for a presentation and interview. At the end of this process, the committee selected BKF Engineers based on qualifications and experience in the Storm Master Planning field. The selection process was according to the California Government Code Section 4526: "Notwithstanding any other provision of law, selection by a state or local agency head for professional services of private architectural, landscape architectural, engineering, environmental, land surveying, or construction project management firms shall be on the basis of demonstrated competence and on the professional qualifications necessary for the satisfactory performance of the services required." Therefore, the committee did not use the cost estimate as direct evaluation criteria. As is the standard practice with consultant selection, staff is maintaining a complete procurement evaluation file to demonstrate that this process was conducted in an objective and systematic manner. This file is available for review by interested parties.

The major scope of work for the Storm Drain Master Plan include evaluation of the current storm drain system and related capital improvement projects, preliminary data collection for hydraulic modeling and inflow analysis. The preliminary data collection consisted of extracting storm manhole rim elevations and storm line invert elevations from existing microfiche records, storm paper maps and storm AutoCAD and GIS files.

Other components consist of analysis of flow data, development of the storm rehabilitation program, development of guidelines to comply with the new NPDES requirements (See Attachment B – Project Approach).

The new master plan will also identify a multi-year capital improvement program that will rehabilitate existing corroded, leaking storm pipes and install new systems to intercept surface water from the City right-of-way. This will substantially reduce the infiltration of storm water to the sewer collection systems.

Staff requests City Council's approval of the Professional Services Agreement with BKF Engineers with a budget of \$152,000 plus a 10% contingency of \$15,200. The detailed scope of work, budget and time schedule is attached. It is also requested that the City Council approve the use of sewer revenue bonds to fund the storm improvement projects to reduce infiltration problems for the existing sewer collection system.

Fiscal Impact

The value of the Professional Services Agreement with BKF Engineers is \$152,000, budgeted in FY 2005-2006, Account Number 525-4315-6049-9030, which is funded by the sewer revenue bond.

Public Contact

Public contact consists of posting the City Council agenda and issuance of Request for Proposal.

Recommendation

It is recommended that the City Council adopt the attached resolution approving the Professional Services Agreement with BKF Engineers with a budget of \$152,000 plus 10% contingency of \$15,200 for the storm drain system evaluation and development of the storm master plan.

Alternatives

1. Refer back to staff for additional information.
2. Deny approval.

Attachments

- A. Resolution
- B. Project Approach & Schedules (Council only)

Respectfully submitted,

Gilbert Yau, P.E.
Senior Civil Engineer

Raymond E. Davis III, PE, PTOE
Director of Public Works

Jack R. Crist
Interim City Manager

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RESOLUTION NO. _____

**RESOLUTION OF THE CITY COUNCIL OF THE CITY OF BELMONT APPROVING
A PROFESSIONAL SERVICES AGREEMENT WITH BKF ENGINEERS FOR
STORM DRAIN EVALUATION AND MASTER PLAN STUDY
FOR AN AMOUNT NOT TO EXCEED \$152,000**

WHEREAS, the City of Belmont had budgeted \$200,000 in FY05-06 to evaluate the City storm drain system and create a storm drain master plan; and,

WHEREAS, in August 2005, the City had solicited proposals from qualified engineering firms to evaluate the City system and prepare a storm master plan; and,

WHEREAS, six consultants submitted their proposals for the project; and,

WHEREAS, BKF Engineers was selected based on qualifications and experience to conduct the project; and,

WHEREAS, the City staff is asking City Council to approve a professional service agreement with BKF Engineers; and,

WHEREAS, the storm drain master plan and its related capital improvement program will identify storm drain improvement projects to substantially reduce infiltration problems for the sewer collection system; and,

WHEREAS, sewer revenue bonds will be used for funding these storm drain improvement projects.

NOW, THEREFORE, BE IT RESOLVED that the City Council of the City of Belmont:

- (1) Directs the City Manager to execute a Professional Services Agreement with BKF Engineers; and,
- (2) Approves the funding for the Professional Services Agreement in the amount of \$152,000 with an additional \$15,200 contingency, from the Capital Improvement Program, Account Number 525-4315-6049-9030 to be funded by sewer revenue bonds.
- (3) Approve the use of sewer revenue bonds to fund the storm improvement projects to reduce infiltration problems for the existing sewer collection system.

* * * * *

I hereby certify that the foregoing Resolution was duly and regularly passed and adopted by the City Council of the City of Belmont at a regular meeting thereof held on October 25, 2005 by the following vote:

AYES, COUNCILMEMBERS: _____

NOES, COUNCILMEMBERS: _____

ABSTAIN, COUNCILMEMBERS: _____

ABSENT, COUNCILMEMBERS: _____

CLERK of the City of Belmont

APPROVED:

MAYOR of the City of Belmont