

City of Brisbane

Agenda Report

TO: Honorable Mayor and City Council

FROM: Randy Breault, Director of Public Works/City Engineer and City Manager

SUBJECT: Engineering Consultant for the 2015 Water and Sewer Master Plan Update

DATE: January 15, 2015

City Council Goals:

To design infrastructure and public facilities to be efficient, cost effective and to contribute to the cohesion and character of the community (#2)

To maintain and improve infrastructure (#3)

Purpose: To approve an agreement to update the 12-year old Water and Sewer Master Plans.

Recommendation:

Authorize the Mayor to sign the Professional Services Agreement with Erler & Kalinowski, Inc. in the amount of \$190,500 to perform the work described in Exhibit A to the Agreement.

Background:

The latest Water and Sewer Master Plans were completed in 2003. These plans are important tools to evaluate the City's existing water and sewer infrastructure, and to recommend improvements necessary to handle the future anticipated demands on the utility systems. Regular updates of these plans on an approximate 10-year cycle are indispensable to maintaining a valid long-term Capital Improvement Plan (CIP) based on current engineering criteria and on the latest planning projections.

Discussion:

California Government Code §4526 requires the selection of professional engineering services to be made “. . . on the basis of demonstrated competence and on the professional qualifications necessary for the satisfactory performance of the services required.”

Staff has in-depth recent experience working with EKI - in response to emergency rulemaking regulations issued by the State Water Resources Control Board, EKI was engaged on 7/8/14 to

develop a Water Shortage Contingency Plan (WSCP). The prompt development of a WSCP was necessary to allow the city's water systems to respond in a fashion that "fit" our city and to also be in full compliance with the regulations. EKI responded with alacrity, and working with multiple staff from the Engineering and City Attorney's offices developed a WSCP that was presented to the city Council on 8/21/14 as a major portion of the city's Water Conservation Program (i.e., Ordinance No. 589).

Based on the demonstrated competence and professionalism presented to both staff and the Council, staff has full confidence that EKI possesses the professional qualifications necessary to perform the engineering work needed to update our Master Plans. The Scope of Work for the plans was initially developed by staff, and then negotiated with EKI, both as to content and as to final price.

The City Attorney has reviewed and approved the attached Agreement for Professional Services.

Fiscal Impact:


The Council approved \$200,000 for this work effort in the Utilities Enterprise Fund of the FY14-15 City budget.

Measure of Success


Completion of an updated Water and Sewer Master Plan.

Attachments:

Agreement for Professional Services with Erler & Kalinowski, Inc.



Director of Public Works/City Engineer



City Manager

AGREEMENT FOR PROFESSIONAL SERVICES

THIS AGREEMENT, dated _____, is made by and between THE CITY OF BRISBANE, a municipal corporation ("City"), and Erler & Kalinowski, Inc., a California corporation ("Consultant").

RECITALS

A. City desires to retain Consultant for the performance of certain professional engineering services for completion of the 2015 Water and Sewer Master Plans ("the Project").

B. Consultant represents that Consultant is specially trained, experienced, and qualified to provide such professional services and is willing to do so pursuant to the terms and conditions of this Agreement.

AGREEMENT

1. **Scope of Services.** Subject to the direction and approval of City through its staff that City may provide from time to time, Consultant shall perform the services described in Exhibit A attached hereto and incorporated herein by reference. All services shall be performed to the reasonable satisfaction of the City department head in charge of the Project. All plans, specifications, estimates, and engineering data furnished by Consultant to City shall be signed by the responsible engineer, with registration number indicated where appropriate.

2. **Time of Performance.** The services of Consultant shall commence upon the issuance by City of a Notice to Proceed and shall be satisfactorily completed by September 2015, unless subject to delays beyond the reasonable control of Consultant.

3. **Responsible Personnel.** The personnel acting on behalf of Consultant primarily responsible for performance of the services hereunder shall be Anona Dutton.

4. **Compensation.** As compensation for all services to be performed by Consultant under this Agreement, Consultant shall be paid the amounts set forth in Exhibit B attached hereto and incorporated herein by reference. The lump sum amounts set forth in Exhibit A include salary, fringe benefits, overhead, profit, and other expenses to be incurred by Consultant. In no event shall Consultant's total compensation exceed the sum of \$190,500 without additional written authorization from City. Payment by City under this Agreement shall not be deemed a waiver of defects, even if such defects were known to City at the time of payment.

5. **Method of Payment.** Consultant shall submit billings to City describing in detail the work performed for which payment is requested, the date the services were performed, the number of hours spent and by whom, and a description of any reimbursable

expenditures. Billings shall be submitted at such time as agreed upon between City and Consultant. City shall pay Consultant no later than 30 days after approval of the invoice by City staff. If City objects to all or any portion of the billing, City shall notify Consultant of the nature of such objection and the amount in dispute. City shall pay when due the portion of the billing, if any, that is not in dispute. The parties will make a good faith effort to settle the disputed billing through good faith negotiations.

6. Maintenance and Inspection of Records. Consultant shall maintain any and all ledgers, books of account, invoices, vouchers, canceled checks, time cards, and other records or documents relating to charges for services or expenditures charged to City, for a minimum of three (3) years from the date of final payment to Consultant under this Agreement and shall make the same available to City or its authorized representatives for inspection and audit, at any time during regular business hours, upon written request by City. Consultant shall also make such records and documents available for inspection and audit upon request by any representatives of the State or Federal government. The right of inspection shall include the right to make extracts and copies.

7. Assignment and Subcontracts. Consultant acknowledges that Consultant's special skill and expertise is a material consideration for City entering into this Agreement. Consultant shall not assign, subcontract or delegate to any other party the performance of any services to be rendered by Consultant under this Agreement without the prior written approval of City. If City consents to any subcontracting of work, Consultant shall be fully responsible to City for all acts or omissions of the subcontractor. Each subcontractor must agree in writing to comply with all of the applicable terms and conditions of this Agreement.

8. Correction of Work. Consultant shall promptly correct any defective, inaccurate or incomplete tasks, deliverables, goods, services, or other work, without additional cost to City. The performance or acceptance of services furnished by Consultant shall not relieve Consultant from the obligation to correct subsequently discovered defective, inaccurate, or incomplete performance of Consultant's services hereunder.

9. Ownership of Documents. All final plans, studies, documents and other writings prepared by and for Consultant in the course of performing its services under this Agreement, except working notes and internal documents, shall become the property of City upon payment to Consultant for such work, and City shall have the sole right to use such materials in its discretion without further compensation to Consultant or to any other party. Consultant shall, at Consultant's expense, provide such reports, plans, studies, documents and other writings to City upon written request. Consultant shall not be responsible for any reuse of such documents by City which is unrelated to the Project and City agrees to indemnify, defend, and hold Consultant and its subcontractors harmless against any claims of liability arising from such reuse by City.

10. Independent Contractor. Consultant is, and at all times shall remain, an independent contractor, and not an agent, officer or employee of City. As an independent contractor, neither Consultant nor any of its agents or employees shall be entitled to any salary, fringe benefits, worker's compensation, retirement contributions, sick leave,

insurance or other benefit or right connected with employment by City, or any compensation other than as provided in this Agreement. Consultant shall have no power or authority to bind City to any contract or otherwise to incur any obligation or liability for, or on behalf, or in the name of City.

11. **Licenses.** Consultant represents and warrants to City that it has all licenses, permits, qualifications, insurance and approvals of whatsoever nature that are legally required of Consultant to practice its profession. Consultant shall, at its sole cost and expense, keep and maintain such licenses, permits, qualifications, insurance and approvals current and in full force and effect at all times during the term of this Agreement. Consultant shall maintain a current City of Brisbane business license.

12. **Compliance with Standards of Care and Laws.** Consultant shall adhere to the standard of care in its profession and shall use due professional care to comply with all applicable federal, state and local laws, codes, ordinances and regulations in connection with the performance of its services under this Agreement. Without limiting the generality of the foregoing, Consultant shall comply with the Federal Acquisition Regulations as set forth in CFR Title 48, Part 31 and CFR Title 49, Part 18, to the extent the same are applicable to the performance of Consultant's services under this Agreement.

13. **Errors and Omissions.** (Not Used)

14. **Indemnity.** Consultant shall indemnify, defend, and hold City, its officers, officials, agents, employees and volunteers, harmless from and against any and all claims, demands, causes of action, losses, damages, injuries, expenses and liabilities, including reasonable attorney's fees, to the extent caused by the negligent performance by Consultant or any of its subcontractors, agents or employees, of any services under this Agreement or the failure by Consultant or any of its subcontractors, agents or employees to comply with any of their obligations contained in this Agreement, and City shall not be liable for any acts or omissions of Consultant or any of its subcontractors, agents or employees.

15. **Insurance.** Consultant, at its own expense, shall procure and maintain, for the duration of this Agreement, insurance policies which satisfy the following requirements:

(a) Type of policies and coverage:

(1) *General Liability Coverage.* Consultant shall maintain commercial general liability insurance in an amount not less than \$1,000,000 per occurrence for bodily injury, personal injury and property damage, providing coverage at least as broad as Insurance Services Office Commercial General Liability form CG 0001 (Ed. 11/88). If the form of insurance with a general aggregate limit is used, either the general aggregate limit shall apply separately to the work to be performed under this Agreement or the general aggregate limit shall be at least twice the required occurrence limit.

- (2) *Automobile Liability Coverage.* Consultant shall maintain automobile liability insurance in an amount not less than \$1,000,000 combined single limit for each occurrence, for bodily injury and property damage, providing coverage at least as broad as Insurance Services Office form CA 0001 (Ed. 12/90) Code 1 (any auto).
 - (3) *Workers' Compensation and Employer's Liability Coverage.* Consultant shall maintain workers' compensation insurance as required by the State of California and employer's liability insurance in an amount not less than \$1,000,000 per occurrence, for any and all persons employed by Consultant in connection with the performance of services under this Agreement. In the alternative, Consultant may rely on a self-insurance program to provide this coverage so long as the program of self-insurance complies fully with the provisions of the California Labor Code. The insurer, if insurance is provided, or Consultant, if a program of self-insurance is provided, shall waive all rights of subrogation against City for loss arising from work performed by Consultant for City.
 - (4) *Professional Liability Coverage.* Consultant shall maintain professional errors and omissions liability insurance in an amount not less than \$1,000,000 per claim and \$2,000,000 annual aggregate, covering negligent acts, errors or omissions which may be committed by Consultant in the performance of its services under this Agreement.
- (b) Endorsements: Each general liability and automobile liability insurance policy shall contain, or be endorsed to contain, the following provisions:
- (1) The City, its officers, officials, employees, and volunteers are to be covered as insureds as respects: liability arising out of activities performed by or on behalf of Consultant; products and completed operations of Consultant; premises owned, occupied or used by Consultant; or automobiles owned, leased, hired or borrowed by Consultant. The coverage shall contain no special limitations on the scope of protection afforded to City, its officers, officials, employees, or volunteers.
 - (2) For any claims related to the Project, Consultant's insurance coverage shall be primary insurance as respects the City, its officers, officials, employees, and volunteers. Any insurance or self-insurance maintained by City, its officers, officials, employees, or volunteers shall be excess of Consultant's insurance and shall not contribute with it.
 - (3) Any failure to comply with reporting or other provisions of the policies including breaches of warranties shall not affect coverage provided to City, its officers, officials, employees, or volunteers.
 - (4) Consultant's insurance shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the limits of the insurer's liability.

- (5) Consultant's insurance coverage shall not be canceled except after thirty (30) days' prior written notice has been given to City by the carrier. Consultant shall immediately give written notice to City of any suspension or reduction in coverage or limits.
- (c) Deductibles and Self-Insured Retentions. Any deductibles or self-insured retentions exceeding \$50,000 must be declared to and approved by City. At City's option, Consultant shall demonstrate financial capability for payment of such deductibles or self-insured retentions.
- (d) Acceptability of Insurers. Insurance is to be placed with insurers having a current A.M. Best rating of no less than A:VII, unless otherwise approved by City in writing.
- (e) Verification of coverage. Consultant shall provide certificates of insurance with original endorsements to City as evidence of the insurance coverage required by this Agreement. Certificates of such insurance shall be filed with City before commencement of work by Consultant. At the request of City, Consultant shall provide complete, certified copies of all required insurance policies, including endorsements effecting the coverage required by this Agreement.

16. **Notices.** Any notices required or permitted to be given under this Agreement shall be in writing and shall be either personally delivered or sent by certified mail, return receipt requested, addressed to the other party as follows:

To City	City of Brisbane Attn: Director of Public Works/City Engineer 50 Park Lane Brisbane, CA 94005
To Consultant	Erler & Kalinowski, Inc. Attn: Anona Dutton 1870 Ogden Drive Burlingame, CA 94010

17. **Resolution of Disputes; Litigation Expenses and Attorneys' Fees.** In the event of any dispute between the parties pertaining to this Agreement, the parties shall endeavor in good faith to resolve such dispute through mediation before the commencement of legal action by one party against the other. If either party to this Agreement commences any legal action against the other party to enforce or interpret this Agreement, the prevailing party shall be entitled to recover all costs and expenses that may be incurred in connection therewith, including court costs, expert witness fees, discovery expenses, and attorneys' fees.

18. **Termination of Agreement.** This Agreement may be terminated immediately by either party, effective upon written notice, should the other party commit any material default in the performance of its obligations hereunder. This Agreement may

also be terminated by either party, for any reason, upon fifteen (15) day's prior written notice to the other party. In the event this Agreement is terminated by City through no fault of Consultant, Consultant shall be compensated for all services performed to the date of termination.

19. **Equal Opportunity Employment.** Consultant warrants that it is an Equal Opportunity Employer and shall comply with applicable regulations governing equal opportunity employment.

20. **Miscellaneous Provisions.**

- (a) Severability. Should any portion of this Agreement be declared void or unenforceable in a final decision by a court of competent jurisdiction, such decision shall not affect the validity of the remainder of this Agreement, which shall continue in full force and effect, provided that the remainder of this Agreement can be reasonably interpreted to implement the intention of the parties.
- (b) Entire Agreement. This Agreement constitutes the entire agreement between the parties and supersedes and cancels all prior agreements or understandings, whether written or verbal.
- (c) Amendments. This Agreement may be modified or amended only by a written document duly executed by both City and Consultant.
- (d) Waiver. The waiver of any breach or default under this Agreement shall not constitute a continuing waiver of a subsequent breach of the same provision or any other provision of this Agreement.
- (e) Execution. Each party warrants that the individuals signing this Agreement on its behalf have the legal power and authority to do so and to bind the party to this Agreement.
- (f) Successors and Assigns. Subject to the restriction against assignment and subcontracting, this Agreement shall be inure to the benefit of and shall be binding upon the heirs, personal representatives, successors and assigns of the parties hereto.

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IN WITNESS WHEREOF, the parties have executed this Agreement the day and year first above written.

THE CITY OF BRISBANE

By: _____
Terry O'Connell, Mayor

ATTEST:

Sheri Marie Spediacci, City Clerk

APPROVED AS TO FORM:

Michael Roush, City Attorney

CONSULTANT:

Michelle Kriegman-King, Ph.D.
President

EXHIBIT A
Scope of Work for Preparing Sanitary Sewer and Water System Master Plan Updates
City of Brisbane, California

Erler & Kalinowski, Inc (“EKI”) is pleased to present a scope of work (“SOW”) for preparing an update to the City of Brisbane’s (“City’s”) Sanitary Sewer Master Plan (“SSMP”) and Water System Master Plan (“WSMP”). Tables 1 and 2, included herein, contains estimated costs to complete the SOW based on the key assumptions outlined below, including costs for the specialized subconsultants that would be part of EKI’s team. For budgeting purposes, we have assumed that the SSMP update will be coordinated with the WSMP update to enhance the efficiency of both projects and that both updates will begin in January 2015 and be completed by September 2015.

PROPOSED SCOPE OF WORK – SANITARY SEWER MASTER PLAN UPDATE

Task 1: Planned Project Meetings and Communication

As part of Task 1, EKI team will coordinate with key City staff at regular intervals during the SSMP update process. EKI anticipates hosting monthly conference calls to update the City on the progress of work. In addition, EKI proposes to hold up to three working meetings with City staff, including engineers, supervisors, operators, and other personnel familiar with the sewer system, to obtain information regarding the sewer system and to present preliminary findings and solicit feedback from City staff. These meetings are planned at the kick-off and at the 30% and 90% completion milestones of the SSMP. Because project update meetings are also planned as part of the WSMP update, EKI has assumed that the meetings can be conducted jointly. Therefore, the preliminary budget for this task has been distributed equally between the two scopes of work.

Major Scope Items

- Monthly Conference Calls: Up to 6 conference calls.
- Working Meetings: Meetings at kick-off and at 30% and 90% milestones.
- Staff Report: Staff report for City review and transmittal to City Council members prior to presentation of the SSMP.
- City Council Presentation: Presentation of the findings of the SSMP to City Council.

Anticipated Submittals:

- Progress summaries, agendas, meeting hand-outs, and meeting minutes.
- Information in the form of tables, figures, or presentations for use during meetings and conference calls.
- Staff report for submittal to City Council prior to presentation of the SSMP.

EXHIBIT A
Scope of Work for Preparing Sanitary Sewer and Water System Master Plan Updates
City of Brisbane, California

Substantive Assumptions

- To facilitate more efficient communications and project progress, EKI has assumed the City will ensure that appropriate staff attend the conference calls and working meetings.

Task 2: Hydraulic Model Verification

In Task 2, EKI will review the City's existing sewer system computer model and update the model with information related to additional developments, replacement of sewer pipes, or other available, relevant information regarding changes to the sewer system since the 2003 SSMP. The model update is intended to make the model more representative of the existing layout, condition, operation and performance of the City's sewer system. Additionally, the model update will re-evaluate assumptions regard wet-weather flow and peaking factors to help gauge areas of potential hydraulic deficiencies.

Major Scope Items

- Discussion Regarding Desired Modeling Platform. EKI understands that the City's existing water system computer model is in SewerCAD format. It is EKI's experience that this model format is no longer in common use and has generally been replaced with other modeling software that is GIS-based. The City may want to consider converting to a more commonly used modeling platform, such as Innovyze H2OMAP Water.
- Existing Model Review and Update:
 - Review the City's existing SewerCAD model to confirm that it is operational and flows approximately match current flows.
 - Identify new capital improvements to the system, and incorporate them into the City's existing SewerCAD model such that the model generally reflects the conditions of the sewer system.
- Update Sewer Flows: Update estimated sewer flows using recent water use data.
- Model Verification: Perform model verification runs with updated model and with varying peaking factors to ensure proper model construction.
- Prepare Technical Memorandum #1: Prepare a technical memorandum summarizing the results of the sewer system model update.

Anticipated Submittals

- Copy of the SewerCAD version of the City model that has been updated with information regarding improvement projects implemented since the 2003 SSMP and new flow data.
- Technical Memorandum #1: Sewer Flow Assessment and Sewer System Hydraulic Model Update.

EXHIBIT A
Scope of Work for Preparing Sanitary Sewer and Water System Master Plan Updates
City of Brisbane, California

Substantive Assumptions

- Costs for this task include four months of SewerCAD model rental, but exclude the costs of purchasing different software or exporting the model to different software platforms.
- The City will provide the necessary documentation and a full set of the most current plans showing pipeline alignments, invert elevations, diameters, pipe materials, and lift station facility configurations, including any updates since the 2003 SSMP.
- The City will provide recent water billing data by address that can be spatially referenced by street address or Assessor's Parcel Number to update base sewer flow inputs.
- In order to avoid the expense of wet-weather flow monitoring, EKI assumes wet weather conditions will be modeled as a series of escalating conservative peaking factors, similar to the approach used in the 2003 SSMP. Based on the results of the modeling, EKI will develop recommendations regarding capital improvement projects ("CIPs").
- EKI assumes that the City's existing model will be directly usable in the format provided and that changes to the model made by the City since 2003 can be readily identified.
- The City will not collect and field measurements as part of this effort and model calibration against field measurements will not be conducted.
- EKI will incorporate City comments on Technical Memorandum #1 into the SSMP document prepared as part of Task 6.

Task 3: Comparison of Previous Condition Assessments to Completed Projects

In Task 3, the EKI will review the previous condition assessment conducted as part of the 2003 SSMP and compare the assessment to projects implemented by the City since that time. Based upon this review and comparison, EKI will identify outstanding projects that may need to be completed and their priority.

Major Scope Items

- Document Review: Review previous condition assessments as documented in the 2003 SSMP relative to the capital projects implemented to date to address identified infrastructure deficiencies. Confirm findings of review with City staff.
- Prepare Technical Memorandum #2: Prepare a summary condition assessment update and recommend areas for update and/or future study.

Anticipated Submittals

- Technical Memorandum #2: Existing Facilities Condition Assessment Update

EXHIBIT A
Scope of Work for Preparing Sanitary Sewer and Water System Master Plan Updates
City of Brisbane, California

Substantive Assumptions

- The City will provide information regarding the previous condition assessment and improvement projects conducted to address identified deficiencies. The information will be provided to EKI verbally and will be supported by available documentation.
- No field site investigations will be conducted.
- Appropriate and knowledgeable staff will be available to meet with EKI.
- EKI will incorporate City comments on Technical Memorandum #2 into the SSMP document prepared as part of Task 6.

Task 4: Collection System Analysis under Existing and Future Conditions

In Task 4, the EKI team will utilize the updated model developed as part of Task 2 to evaluate the flow conditions of the overall sewer collection system under existing and future conditions. Two future build-out scenarios for the Baylands Development analysis (i.e., the Developer Plan and the Community Plan), as well as three new development projects planned at Sierra Point will be included in the analysis.

Major Scope Items

- Perform Model Simulations Under Existing Conditions:
 - Utilize the updated and verified model to evaluate the flow conditions of the overall collection system under existing conditions.
 - Analyze where potential hydraulic constraints may exist and estimate the need for infrastructure replacement.
 - Determine potentially appropriate CIPs to address issues identified in the modeling.
- Perform Model Simulations Under Future Conditions:
 - Utilize the updated model to evaluate the flow conditions of the overall collection system at the end of the 25-year planning horizon (2040).
 - Evaluate two build-out scenarios for the Baylands Development specified by the City, and develop additional facilities (incremental needs) for each scenario and Sierra Point projects.
 - Analyze where potential hydraulic constraints may exist under future flow and build-out conditions and estimate the need for infrastructure replacement.
- Prepare Technical Memorandum #3: Summarize the results of the model runs, including identification of areas where pipes or other infrastructure may need to be upsized based on the results.

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City of Brisbane, California

Anticipated Deliverables:

- Copy of the updated SewerCAD model that includes future build-out projections.
- Technical Memorandum #3: Sewer System Analysis under Existing and Future Conditions.

Substantive Assumptions

- EKI assumes the City representatives will be available to assist and provide input for the evaluations identified in this task, including which two Baylands Development scenarios should be included in the simulations.
- EKI assumes that future flow projections will be based off of the City's recent DSS Model demand projections and underlying assumptions, as described in Task 2 of the WSMP scope of work.
- EKI will incorporate City comments on Technical Memorandum #3 into the SSMP document prepared as part of Task 6.

Task 5: SCADA System Peer- Review Evaluation

As part of this task, EKI will perform a review of a proposal submitted to the City by Telstar for upgrading the City's SCADA system.

Major Scope Items

- Meet with City Brisbane to establish intentions and expectations for the SCADA system;
- Review existing hardware and software (SCADA Central and representative remote sites);
- Identify relevant existing documentation;
- Review documentation and contact Telstar (telephone) to discuss status;
- Review Telstar proposal details against documentation; establish level of completion and likelihood of meeting City needs; and
- Coordinate project with EKI efforts on the CIP process including project delivery options (sole source, standalone Contractor bid package, engineering services RFP, etc.).

Anticipated Submittals

- There is no separate written submittal anticipated as part of this task. Any findings or discussions will be presented in the SMP.

Substantive Assumptions

- Includes one four hour discovery workshop with staff for planning level input for SCADA and security system.

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City of Brisbane, California

- Site inspections related to electrical and SCADA infrastructure limited to visual observations only. Physical access to energized panels is not included. If necessary, physical access can be provided by a licensed electrician as an additional service.

Task 6: Prepare Sewer System Master Plan Update

This SSMP update is designed to facilitate the City's future approach to identifying, scheduling, and budgeting capital improvements to the sewer system. In Task 6, EKI will document the assumptions, calculations, sewer model parameters, scenarios, and evaluations (either quantitative or qualitative) from Tasks 2 through 5. In addition, the SSMP update will include the identification of CIPs and areas for further study to address anticipated growth and demand, potential sewer system needs, and alternatives to meet the identified needs through the planning period.

Major Scope Items

- Prepare Draft SSMP: Synthesize the results of the analyses from Tasks 2 through 5 in an Executive Summary, and present recommendations in the form of a prioritized list of CIPs and associated planning-level opinion of probable cost ("OPC") estimates. Technical memoranda produced as part of Tasks 2 through 5 will be included as appendices to the SSMP.
- Prepare Final SSMP: Finalize SSMP based on City comments.

Anticipated Deliverables

The updated SSMP document is the key task deliverable.

Substantive Assumptions

- The OPCs will be made to a planning level, with costs rounded to the nearest \$50,000.
- EKI assumes it will receive all City comments, both verbal and in writing, at the time of the 90% draft meeting, and that these comments require no additional computer modeling efforts or other significant scope changes or revisions.

EXHIBIT A
Scope of Work for Preparing Sanitary Sewer and Water System Master Plan Updates
City of Brisbane, California

PROPOSED SCOPE OF WORK – WATER SYSTEM MASTER PLAN UPDATE

Task 1: Planned Project Meetings and Communication

As part of Task 1, EKI will coordinate with key City staff at regular intervals during the WSMP update process. EKI anticipates hosting monthly conference calls to update the City on the progress of work. In addition, EKI proposes to hold up to three working meetings with City staff, including engineers, supervisors, operators, and other personnel familiar with the water system, to obtain information regarding the water system and to present preliminary findings and solicit feedback from City staff. These meetings are planned at the kick-off and at the 30% and 90% completion milestones of the WSMP. Because project update meetings are also planned as part of the SSMP update, EKI has assumed that the meetings can be conducted jointly. Therefore, the preliminary budget for this task has been distributed equally between the two scopes of work.

Major Scope Items

- Monthly Conference Calls: Up to 6 conference calls.
- Working Meetings: Meetings at kick-off and at 30% and 90% milestones.
- Staff Report: Staff report for City review and transmittal to City Council members prior to presentation of the WSMP.
- City Council Presentation: Presentation of the findings of the WSMP to City Council.

Anticipated Submittals:

- Progress summaries, agendas, meeting hand-outs, and meeting minutes.
- Information in the form of tables, figures, or presentations for use during meetings and conference calls.
- Staff report for submittal to City Council prior to presentation of the WSMP.

Substantive Assumptions

- To facilitate more efficient communications and project progress, EKI has assumed the City will ensure that appropriate staff attend the conference calls and working meetings.

Task 2: Water Demand Assessment

In Task 2, EKI will update the City's water demand based upon information contained in the Demand Side System Model ("DSS Model") that the City prepared in conjunction with the Bay Area Water Supply and Conservation Agency ("BAWSCA"), available current billing information, and other information provided by the City or available from publically available sources. EKI will develop updated average daily demands, and maximum day and peak hour peaking factors. EKI's future demand projections will take into account planned future

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City of Brisbane, California

developments, such as the Baylands Development and the anticipated growth in the Sierra Point area. Specifically, the demand assessment will include two different build out scenarios for the Baylands development (i.e., the Developer Plan and the Community Plan) and will include the three new projects planned at Sierra Point.

Major Scope Items

- Data Review: Review of the DSS Model and the available population, land use and billing data and other relevant information provided by the City.
- Updated Demand Assessment: Update average daily demands, maximum day and peak hour peaking factors based on DSS Model demand estimates and current American Water Works Association standards for peaking assumptions. Update fire flow assumptions based on current standards.
- Demand Projections: Conduct demand projections over a 25-year planning horizon.
- Prepare Technical Memorandum: Summarize the results of the demand assessment in a technical memo.

Anticipated Submittals:

- Technical Memorandum #1: Current and Future Water Demand and Peaking Factor Assessment

Substantive Assumptions

- EKI assumes the City representatives will provide the following:
 - The DSS model and relevant back up information and assumptions,
 - Projected land use and population data that can be used in conjunction with other publicly available sources to support future water demand estimates, including the specifics for the Baylands Development scenarios and the Sierra Point projects,
 - Historic water usage and billing information to facilitate demand calculations and peaking factor estimation.
- EKI will incorporate City comments on Technical Memorandum #1 into the WSMP document prepared as part of Task 8.

Task 3: Hydraulic Model Verification and Calibration

In Task 3, EKI will evaluate the City's existing water system computer model and update the model with any known improvements that have been made to the water system. After updating the infrastructure, as represented in the model, the City will conduct hydrant flow testing at specific sites within the City and EKI compare the modeled results to those measured in the field. Based upon these data, EKI will evaluate the extent to which the hydraulic model may have changed relative to the original model and the percent deviation between the model and the

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field measurements. To the extent that the updated model results deviate significantly from the original model and the field measurements (i.e., by greater than 20%), EKI will recalibrate the model.

Major Scope Items

- Discussion Regarding Desired Modeling Platform. EKI understands that the City's existing water system computer model is in WaterCAD format. It is EKI's experience that this model format is no longer in common use and has generally been replaced with other modeling software that is GIS-based. The City may want to consider converting to a more commonly used modeling platform, such as Innovyze H₂OMAP Water.
- Existing Model Review and Update:
 - Review the City's existing WaterCAD model to confirm that it is operational and demands approximately match current demands.
 - Identify new capital improvements to the system, such as new pipelines and changes to storage and pumping facilities capacity, and incorporate them into the City's existing WaterCAD model such that the model generally reflects the conditions of the water system.
- Update Model Input Parameters: Update estimated water demands in the model using recent water use data and updated peaking factors.
- Model Verification Runs: Perform model verification runs with the updated model. Compare model results to original model results and hydrant flow tests performed and documented by the City.
- Model Calibration: Recalibrate model to within 20% of field flow measurements.
- Prepare Technical Memorandum #2: Prepare a technical memorandum summarizing the results of the water system model update, verification and calibration.

Anticipated Submittals:

- Copy of the WaterCAD version of the City model that has been updated with information regarding improvement projects implemented since the 2003 WSMP and the new water demand data.
- Technical Memorandum #2: Water System Hydraulic Model Update.

Substantive Assumptions

- Costs for this task include four months of WaterCAD model rental, but exclude the costs of purchasing different software or exporting the model to different software platforms.
- The City will provide the necessary documentation and a full set of the most current plats showing pipeline alignments, diameters, valve locations, pump station facility

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configurations, reservoir locations and yard piping, and Hetch Hetchy turnout configurations, including any updates since the 2003 WSMP.

- EKI assumes that the City's existing model will be directly usable in the format provided and that changes to the model made by the City since 2003 can be readily identified.
- EKI assumes that the City's existing model will be in good condition, and will not require more than one round of re-calibration following model update and verification runs and comparison to City-provided hydrant flow testing data.
- EKI assumes the City will be available, with reasonable notice, to assist in the collection of measurements during the field verification process (i.e., hydrant flow testing).
- EKI will incorporate City comments on Technical Memorandum #2 into the WSMP document prepared as part of Task 8.

Task 4: Comparison of Previous Condition Assessments to Completed Projects

In Task 4, the EKI will review the previous condition assessment conducted as part of the 2003 WSMP and compare the assessment to projects implemented by the City since that time. Based upon this review and comparison, EKI will identify outstanding projects that may need to be completed and their priority.

Major Scope Items

- Document Review: Review previous condition assessments as documented in the 2003 WSMP relative to the capital projects implemented to date to address identified infrastructure deficiencies. Review and update the design criteria utilized in the 2003 WSMP to evaluate required booster pump capacity (maximum-day criteria and six-hour refill goal) and required storage requirements. Confirm findings of review with City staff.
- Prepare Technical Memorandum #3: Prepare a summary condition assessment update and recommend areas for update and/or future study.

Anticipated Submittals

- Technical Memorandum #3: Existing Facilities Condition Assessment Update

Substantive Assumptions

- The City will provide information regarding the previous condition assessment and improvement projects conducted to address identified deficiencies. The information will be provided to EKI verbally and will be supported by available documentation.
- No field site investigations will be conducted.
- Appropriate and knowledgeable staff will be available to meet with EKI.

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- EKI will incorporate City comments on Technical Memorandum #3 into the WSMP document prepared as part of Task 8.

Task 5: Distribution System Analysis under Existing and Future Conditions

In Task 5, EKI will utilize the updated model developed as part of Task 3 to evaluate the flow conditions of the overall water distribution system under existing and future conditions. Two future build-out scenarios for the Baylands Development will be included in the analysis (i.e., the Developer Plan and the Community Plan), as well as three new development projects planned at Sierra Point.

Major Scope Items

- Perform Model Simulations Under Existing Conditions:
 - Utilize the the updated model to evaluate the flow conditions of the overall distribution system under existing conditions.
 - Identify bottlenecks and areas where pipe or pump station upsizing is needed.
 - Identify where booster pump and/or storage capacities need to be updated to conform to current standards.
- Perform Model Simulations Under Future Conditions:
 - Utilize the the updated model to evaluate the flow conditions of the overall distribution system at the end of the planning horizon (2040).
 - Evaluate two build-out scenarios for the Baylands Development specified by the City, and develop additional facilities (incremental needs) for each scenario and Sierra Point projects.
- Prepare Technical Memorandum #4: Summarize the results of the model runs, including identification of areas where pipes or other infrastructure may need to be upsized based on the results.

Anticipated Deliverables:

- Copy of the updated WaterCAD model that includes future build-out projections.
- Technical Memorandum #4: Distribution System Analysis under Existing and Future Conditions

Substantive Assumptions

- EKI assumes the City representatives will be available to assist and provide input for the evaluations identified in this task,.
- EKI assumes that future demand projections will be based on the City's recent DSS Model demand projections and underlying assumptions, as described in Task 2.

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- EKI will incorporate City comments on Technical Memorandum #4 into the WSMP document prepared as part of Task 8.

Task 6: Preliminary Evaluation of Water Movement to Maintain Water Quality

In Task 6, EKI will evaluate water movement alternatives within the system with the goal of improving the movement, and reducing the age, of water within the system and thus improving water quality. Specific facilities to be addressed are pump stations, storage tanks, and transmission mains for the water system. The goal of these evaluations is to identify potential future capital improvement projects (“CIPs”), operational changes, and/or areas of future study to improve water movement in the system and reduce water age.

Major Scope Items

- Document Review: Review existing operational records, including tank levels and water quality data provided by the City.

Anticipated Submittals:

- Findings of this evaluation will be incorporated into the WSMP document prepared as part of Task 8.

Substantive Assumptions

- EKI assumes the City representatives will be available to assist and provide input for the evaluations identified in this task, including existing operational data and records.
- Modeling and sampling and analysis are not included in the scope of this task.

Task 7: SCADA System Peer-Review Evaluation

As part of this task, EKI will perform a review of a proposal submitted to the City by Telstar for upgrading the City’s SCADA system.

Major Scope Items

- Meet with City Brisbane to establish intentions and expectations for the SCADA system;
- Review existing hardware and software (SCADA Central and representative remote sites);
- Identify relevant existing documentation;
- Review documentation and contact Telstar (telephone) to discuss status;
- Review Telstar proposal details against documentation; establish level of completion and likelihood of meeting City needs; and
- Coordinate project with EKI efforts on the CIP process including project delivery options (sole source, standalone Contractor bid package, engineering services RFP, etc.).

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Anticipated Submittals

- There is no separate written submittal anticipated as part of this task. Any findings or discussions will be presented in the WSMP.

Substantive Assumptions

- Includes one four hour discovery workshop with staff for planning level input for SCADA and security system.
- Site inspections related to electrical and SCADA infrastructure limited to visual observations only. Physical access to energized panels is not included. If necessary, physical access can be provided by a licensed electrician as an additional service.

Task 8: Prepare Water System Master Plan Update

The updates to the WSMP are anticipated to facilitate the City's future approach to identifying, scheduling, and budgeting capital improvements to the water system. In Task 8, the EKI team will document the assumptions, calculations, water hydraulic model parameters, scenarios, and evaluations (either quantitative or qualitative) from Tasks 2 through 7 in an update to the City's WSMP. The focus of the WSMP will be identification of CIPs and areas for further study to address anticipated growth and demand, potential water system needs, and alternatives to meet the identified needs through the planning period

Major Scope Items

- Prepare Draft WSMP: Synthesize the results of the analyses from Tasks 2 through 7 in an Executive Summary, and present recommendations in the form of a prioritized list of CIPs and associated planning-level opinion of probable cost ("OPC") estimates. Technical memoranda produced as part of Tasks 2 through 7 will be include as appendices to the WSMP.
- Prepare Final WSMP: Finalize WSMP based on City comments.

Anticipated Deliverables

The updated WSMP document is the key task deliverable.

Substantive Assumptions

- The OPCs will be made to a planning level, with costs rounded to the nearest \$50,000.
- EKI assumes it will receive all City comments, both verbal and in writing, at the time of the 90% draft meeting, and that these comments require no additional computer modelling efforts or other significant scope changes or revisions.

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COMPENSATION FOR CONSULTING SERVICES

Inasmuch as the exact level of effort to complete the SOW cannot be identified at this time, we propose that compensation for consulting services by EKI this SOW be on a time and expense reimbursement basis in accordance with in accordance with the current Schedule of Charges, dated 1 January 2015 (Attachment 1).

Table 1 - Budget Estimate for Sanitary Water System Master Plan Update

Task	Budget Estimate
Task 1 – Planned Project Meetings and Communication	\$15,000
Task 2 – Water Demand Assessment	\$11,500
Task 3 – Hydraulic Model Verification and Calibration	\$21,000
Task 4 – Comparison of Previous Condition Assessments to Completed Projects	\$7,500
Task 5 – Distribution System Analysis Under Existing and Future Conditions	\$23,000
Task 6 – Preliminary Evaluation of Water Movement to Maintain Water Quality	\$3,500
Task 7 – SCADA System Peer Review Evaluation	\$5,000
Task 8 – Prepare Water System Master Plan Update	\$16,000
TOTAL	\$102,000

Table 2 - Budget Estimate for Sewer System Master Plan Update

Task	Budget Estimate
Task 1 – Planned Project Meetings and Communication	\$15,000
Task 2 – Hydraulic Model Verification	\$18,000
Task 3 – Comparison of Previous Condition Assessments to Completed Projects	\$7,500
Task 4 – Collection System Analysis under Existing and Future Conditions	\$23,000
Task 5 – SCADA System Peer Review Evaluation	\$5,000
Task 6 – Prepare Sewer System Master Plan Update	\$20,000
TOTAL	\$88,500

Client/Address: City of Brisbane
50 Park Place
Brisbane, CA 94005

EXHIBIT B



Proposal/Agreement Date: 6 January 2015

EKI Project # B40043.00

SCHEDULE OF CHARGES FOR ERLER & KALINOWSKI, INC.

1 JANUARY 2015

Personnel Compensation

Classification	Hourly Rate
Officer and Chief Engineer-Scientist	259
Principal Engineer-Scientist	249
Supervising Engineer-Scientist	239
Senior I, Engineer-Scientist	217
Senior II, Engineer-Scientist	203
Associate I, Engineer-Scientist	195
Associate II, Engineer-Scientist	181
Engineer-Scientist, Grade 1	169
Engineer-Scientist, Grade 2	159
Engineer-Scientist, Grade 3	148
Engineer-Scientist, Grade 4	127
Engineer-Scientist, Grade 5	111
Engineer-Scientist, Grade 6	99
Technician	91
CADD / GIS Operator	103
Administrative Assistant	90
Secretary	75

Direct Expenses

Reimbursement for direct expenses, as listed below, incurred in connection with the work will be at cost plus fifteen percent (15%) for items such as:

- a. Maps, photographs, reproductions, printing, equipment rental, and special supplies related to the work.
- b. Consultants, soils engineers, surveyors, drillers, laboratories, and contractors.
- c. Rented vehicles, local public transportation and taxis, travel and subsistence.
- d. Special fees, insurance, permits, and licenses applicable to the work.
- e. Outside computer processing, computation, and proprietary programs purchased for the work.

Communication charges for local and long distance telephone, facsimile transmittal, standard delivery U.S. postage, and routine in-house copying will be charged at a rate of 4% of labor charges. Large volume copying of project documents, e.g., bound reports for distribution or project-specific reference files, will be charged as a project expense as described above.

Reimbursement for company-owned automobiles, except trucks and four-wheel drive vehicles, used in connection with the work will be at the rate of sixty cents (\$0.60) per mile. The rate for company-owned trucks and four-wheel drive vehicles will be seventy-five cents (\$0.75) per mile. There will be an additional charge of thirty dollars (\$30.00) per day for vehicles used for field work. Reimbursement for use of personal vehicles will be at the federally allowed rate plus fifteen percent (15%).

CADD Computer time will be charged at twenty dollars (\$20.00) per hour. In-house material and equipment charges will be in accordance with the current rate schedule or special quotation. Excise taxes, if any, will be added as a direct expense.

Rate for professional staff for legal proceedings or as expert witnesses will be at a rate of one and one-half times the Hourly Rates specified above.

The foregoing Schedule of Charges is incorporated into the Agreement for the Services of Erler & Kalinowski, Inc. and may be updated annually.