



WASHOE COUNTY

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CM/ACM	<u>CS</u>
Finance	<u>DS</u>
DA	<u>PLU</u>
Risk Mgt.	<u>DC</u>
HR	<u>N/A</u>
Other	<u>N/A</u>

STAFF REPORT BOARD MEETING DATE: March 10, 2015

DATE: February 10, 2015

TO: Board of County Commissioners

FROM: Rick Warner, P.E., Sr. Licensed Engineer, Engineering & Capital Projects, Community Services Department, 954-4621, rwarner@washoecounty.us

THROUGH: Dwayne Smith, P.E., Division Director, Engineering & Capital Projects, Community Services Department, 328-2043, desmith@washoecounty.us

SUBJECT: Recommendation to approve an Agreement for Consulting Engineering Services between Washoe County and Carollo Engineers, Inc., commencing March 10, 2015 through January 30, 2016, to provide planning and engineering services for the South Truckee Meadows Water Reclamation Facility 2015 Facility Plan Update Project [\$340,438]. (Commission District 2.)

SUMMARY

The Community Services Department (CSD) is requesting approval of a professional services agreement with Carollo Engineers, Inc. (Carollo) to provide planning and engineering services for the South Truckee Meadows Water Reclamation Facility (STMWRF) 2015 Facility Plan Update Project.

The outcome of the work will be a facility plan document, which creates the framework to plan STMWRF's infrastructure investment requirements for the next 20-year planning horizon. Washoe County anticipates constructing \$25-30 million in infrastructure over the next several years at STMWRF. Facility planning is a critical step to assure future rehabilitation and expansion work is thoughtfully planned and implemented on-schedule and within budget.

In 2014, staff conducted a qualifications-based selection process for an engineering consultant team to conduct this work. Carollo, a consulting firm with extensive wastewater treatment facility engineering expertise was ranked highest amongst several other highly qualified regional engineering firms.

Washoe County Strategic Objective supported by this item: Safe, secure and healthy communities.

PREVIOUS ACTION

On February 13, 2007, the Board of County Commissioners (Board) awarded an agreement for consulting engineering services with CH2M Hill Inc. to provide facility planning and preliminary engineering services for the South Truckee Meadows Water Reclamation facility.

On August 20, 2002, the Board adopted the South Truckee Meadows Water and Wastewater Facility Plan.

BACKGROUND

Washoe County owns and operates the South Truckee Meadows Water Reclamation Facility (STMWRF), which provides sewer treatment to approximately 13,000 homes and businesses within southern Washoe County, including portions of the City of Reno. The facility was commissioned in 1990 and expanded in 2003. STMWRF is presently configured to treat up to 4.1 million gallons of sewage per day (mgd). Wastewater influent flows to STMWRF are presently 3.5 million gallons per day and increasing approximately 3-percent annually.

Since STMWRF is nearing its permitting capacity, the State of Nevada Division of Environmental Protection requires Washoe County update the facility planning to assure the next phase of sewer capacity is thoughtfully planned and ready when needed. Major infrastructure improvements at STMWRF can take 3-5 years to plan and construct.

The professional service contract being considered at this time supports several engineering tasks related to: land use planning; population projections; regulatory forecast; establishing water quality objectives and treatment goals; permitting needs; existing infrastructure condition assessments; operational optimization; near-term repair and rehabilitation needs; identifying infrastructure needs for future customers; and, estimating future capital investment requirements and operating costs.

The following table lists the focus areas for the facility planning work.

Task	Description	Estimated Fee
1	Executive Summary	\$4,668
2	Basis of Planning	\$26,718
3	Wastewater Collection System	\$66,728
4	Infrastructure Condition Assessment	\$32,126
5	Facility Performance and Process Model	\$39,902
6	Facility Plan Update	\$68,952
7	Capital Improvement Plan and Overall Implementation Plan	\$22,078
8	Final Report Preparation	\$35,166
9	Meetings and Workshops	\$36,060
10	Project Management	\$8,040
Total		\$340,438

FISCAL IMPACT

This project was identified and recommended for approval by the Board in the 2014-2015 Capital Improvement Program. Sufficient funds and budget authority exist in Fund 566, cost center 668600, account 710100. Revenues in support of this project are provided from developer sewer connection fees.

RECOMMENDATION

It is recommended that the Board of County Commissioners approve an Agreement for Consulting Engineering Services between Washoe County and Carollo Engineers, Inc., commencing March 10, 2015 through January 30, 2016, to provide planning and engineering services for the South Truckee Meadows Water Reclamation Facility 2015 Facility Plan Update Project [\$340,438].

POSSIBLE MOTION

Should the Board agree with staff's recommendation, a possible motion would be "Move to approve an Agreement for Consulting Engineering Services between Washoe County and Carollo Engineers, Inc., commencing March 10, 2015 through January 30, 2016, to provide planning and engineering services for the South Truckee Meadows Water Reclamation Facility 2015 Facility Plan Update Project [\$340,438]."

AGREEMENT FOR CONSULTING ENGINEERING SERVICES

THIS AGREEMENT is entered into between Washoe County, a political subdivision of the State of Nevada ("County") and Carollo Engineers Inc. ("Consultant"), collectively (the "Parties").

WITNESSETH:

WHEREAS, County desires to engage Consultant to render certain engineering services in Support of the "South Truckee Meadows Water Reclamation Facility Plan Update 2015" (the "Project"); and

WHEREAS, County requires certain professional services in connection with the Project, as described in Exhibit "A", Scope of Work (the "Services"); and,

WHEREAS, Consultant represents that it is duly qualified, ready, willing and able to provide the Services by virtue of its education, training and experience;

NOW, THEREFORE, in consideration of the mutual promises contained herein, the Parties agree as follows:

ARTICLE 1 - EFFECTIVE DATE

The effective date of this Agreement shall be March 10, 2015

CONSULTANT shall begin performance of services as provided herein upon notice to proceed and shall complete all **Services identified in Exhibit A, Scope of Work** in accordance with the Standard of Care as set forth in Article 5 herein no later than January 31, 2016 unless this Agreement is terminated sooner in accordance with its terms.

ARTICLE 2 - SERVICES TO BE PERFORMED BY CONSULTANT

CONSULTANT agrees to perform and complete all **Services identified in Exhibit A, Scope of Work** under this Agreement, and any amendment thereto in accordance with the Standard of Care as set forth in Article 5 herein. CONSULTANT shall be responsible for the quality, technical accuracy, completeness and coordination of all reports, information, specifications and other items and services furnished under this Agreement and any amendments hereto. COUNTY reserves the right to inspect, comment on, and request revision of, all Services identified in Exhibit A and any amendments thereto performed by CONSULTANT prior to acceptance, and CONSULTANT warrants that such Services shall be fit and sufficient for the purposes expressed in, or reasonably inferred from, this Agreement and any amendments hereto.

Failure to provide major deliverables, including, but not limited to, Services identified in Exhibit A, Scope of Work, shall constitute a material breach of this Agreement, unless waived in writing by the COUNTY.

ARTICLE 3 - COMPENSATION

3.1 Compensation for Services

For Services defined in Section 1 above, CONSULTANT'S compensation shall be determined on a time and material basis, in accordance with the fee schedule described in Exhibit "B", which is attached hereto and incorporated by reference as part of the Agreement, and shall not exceed the sum of \$340,438.00. CONSULTANT shall satisfy its obligations hereunder without additional cost or expense to COUNTY during the term of this Agreement other than the heretofore stated compensation and the fee schedule described in Exhibit "B". The Fee Schedule may be renegotiated at the end of one (1) year upon request by either the COUNTY or the CONSULTANT. Renegotiated fees are subject to approval by County's Board of County Commissioners. The actual costs charged for the work by CONSULTANT in accordance with this provision shall be full compensation to CONSULTANT for all Services and duties required by the Scope of Work, including, but not limited to: costs of supplies, facilities and equipment; costs of labor and services of employees, consultants and sub-consultants engaged by CONSULTANT; travel expenses, telephone charges, typing, duplicating, costs of insurance, and all items of general overhead. CONSULTANT shall submit billings on a monthly basis.

3.2 Compensation for Additional Services

If County requests Consultant to perform additional services, other than those required to be performed under **Services identified in Exhibit A, Scope of Work**, the cost of such additional services shall be determined prior to commencing additional work. All additional services and amount of payment must be authorized in writing by County prior to commencing any work for such services.

3.3 Methods and Times of Payment

Consultant shall submit to County monthly progress invoices indicating the number of hours each employee provided services and other allowed direct expenses. Payment to Consultant for work on the Project shall be made within forty-five (45) days after receipt and approval of Consultant's invoice, said approval not to be unreasonably withheld. Payment by County of invoices or requests for payment shall not constitute acceptance by County of work performed on the Project by Consultant.

ARTICLE 4 - TIME SCHEDULE FOR COMPLETION

The Services identified in Exhibit A, Scope of Work on the Project shall be diligently performed and be completed no later than January 31, 2016. Consultant shall be granted time extensions for items within the phases of the Project in writing by County if the time schedules cannot be met because of delays beyond Consultant's reasonable control, including, but not limited to, County's failure to furnish information, or to approve or disapprove Consultant's work promptly. Consultant will provide to County a monthly report including a schedule identifying progress or work completed, problems or difficulties being encountered, work to be initiated during the following month and other useful information. This report will be submitted on the first day of each month and will be in a format suitable for submittal to other interested agencies. Consultant's failure to submit promptly the monthly progress report may cause delay in payment from the County.

ARTICLE 5 - STANDARD OF CARE

Consultant shall exercise the same degree of care, skill, and diligence in the performance of the Services as is ordinarily provided by a professional engineer under similar circumstances and Consultant shall, at no cost to County, re-perform services which fail to satisfy the foregoing standard of care provided that Consultant is notified in writing by County of the deficiency within six (6) months of performance of the deficient Services. Such re-performed Services may include, but not be limited to, correcting errors and omissions, or any other deficiencies in designs, drawings, specifications and reports. County reserves the right to inspect, comment on, and request revision of, all Services performed by Consultant prior to acceptance, and Consultant warrants that Services shall be fit and sufficient for the purposes expressed in and intended by this Agreement and any amendments thereto. Failure to provide Services or re-performed Services in accordance with the foregoing standard of care shall constitute a material breach of this Agreement unless waived by the County. Review and approvals by County do not relieve Consultant of its responsibilities under this Article. Except as is otherwise provided for in this Article, the re-performance of Services is the Consultant's entire responsibility and the County's exclusive remedy for Services rendered or to be rendered hereunder, and no additional warranties, guarantees or obligations are to be implied.

ARTICLE 6 - LIMITATIONS OF RESPONSIBILITY

Consultant shall not be responsible for construction means, methods, techniques, sequences, procedures, or safety precautions and programs in connection with the Project. In addition, Consultant shall not be responsible for the failure of any Consultant, subcontractor, vendor, or other project participant to fulfill contractual or other responsibilities to County or to comply with federal, state, or local laws, ordinances, regulations, rules, codes, orders, criteria, or standards. Consultant shall notify County of any apparent unsafe conditions, methods or procedures that the Consultant may observe at the construction site.

ARTICLE 7 - OPINIONS OF COST AND SCHEDULE

Since Consultant has no control over the cost of labor, materials, equipment or services furnished by others, or over Consultants', subcontractors', or vendors' methods of determining prices, or over competitive bidding or market conditions, Consultant's cost estimates shall be made on the basis of qualification and experience in professional engineering.

Since Consultant has no control over the resources provided by others to meet contract schedules, Consultant's forecast schedules for completion of Services shall be established based on generally acceptable schedules for and performance standards of similarly situated professional engineers qualified and experienced to perform the Services. Consultant cannot and does not guarantee that proposals, bids or actual project costs will not vary from its cost estimates or that actual schedules will not vary from its forecast schedules.

ARTICLE 8 - INDEPENDENT CONTRACTOR

Consultant undertakes performance of the Services as an independent contractor and shall be wholly responsible for the methods of performance. County shall have no right to supervise the methods used by

Consultant. County shall have the right to observe such performance. Consultant shall work closely with County in performing Services under this Agreement.

ARTICLE 9 - PERMITS AND LICENSES

Consultant shall procure the permits, certificates, and licenses necessary to allow Consultant to perform the Services. Consultant shall not be responsible for procuring permits, certificates, and licenses required for any construction unless such responsibilities are specifically assigned to Consultant in Exhibit A, Scope of Services.

ARTICLE 10 - COUNTY'S RESPONSIBILITY

County shall provide any information authorized by law in its possession that is requested by Consultant and is necessary to complete the Project. County shall assist Consultant in obtaining access to public and private lands so Consultant can perform the Services. County shall examine all studies, reports, sketches, estimates, specifications, drawings, proposals, and other documents presented by Consultant and shall render decisions pertaining thereto within a reasonable time so as not to delay the work of Consultant.

ARTICLE 11 - REUSE OF DOCUMENTS

All documents, including computer files, drawings, specifications, and computer software, prepared by Consultant pursuant to this Agreement are instruments of service in respect to the Project. They are not intended or represented to be suitable for reuse by County or others on extensions of the Project or on any other project. Any reuse without written verification or adaptation by Consultant for the specific purpose intended will be at County's sole risk and without liability or legal exposure to Consultant; and County shall indemnify and hold harmless Consultant against all claims, damages, losses, and expenses including attorneys' fees arising out of or resulting from such reuse. Any such verification or adaptation will entitle Consultant to further compensation at rates to be agreed upon by County and Consultant.

Copies of all documents, including reports, computer files, drawings, specifications, and computer software, prepared by Consultant pursuant to this agreement will be provided to the County in electronic format accompanied by the appropriate documentation necessary to catalog them in the context of this project.

When transferring data in electronic media format, Consultant makes no representation as to long term compatibility, usability, or readability of documents resulting from the use of software application packages, operating systems, or computer hardware differing from those used by Consultant at the beginning of the Project.

Because the data stored in electronic media format can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the party receiving electronic files agrees that it will perform acceptance tests or procedures within 60 days, after which the receiving party shall be deemed to have accepted the data thus transferred. Any errors detected within the 60-day acceptance period will be corrected by the party delivering the electronic files. Consultant shall not be responsible to maintain documents stored in electronic media format after acceptance by County. The original hard

copy of the documents containing the professional engineer's seal shall take precedence over the electronic documents.

ARTICLE 12 - TERMINATION OR EXTENSION OF CONTRACT

Either Party may terminate this Agreement by written notice to the other Party if the other Party is in material breach or default of any provision of this Agreement and does not remedy such breach or default, or provide satisfactory evidence that such default will be expeditiously remedied, within thirty (30) days after being given such notice. In the event of such termination, County shall pay Consultant for all Services satisfactorily performed to the date of termination.

County, in its sole discretion, shall have the right to terminate this Agreement or suspend performance thereof for County's convenience upon written notice to Consultant, and Consultant shall terminate or suspend performance of services within thirty (30) days on a schedule acceptable to County. In the event of termination or suspension for County's convenience, County shall pay Consultant for all Services performed in accordance with the terms of this Agreement. Upon any restart of a suspended project, equitable adjustment shall be made to Consultant's compensation.

ARTICLE 13 - NONDISCLOSURE OF PROPRIETARY INFORMATION

Consultant shall consider all information provided by County to be proprietary unless such information is available from public sources, was known to Consultant prior to the execution of this Agreement, was received by Consultant from a third-party source not under any obligation of confidentiality to the County, or is required by law or ordered to be disclosed in a regulatory or judicial proceeding. Consultant shall not publish or disclose proprietary information for any purpose other than the performance of the Services without the prior written authorization of County or in response to legal process or as required by the regulations of public entities.

ARTICLE 14 - NOTICE

Any notice, demand, or request required by or made pursuant to this Agreement shall be deemed properly made if personally delivered in writing or deposited in the United States mail, postage prepaid, to the address specified below.

To Consultant:

Keli Callahan, Associate Vice President
Carollo Engineers, Inc.
1325 Airmotive Way, Suite 175 D
Reno, NV 89502

To County:

David Solaro, Director
Washoe County Community Services
P.O. Box 11130
Reno, NV 89520

Nothing contained in this Article shall be construed to restrict the transmission of routine communications between representatives of Consultant and County.

ARTICLE 15 - UNCONTROLLABLE FORCES

Neither County nor Consultant shall be considered to be in default of this Agreement if delays in or failure of performance shall be due to uncontrollable forces the effect of which, by the exercise of reasonable diligence, the non-performing party could not avoid and is not reasonably foreseeable at the time of entering into this Agreement. The term "uncontrollable forces" shall mean any event which results in the prevention or delay of performance by a party of its obligations under this Agreement and which is beyond the control of the non-performing party. It includes, but is not limited to, fire, flood, earthquakes, storms, lightning, epidemic, war, riot, civil disturbance, sabotage, inability to procure permits, licenses, or authorizations from any state, local, or federal agency or person for any of the supplies, materials, accesses, or services required to be provided by either County or Consultant under this Agreement, strikes, work slowdowns or other labor disturbances, and judicial restraint. Consultant shall be paid for services performed prior to the delay plus related costs incurred attributable to the delay.

Neither Party shall, however, be excused from performance if nonperformance is due to uncontrollable forces which are removable or remediable nor which the non-performing Party could have, with reasonable dispatch removed or remedied. The provisions of this Article shall not be interpreted or construed to require Consultant or County to prevent, settle, or otherwise avoid a strike, work slowdown, or other labor action. The non-performing Party shall upon being prevented or delayed from performance by an uncontrollable force, immediately give written notice to the other Party describing the circumstances and uncontrollable forces preventing continued performance of the obligations of this Agreement.

ARTICLE 16 - GOVERNING LAW-VENUE

This Agreement shall be governed by the laws of the State of Nevada, and venue for any action shall be solely in state district court for Washoe County, Nevada.

ARTICLE 17 - MISCELLANEOUS

17.1 Nonwaiver

A waiver by either County or Consultant of any breach of this Agreement shall not be binding upon the waiving Party unless such waiver is in writing. In the event of a written waiver, such a waiver shall not affect the waiving party's rights with respect to any other or further breach.

17.2 Severability

The invalidity, illegality, or unenforceability of any provision of this Agreement, or the occurrence of any event rendering any portion or provision of this Agreement void, shall in no way affect the validity or enforceability of any other portion or provision of the Agreement. Any void provision shall be deemed severed from the Agreement and the balance of the Agreement shall be construed and enforced as if the Agreement did not contain the particular portion or provision held to be void. The Parties further agree to

reform the Agreement to replace any stricken provision with a valid provision that comes as close as possible to the intent of the stricken provision.

ARTICLE 18 - INTEGRATION AND MODIFICATION

This Agreement represents the entire and integrated agreement between the Parties and supersedes all prior negotiations, representations, or agreements, either written or oral. This Agreement may be amended only by a written instrument signed by each of the Parties. Unless otherwise specified in writing, if there is any inconsistency between the terms of this Agreement and any other agreement between the Parties, the terms of this Agreement shall control.

ARTICLE 19 - SUCCESSORS AND ASSIGNS

County and Consultant each binds itself and its directors, officers, partners, successors, executors, administrators, assigns and legal representatives to the other party to this Agreement and to the partners, successors, executors, administrators, assigns, and legal representatives of such other party, in respect to all covenants, agreements, and obligations of this Agreement.

ARTICLE 20 - ASSIGNMENT

Neither County nor Consultant shall assign, sublet, or transfer any rights under or interest in (including, but without limitation, monies that may become due or monies that are due) this Agreement without the written consent of the other, except to the extent that the effect of this limitation may be restricted by law. Unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under this Agreement. Nothing contained in this paragraph shall prevent Consultant from employing such independent consultants, associates, and subcontractors, as he may deem appropriate to assist him in the performance of the Services hereunder.

ARTICLE 21 - THIRD PARTY RIGHTS

Nothing herein shall be construed to give any rights or benefits to anyone other than County and Consultant.

ARTICLE 22 - INDEMNIFICATION, INSURANCE, AND ARBITRATION

Washoe County has established specific indemnification and insurance requirements for agreements/contracts with consultants, engineers, and architects to help assure that reasonable insurance coverage is maintained. Indemnification and hold harmless clauses are intended to assure that consultants accept and are able to pay for the loss or liability related to their activities. Exhibit C, Pages 1-4, is included by reference. All conditions and requirements identified in this exhibit shall be completed prior to the commencement of any work under this Agreement.

ARTICLE 23 – LIMITED LIABILITY

County will not waive and intends to assert available defenses and limitations contained in Chapter 41 of the Nevada Revised Statutes. Contract liability of both parties shall not be subject to punitive damages. Actual damages for the County's breach of this Agreement shall never exceed the amount of funds that have been appropriated for payment under this Agreement, but not yet paid, for the fiscal year budget in existence at the time of the breach.

ARTICLE 24 - ORGANIZATION'S CERTIFICATION

Consultant, its principals and agents, to the best of its knowledge and belief:

- a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal or state department or agency;
- b) Have not within a three year period preceding this Agreement been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
- c) Are not presently indicted for or otherwise criminally or civilly charged by a government entity (Federal, State, or local) with commission of any of the offenses enumerated in (ii) above;
- d) Have not within a three-year period preceding this Agreement had one or more public transactions (Federal, State, or local) terminated for cause or default; and
- e) Understand that a false statement on this certification may be grounds for rejection or termination of this Agreement. In addition, under 18 USC Sec. 1001, a false statement may result in a fine of up to \$10,000 or imprisonment for up to 5 years, or both.

IN WITNESS WHEREOF, the parties have executed this Agreement.

WASHOE COUNTY:

CONSULTANT:

Dated this ___ day of _____, 2015

Dated this ___ day of _____, 2015

By _____
Chair
Washoe County Commission

By _____
Lisa M. Freestone, Vice-President
Carollo Engineers, Inc.

By _____
Keli Callahan, Associate Vice-President
Carollo Engineers, Inc

**EXHIBIT A
WASHOE COUNTY, NEVADA**

**SOUTH TRUCKEE MEADOWS WATER RECLAMATION FACILITY
FACILITY PLAN UPDATE**

SCOPE OF WORK

INTRODUCTION

Washoe County (County) is planning to develop a Facility Plan Update for its South Truckee Meadows Water Reclamation Facility (STMWRF) that will include a collection system evaluation and an assessment of the current treatment processes and operation at the facility. Ultimately, the Facility Plan Update will develop alternatives and recommended facility improvements to meet a 20-year planning horizon, including a phased Capital Improvement Program (CIP) for STMWRF and its wastewater collection system service area. The last Facility Plan Update was completed in 2008 and focused on expansion to 6 million gallons per day (mgd). Most of STMWRF's existing unit processes have a hydraulic capacity of 6 mgd, with the exception of influent/headworks pumping and secondary treatment. Based on recent discussions with Washoe County staff, influent flows (3.5 mgd including filter backwash) are approaching 80 percent of the plant's permitted capacity and variations in diurnal ammonia loading are affecting effluent water quality, equipment at STMWRF and in the effluent distribution system. A Facility Plan Update has become critical.

STMWRF was commissioned in 1990. The last major expansion was completed in 2003, and in 2006, the County began planning its next expansion project. Shortly thereafter, however, the major treatment expansion was postponed due to declining growth and the start of one of the longest economic recessions of its time. Until recently, upgrades and major expansion projects were limited to non-process specific projects. The planning period for this facility plan update will be 20 years, running from 2015 through 2035, with recommendations for modifications presented generally in five-year increments with the addition of population growth trigger points.

SCOPE OF WORK

This Scope of Work is organized into major categories of work. Each major work category is identified numerically with a task group number. Subtasks within each category are also identified. Tasks 1 through 8 represent technical work for which a specific deliverable will be prepared to present the results of the work effort. The tasks are summarized as follows:

- Task 1 - Section 1: Executive Summary
- Task 2 - Section 2: Basis of Planning
- Task 3 - Section 3: Wastewater Collection System
- Task 4 - Section 4: Condition Assessment
- Task 5 - Section 5: Plant Performance and Process Model
- Task 6 - Section 6: Facility Plan
- Task 7 - Section 7: CIP and Overall Implementation Plan
- Task 8 - Final Report Preparation
- Task 9 - Meetings and Workshops
- Task 10 - Project Management

TASK 1.0 – SECTION 1: EXECUTIVE SUMMARY

An Executive Summary will be prepared, approximately 10 pages in length, to provide a condensed version of the Facility Plan Update. The Executive Summary will include a discussion of the issues, alternative analysis, the capital expansion and improvement program and associated costs. Graphics will be prepared to support the discussion.

Deliverable(s):

Draft Section 1: Executive Summary: Prepare and submit draft Section 1 as part of the Draft Facility Plan Update Report. This Section, with County comments incorporated, will become a section of the final report.

TASK 2.0 – SECTION 2: BASIS OF PLANNING

2.1 Introduction

With the assistance of the County, the goals and objectives of the Facility Plan Update will be defined, along with describing past expansion and modification projects of the County's South Truckee Meadows Water Reclamation Facility.

2.2 Regulatory Requirements

Existing regulatory requirements and policies will be reviewed and summarized. The Engineer, with input from County staff, will address the impact of potential modifications to existing regulations. The regulation and policy review will include, but will not be limited to the following:

- Nevada Division of Environmental Protection (NDEP).
- Local, State and Federal Regulations and Policies Related to Water Recycling, Storm Water, Biosolids Management, and Air Quality.

2.3 Inflow and Infiltration Evaluation

In collaboration with County staff, Engineer will identify potential locations within the collection system where inflow and infiltration (I/I) occurs and determine the inflow and infiltration rates that will be assumed for future planning. Inflow and infiltration in the collection system will be evaluated using water billing records, STMWRF influent flow records, and available flow monitoring data provided by the County.

2.4 Population, Flow and Load Projections

With the assistance of the County, the Engineer will define the existing collection system and STMWRF service area, including service area boundary maps. Population projections for the service area will be provided by the County and incorporated into the plan. The County will also provide land use plan updates, including a build-out land use plan, identifying residential, commercial, and industrial developments.

Available historical data for wastewater flow and influent characteristics for the preceding five-year period will be summarized in tabular format for the following:

- Flows by month and year (i.e. average daily, maximum day, maximum month, peak hour).
- Average BOD concentrations by month and year.
- Average TSS concentrations by month and year.

- Average nutrient (ammonia, phosphorus) concentrations by month and year.
- Average flow generation per ERU.
- Other parameters as warranted by existing or future regulatory requirements.

Existing population and land use projections, developed by the Truckee Meadows Regional Planning Agency, along with the water system billing data and historical wastewater flows and characteristics will be used to develop wastewater flow projections for each of the five-year time increments. These projections will include maximum, average, and minimum values for both wastewater flows and loads. Flow projections will also be presented on a per ERU basis. This information will be the basis for determining collection system and treatment facility capacity needs.

2.5 Reliability and Design Criteria

The determination of future facility needs depends upon the design criteria as well as the criteria established for providing reliability. Design criteria to be used for planning future collection and treatment facilities shall be recommended and presented to the County. The reliability of the existing major unit processes and support facilities at STMWRF will also be reviewed with County staff. Reuse water quality objectives will be developed through focused discussions with County staff, and presented for consensus during the Water Quality Objectives and Vision Workshop (See Task 9.2). Design criteria for future facility needs and selected reliability criteria will be incorporated into the facility planning design criteria and presented in tabular format (i.e., clarifier overflow rates, aeration basin loadings, etc.). Criteria shall be developed for the following:

- Collection system (e.g. min/max velocity, slope, d/D, Manning's "n")
- Preliminary treatment
- Secondary treatment
- Tertiary treatment
- Disinfection
- Reuse water quality objectives
- Solids handling
- Primary power / Emergency power

Deliverable(s):

Draft Section 2: Basis of Planning: Prepare and submit draft Section 2 documenting the wastewater flow projections, and project planning elements. Methodology used to develop the wastewater unit rates, and ultimately the flow projections, will be summarized and presented. One (1) electronic PDF copy will be provided. This Section, with County comments incorporated, will become a section of the final report.

TASK 3.0 – SECTION 3: WASTEWATER COLLECTION SYSTEM

3.1 Description of Existing Facilities

The existing Wastewater Collection System will be described in narrative form with supporting figures and tables. The description will identify major interceptors, sewer lift stations, interconnections with surrounding community areas, design criteria, pipeline sizes, and rated capacities. Design criteria and reliability needs selected in Task 2.6 will be summarized and presented in tabular format.

3.2 Summary of Planning Studies

Previous Wastewater Collection System Planning efforts, as directed by the County, will be reviewed and the findings and recommendations of these reports will be summarized.

3.3 Wastewater Collection System Modeling

Using the County's existing, calibrated hydraulic model, Engineer will confirm model operation and calibration using plant influent flow data from 2011 to present. The Engineer will update model attributes as necessary for new infrastructure installed since 2011, update existing and future flow generation, evaluate the existing system under current and future flow conditions, identify future needs, and develop recommended capital improvements to the collection system, as needed.

The Pleasant Valley Interceptor project was designed for implementation in four phases. Phases 1 and 2 have been constructed and are currently in operation. Phases 3 and 4 have been planned, but have not been constructed. Using the model as a tool, the Engineer will determine capacity and recommend a phasing plan for the remaining phases of the Pleasant Valley Interceptor project. This evaluation will include a cost allocation analysis considering the impact of future user connections (per home contributions) on the Pleasant Valley Interceptor as a whole.

3.4 Proposed Replacement and Expansion Plan

Based on the findings and conclusions of the previous tasks, proposed future facilities will be identified and described. An overall sewer map will be developed to show the proposed facilities within the service area.

3.5 Implementation Schedule and Cost

An implementation plan for the proposed facilities will be developed. The schedule will be based on the results of the hydraulic modeling and population projections.

Deliverable(s):

Draft Section 3: Wastewater Collection System: Prepare and submit draft Section 3 documenting the collection system elements, hydraulic modeling, and associated scenario development, including the planned interceptor from the south portion of the service area, proposed replacement and expansion plan, and the recommended implementation schedule and cost. One (1) electronic PDF copy will be provided. This Section, with County comments incorporated, will become a section of the final report.

TASK 4.0 – SECTION 4: CONDITION ASSESSMENT

4.1 Data Review

As the Designer for the STMWRF Expansion Project, the Engineer has several data items in house, including records drawings and specifications. This task consists of reviewing those documents, as well as supplemental data provided by County Staff. Any data supplied by the County will be in an electronic format, such as Word, Excel, or PDF, when available.

4.2 Checklist Development

This task consists of development of a checklist that will provide an outline for the Engineer to assess the elements within the STMWRF during field review. It is anticipated that the checklist will be a living document and require modification and updating based on actual conditions observed during the field review.

4.3 Field Review

This task consists of field review of STMWRF, including Steamboat Creek Lift Station (SCLS), by the Engineer (two [2] team members) and the County's operations and maintenance staff. For budgeting purposes, two (2) full day trips (8 hours each) for two (2) team members is estimated. The Engineer team will:

- Conduct a plant site visit to visually evaluate the electrical, mechanical, and structural condition of existing facilities and identify potential improvements through year 2035.
 - The specific equipment for this evaluation includes: visible mechanical equipment associated with influent pumping (i.e. SCLS and influent screw pumps) and unit process operation; the support mechanisms of this equipment; and visible piping connected to the influent pumping, unit processes, structures, and buildings. Structures include those associated with influent pumping and unit processes, and walkways and support buildings.
- Update the Checklist as required to reflect field conditions.
- Document and classify findings, apparent code violations, and other discrepancies.
- Present findings in tabular format
- Inform the County of immediate corrective actions identified (i.e. public health related, personal safety related, equipment related, etc) prior to issuing the Draft STMWRF Condition Assessment deliverable.

The Engineer's team will evaluate the apparent condition of the equipment using direct observation methods. No teardowns or destructive testing is included in this scope. Industry methods for determining risk (vulnerability, consequence, and criticality) will be used. The procedures and guidelines for estimating capital, and operations and maintenance costs for the Facility Plan Update will be developed and summarized.

Deliverable(s):

One (1) electronic (PDF) copy of the DRAFT Assessment Check List will be delivered to the County for review prior to Field Review.

Draft Section 4: Condition Assessment: Prepare and submit draft Section 4 documenting the assessment of equipment remaining useful life, reliability criteria, applicable code requirement summary, and prioritization of replacement items to be included in the CIP. One (1) electronic PDF copy will be provided. This Section, with County comments incorporated, will become a section of the final report.

TASK 5.0 – SECTION 5: PLANT PERFORMANCE AND PROCESS MODEL

5.1 Evaluate Existing Treatment Plant Performance and Design Intent

Engineer will review original design and sizing criteria, evaluate the hydraulic and process loadings and associated performance of each major treatment plant process at the STMWRF.

Engineer will evaluate the ability to convey average and peak flows and will develop a strategy for managing flows. Average annual flows, peak daily flows, maximum month flows, and peak hourly flows identified in Task 2.0 will be used to generate a hydraulic profile for dry weather and wet weather conditions. If needed, piping modifications will be identified.

5.2 Capacity Rating of Existing Facilities

The peak capacity (all units in service) and firm capacity (standby units out of service) for process treatment and hydraulic conveyance will be determined for each of the major treatment processes based on the reliability and design criteria developed in Task 2.0.

Engineer will establish the hydraulic and treatment capacity potential for each treatment process unit at various loading conditions. Engineer will prepare plant-wide mass balances to confirm capacity and serve as the basis for identifying existing process optimization opportunities.

5.3 Evaluate Existing Processes to Improve Efficiencies

Engineer will review operating data, conduct a site visit (three (3) team members), survey operations, maintenance, and engineering staff, and apply appropriate analyses and modeling. Engineer will prepare an inventory of chemicals used to enhance treatment and provide process control. Associated labor, power, and chemical costs will be estimated based on County staff direction. Engineer will investigate ways to maximize capacity and to get the most out of the existing facilities. The analyses will assess performance under different process loading conditions, with and without standby facilities. Specifically, this analysis will consider not only the existing plant facilities, but will also identify the operation and optimization of existing facilities under different future facility alternatives.

5.4 Develop Process Model

Engineer will update the process model (BIOWIN) for the STMWRF. The model was previously calibrated based on actual process data. The model will be recalibrated based on current plant data and any changes in plant operating strategy to represent the existing process operation. Projected mass balances for future flows will be prepared. The model will be prepared for a range of effluent quality parameters, to reflect possible changes in regulatory requirements.

5.5 Identify Optimization Opportunities

Engineer will identify optimization opportunities for current process operation with goals of enhancing STMWRF water quality and identifying opportunities for labor, power, and chemical cost savings. With County staff direction, up to two (2) identified process improvements will be selected for temporary implementation and field verification. In addition, identified process improvements may be considered for planning future expansion, rehabilitation, or replacement projects.

5.6 Field Implementation Plan

Engineer will work with County staff to implement process improvements for field verification. It is estimated that each process improvement will remain in place for a minimum of four (4) weeks to obtain adequate information. Engineer will assist County staff, as requested, throughout the field implementation effort. County staff will decide on permanent implementation of any of the proposed process improvements. Associated costs (i.e. laboratory analysis, chemicals, etc), if any, will be responsibility of the County.

Deliverable(s):

Draft Section 5: Plant Performance and Process Model: Prepare and submit draft Section 5 summarizing the findings, conclusions, and recommendations of the Process Optimization task. One (1) electronic PDF copy will be provided. This Section, with County comments incorporated, will become a section of the final report.

TASK 6.0 – SECTION 6: FACILITY PLAN UPDATE**6.1 Description of Existing Facilities**

The existing wastewater treatment facilities will be summarized in narrative form with supporting figures and tables. The description will include treatment facilities, support facilities, plant access, parking for staff and visitors, and a summary of the surrounding area including any buffer zone issues.

The treatment facilities description will include design criteria, unit sizes, and existing stated capacities (for both treatment processes and hydraulics). Unit processes, major interceptors, and significant in-plant pipelines will be included. An updated plant layout and simplified flow schematic will be provided.

6.2 Summary of Planning Studies

Past planning studies, as directed by the County, for STMWRF will be reviewed. The findings and recommendations of these reports will be summarized and presented in the Summary of Planning Studies Chapter.

6.3 Plant Hydraulics

The ability of the plant to convey average and peak flows will be evaluated and a strategy for managing flows will be developed. Average annual flows, peak daily flows, maximum month flows, and peak hourly flows will be taken from previous studies and analysis and compared to the most recent flow data. A hydraulic profile for dry weather and wet weather conditions will be developed and piping modifications will be identified.

6.4 Liquid Treatment Processes

The liquid treatment processes at STMWRF include influent pumping, preliminary treatment, secondary treatment, tertiary treatment, and disinfection. Alternative(s) for meeting the process capacity assessment, regulatory requirements, and long-term flow and waste load projections developed in the previous tasks will be evaluated. The Engineer will perform the following subtasks:

- Evaluate and provide technology and cost comparisons for influent pumping, including Steamboat Lift Station and force main, and influent pumping at the headworks. The existing headworks was recently modified with new screening and grit removal processes. Therefore it is anticipated that one (1) expansion alternative for preliminary treatment processes including metering, screening, grit removal, and screenings handling will be developed and evaluated for future conditions.
- Evaluate applicable treatment technologies, including oxidation ditch, conventional bioreactors, membrane bioreactors, or other applicable treatment alternatives for

secondary treatment. Consideration should be given to effluent nitrogen limitations, water quality, and the impact of possible changes in regulatory requirements.

- Evaluate and provide technology and cost comparisons for tertiary filters (e.g. DAF and Flocculation/Sedimentation). Previous studies may be utilized as a reference and as necessary for gainful purposes related to this task. Treatment scenarios will be developed to consider water quality and the impact of possible changes in regulatory requirements.
- Evaluate upgrading the chlorine contact basins and sodium hypochlorite disinfection systems versus the feasibility of effluent disinfection using UV, ozone, and/or other technologies. Consideration will be given to water quality and the impact of possible changes in regulatory requirements such as limitations on disinfection by products (DBPs, THMs, and NDMA, etc) as well as specific pathogens such as Giardia and Cryptosporidium and endocrine disrupting compounds (EDCs).
- Develop alternative(s) to sufficiently verify space requirements and establish Class 5 "order of magnitude" costs. Cost estimates will include capital, operation, and maintenance, as well as County supplied legal and administrative costs for the alternatives identified. Present worth analysis will be used to compare costs for the viable alternatives.

6.5 Solids Handling Processes

Because the solids handling facility is currently being constructed, it is not anticipated that a detailed evaluation of expansion alternatives is necessary. Plans for future expansion will be based on the current project, and incorporated into the Facility Plan Update. The Engineer will develop solids production projections for the planning period, and confirm that planned solids facilities will meet future solids processing needs.

6.6 Recycle Stream Management

The impact of recycle streams on the treatment process will be evaluated and recommendations for recycle stream management will be developed to improve water quality and process control. Scenarios will be developed for impact on future discharge requirements. Capital and O&M cost estimates (Class 5, order of magnitude) will be developed for alternative evaluations, and the selected alternative will be the basis for the implementation plan and CIP. Based on direction from County staff, this task may be completed as an early milestone.

6.7 Effluent Reuse

Existing Effluent Reuse Facilities will be described in narrative form with supporting figures and tables. Because the County is currently working with other agencies to consider a regional plan for effluent reuse, it is not anticipated that a detailed evaluation of effluent reuse alternatives is necessary. Plans for future expansion will be based on the 2008 Facility Plan Update, Technical Memorandum No. 5, and incorporated into the Facility Plan update. The Engineer will work with County staff to identify and develop water quality objectives for the effluent reuse system. Specific considerations will be given to chlorine residual, arsenic, and the impact of intermediate storage facilities on effluent reuse water quality. Where possible, alternatives considered in previous tasks may be considered in this task.

6.8 Plant Utilities and Support Facilities

Existing Plant Utilities and Support Facilities will be described. Utility needs and system requirements for the following plant utilities will be identified:

- Effluent reuse water.
- Potable water.
- Natural gas.
- High pressure air.
- Plant drain system.
- Plant sewage.
- Hot water system.
- Plant communication system.

The existing support facilities will be evaluated for adequacy and recommendations for improvements and/or expansions will be made. Capital and O&M cost estimates (Class 5, order of magnitude) will be developed for alternative evaluations, and the selected alternative will be the basis for the implementation plan and CIP.

6.9 Proposed Expansion Plan and Site Layout

Based on the findings and conclusions of the previous tasks, proposed future treatment facilities will be identified and described. A site layout, major piping schematic, and hydraulic profile will be developed for the proposed facilities.

6.10 Implementation Schedule and Cost

An implementation plan for the proposed facilities will be developed. The schedule will be based on the results of the process modeling, alternatives analysis of unit process areas, and technical workshops, considering the County's input on project priorities based on relative risk and available funds.

Deliverable(s):

Draft Section 6: Facility Plan Update: Prepare and submit draft Section 6 summarizing the findings, conclusions, and recommendations of the Facility Plan Update task. One (1) electronic PDF copy will be provided. This Section, with County comments incorporated, will become a section of the final report.

TASK 7 – SECTION 7: CIP AND OVERALL IMPLEMENTATION PLAN

7.1 Implementation Schedule

Based on the previous tasks, an implementation schedule for the expansion of the wastewater collection system and treatment facilities will be developed. The schedule will be based on the results of the recommendations of Tasks 2 through 6 and technical workshops considering the County's input on project priorities based on relative risk and available funds. The implementation schedule will include:

- Identification of individual projects and their timing.
- Logical, staged construction of the facilities to spread the cash flow requirements over the planning period while providing for timely construction to accommodate increasing wastewater flows.
- Design and construction durations for each project.

7.2 Capital Improvement Plan

Capital costs developed in previous tasks will be compiled for individual process components and an overall capital expenditure schedule, or Capital Improvement Plan (CIP), will be prepared. Costs will be based on construction cost breakdowns from previous County and Engineer projects, cost curves, quantity takeoffs, and cost extensions. Engineer's in-house cost estimator will review all cost estimates. The CIP will identify the estimated cost of each planned project including the estimated cost of design, construction, construction management, legal, administrative, and other costs to make a complete project. The costs will be presented in a spreadsheet format to allow the County to select different phasing options based on relative risks, costs, and treatment considerations.

7.3 Operations and Maintenance Cost Projections

Operations and Maintenance (O&M) cost projections will be prepared showing the projected yearly O&M costs for expanded facilities. O&M requirements for both existing and proposed facilities will also be presented. These costs will be presented in yearly increments to the Year 2035.

Deliverable(s):

Draft Section 7: CIP and Overall Implementation Plan: Prepare and submit draft Section 7 documenting the selected improvements, proposed implementation plan, and recommended CIP. One (1) electronic PDF copy will be provided. This technical memorandum, with County comments incorporated, will become a section of the final report.

TASK 8 – FINAL REPORT PREPARATION

The Facility Plan Update will be a series of Sections with specific Chapters, one Chapter for each specific topic as identified for each major task category. As the topic is developed and completed, a draft Section will be submitted to the County for review and comment. As noted in the previous tasks, draft Sections will be submitted electronically (PDF) by email. The County agrees to review each Section and return with comments within fifteen (15) days after receipt. Each Section will be revised to address County comments, as appropriate. This approach facilitates review and input to the planning process as it progresses.

At project completion, all Sections will be bound in three-ring binders, organized by major task category. The full complement of Sections will serve as the comprehensive Facility Plan Update. Five (5) sets of draft bound report copies and five (5) sets of final bound report copies will be provided to the County, along with one set of reproducible copies including PDF electronic format. In addition, an interactive CD of the final sections will be provided complete with search features to allow County staff to search specific topics.

TASK 9 – MEETINGS AND WORKSHOPS

9.1 Monthly Progress Meetings

Monthly progress meetings (one [1] hour in duration) will be held with County staff at which a written summary of project status shall be presented. A total of eight (8) monthly meetings are planned. It is anticipated that four (4) monthly progress meetings will be attended by the Project Manager and combined with planned meetings or workshops. Four (4) monthly progress

meetings will be held by teleconference, and attended by the Project Manager and Project Director.

9.2 Technical Workshops

Engineer will prepare and conduct one (1) Project Kickoff Workshop and four (4) focused technical workshops (up to three (3) team members). These workshops will be two (2) hours in duration and shall be held at critical decision points in the project. Meeting notes will be prepared and submitted within two (2) weeks of the meeting. A preliminary list of the workshop follows:

- Project Kickoff Meeting.
 - Scope, Schedule, Basis of Planning, Design Criteria, Data Collection
- Water Quality Objectives and Vision.
- Wastewater Collection System and Condition Assessment.
- Plant Performance and Process Model and Liquid Treatment Facilities.
- CIP and Implementation Plan.

9.3 Coordination with Other Consultants

In order to incorporate the recommendations and finding of the following on-going studies, the Engineer (two (2) team members) will meet with other consultants, as needed. A total of six (6) coordination meetings (one [1] hour duration by conference call) with the other consultants and the County are planned. A preliminary list of the meetings follows:

- BioWin Model Coordination.
- Tertiary Treatment Coordination.
- Effluent Reuse/Water Quality Coordination.
- Field Implementation Plan Coordination.
- Others as directed by the County.

TASK 10 - PROJECT MANAGEMENT

The Engineer shall perform various project management and monitoring activities associated with the project. Specific project management services include development of a Facility Plan Update; development of project progress reports to be included with monthly invoices; development of applicable formats and standards; coordination and collaboration with County management and utility staff; and management of individual Project team resources to assist in a Project delivery consistent with the County's specific needs.

PROJECT ASSUMPTIONS

The following project assumptions form the basis for the Scope of Work, Engineering Services Costs, and Project Schedule detailed herein:

1. The Project is estimated to begin January 2015 and be complete by October 2015.
2. STMWRF is currently rated for 4.1 mgd, but the current average daily flow of 3.5 mgd is approaching the plant's current capacity.

3. The County will provide the current collection system hydraulic model, flow monitoring data, planning information (e.g. land use, population projections, service area boundary), billing information, GIS data, and other information needed to complete this Project.
4. The collection system model will be validated based on existing flow monitoring data (where applicable and available) to be provided by the County, as well as comparison to existing plant flow data. Field flow monitoring is not anticipated for this Project, and is not included as part of this Scope of Work.
5. The condition assessment will consist of visual inspection of select equipment and structures at STMWRF, including mechanical equipment, the support mechanisms of this equipment and visible piping connected to the unit processes, structures, and buildings. A general observation will also be conducted by the field review team for safety issues and general facility condition. The County will supply appropriate safety and security escorts as may be required for the safe performance of this work.
6. Wastewater sampling and analysis will be performed by the County. In addition, the County will conduct the recommended biological "stress test." Engineer will provide recommendations and guidance only for the test.
7. The Engineer will prepare estimates of probable costs for the items that will be improvements/upgrades in the CIP. These estimates of probable cost can be used by the County for budgeting and planning purposes. Engineer has no control over inflationary rates, the cost of labor, materials, equipment, or service furnished by others, or over Contractor's methods of determining prices, or other competitive bidding or market conditions, practices, or bidding strategies. Cost estimates are based on the Engineer's opinion based on experience and judgment. Engineer cannot and does not guarantee that bids or actual project construction costs will not vary from cost estimates prepared by the Engineer.
8. The Engineer will provide five (5) hard copies of the DRAFT STMWRF Facility Plan Update. An electronic copy in Adobe format (.pdf) will also be provided. Five (5) hard copies of the FINAL STMWRF Facility Plan Update will be provided. An electronic copy in Adobe format (.pdf) will also be provided.

BUDGET ESTIMATE

A budget estimate summary is included in Attachment B-1A. The Labor Hour Estimate and Budget Estimate are presented in Attachment B-1B.

The budget for this Scope of Work assumes that all work will be completed by October 30, 2015. Should the project be delayed beyond this time for any reason, the Engineer reserves the right to renegotiate the agreement to cover actual cost increases.

TIME OF PERFORMANCE

Engineer shall commence work immediately following authorization to proceed. As described previously, and to facilitate review and input to the planning process as it progresses, draft Sections will be submitted as they are to the County for review and comment. A summary of the

project schedule is included in Attachment B-2A. The Detailed Schedule is presented in Attachment B-2B.

Engineer/County mutually agree that they will work earnestly toward meeting the project schedule. Should the Scope of Work be changed and/or should problems arise during the course of the work effort that could affect the above schedules, it is understood that both the County and Engineer will develop a revised schedule and budget limit, if required, to address scope changes, delays by the County or other problems. It is understood that the Engineer must proceed with the work during the review period in order to complete the work on schedule. Impacts from County comments that are received more than 15 days after the submittal, or comments that require extensive rework, may affect the schedule and budget and may be considered a change in scope.

**EXHIBIT B-1A
WASHOE COUNTY, NEVADA**

**SOUTH TRUCKEE MEADOWS WATER RECLAMATION FACILITY
FACILITY PLAN UPDATE**

SUMMARY OF PROFESSIONAL SERVICES

<u>Work Elements</u>	<u>Estimated Fee</u>
Task 1 – Section 1: Executive Summary	\$4,668
Task 2 – Section 2: Basis of Planning	\$26,718
Task 3 – Section 3: Wastewater Collection System	\$66,728
Task 4 – Section 4: Condition Assessment	\$32,126
Task 5 – Section 5: Plant Performance and Process Model	\$39,902
Task 6 – Section 6: Facility Plan Update	\$68,952
Task 7 – CIP and Overall Implementation Plan	\$22,078
Task 8 – Final Report Preparation	\$35,166
Task 9 – Meetings and Workshops	\$36,060
Task 10 – Project Management	\$8,040
TOTAL AMOUNT	\$340,438

**Exhibit B-1B: Labor Hour Breakdown and Fee Estimate
STMWRF Facility Plan Update
Washoe County Department of Water Resources**



FINAL

Task	Subtask	Activity Description	Labor Category						Total Hours	Labor Cost	Other Direct Cost (ODC) Details			Total ODC's	Total Project Budget
			Senior Professional \$245	Lead Project Professional \$233	Project Professional \$212	Professional \$180	Assistant Professional \$142	Senior Technician \$136			DP/Clerical \$83	Travel and Subsistence	Printing		
1.0	Executive Summary		2	14	0	0	0	0	24	\$ 4,668	\$ -	\$ -	\$ -	\$ 4,668	
	101 Deliverable Preparation		2	14					24	\$ 4,668	\$ -	\$ -	\$ -	\$ 4,668	
2.0	Basis of Planning		4	18	0	68	50	6	120	\$ 26,718	\$ -	\$ -	\$ -	\$ 26,718	
	201 Introduction		2	2					4	\$ 2,038	\$ -	\$ -	\$ -	\$ 2,038	
	202 Regulatory Requirements		2	2					4	\$ 3,762	\$ -	\$ -	\$ -	\$ 3,762	
	203 Inflow and Infiltration Evaluation		2	2					4	\$ 3,346	\$ -	\$ -	\$ -	\$ 3,346	
	204 Population, Flow, and Load Projections		2	2					4	\$ 4,406	\$ -	\$ -	\$ -	\$ 4,406	
	205 Reliability and Design Criteria		2	2					4	\$ 3,762	\$ -	\$ -	\$ -	\$ 3,762	
	206 Deliverable Preparation		4	8	10	18	8	12	60	\$ 9,404	\$ -	\$ -	\$ -	\$ 9,404	
3.0	Wastewater Collection System		4	36	0	98	240	36	422	\$ 66,728	\$ -	\$ -	\$ -	\$ 66,728	
	301 Description of Existing Facilities		2	2					4	\$ 2,866	\$ -	\$ -	\$ -	\$ 2,866	
	302 Summary of Planning Studies		2	2					4	\$ 3,818	\$ -	\$ -	\$ -	\$ 3,818	
	303 Wastewater Collection System Modeling		4	4					8	\$ 33,924	\$ -	\$ -	\$ -	\$ 33,924	
	304 Proposed Replacement and Expansion Plan		8	8					16	\$ 6,968	\$ -	\$ -	\$ -	\$ 6,968	
	305 Implementation Schedule and Cost		8	8					16	\$ 8,392	\$ -	\$ -	\$ -	\$ 8,392	
	306 Deliverable Preparation		4	12	16	16	8	8	64	\$ 10,760	\$ -	\$ -	\$ -	\$ 10,760	
4.0	Site Evaluation/Condition Assessment		4	10	96	28	8	4	158	\$ 31,126	\$ 1,000	\$ -	\$ 1,000	\$ 32,126	
	401 Data Review		2	2					4	\$ 3,730	\$ -	\$ -	\$ -	\$ 3,730	
	402 Checklist Development		2	2					4	\$ 1,984	\$ -	\$ -	\$ -	\$ 1,984	
	403 Field Review		2	2					4	\$ 9,408	\$ 1,000	\$ -	\$ 1,000	\$ 10,408	
	404 Implementation Schedule and Cost		4	4					8	\$ 3,392	\$ -	\$ -	\$ -	\$ 3,392	
	405 Deliverable Preparation		4	8	40				52	\$ 12,612	\$ -	\$ -	\$ -	\$ 12,612	
5.0	Plant Performance and Process Model		4	58	0	134	0	4	208	\$ 36,902	\$ -	\$ -	\$ -	\$ 36,902	
	501 Evaluate Existing STMWRF Performance and Design Intent		6	6					12	\$ 4,638	\$ -	\$ -	\$ -	\$ 4,638	
	502 Capacity Rating of Existing Facilities		8	8					16	\$ 6,184	\$ -	\$ -	\$ -	\$ 6,184	
	503 Evaluate Existing Processes to Improve Efficiencies		8	8					16	\$ 4,024	\$ -	\$ -	\$ -	\$ 4,024	
	504 Develop Process Model		16	16					32	\$ 9,488	\$ -	\$ -	\$ -	\$ 9,488	
	505 Identify Optimization Opportunities		8	8					16	\$ 4,024	\$ -	\$ -	\$ -	\$ 4,024	
	506 Field Implementation Plan		4	4					8	\$ 3,092	\$ -	\$ -	\$ -	\$ 3,092	
	507 Deliverable Preparation		4	8	24				36	\$ 8,452	\$ -	\$ -	\$ -	\$ 8,452	
6.0	Facility Plan Update		8	36	0	102	232	40	438	\$ 68,952	\$ -	\$ -	\$ -	\$ 68,952	
	601 Description of Existing Facilities		4	4					8	\$ 3,352	\$ -	\$ -	\$ -	\$ 3,352	
	602 Summary of Planning Studies		4	4					8	\$ 5,688	\$ -	\$ -	\$ -	\$ 5,688	
	603 STMWRF Hydraulics		12	12					24	\$ 5,332	\$ -	\$ -	\$ -	\$ 5,332	
	604 Liquid Treatment Processes		40	40					80	\$ 22,988	\$ -	\$ -	\$ -	\$ 22,988	
	605 Solids Handling Processes		2	2					4	\$ 2,052	\$ -	\$ -	\$ -	\$ 2,052	
	606 Recycle Stream Management		4	4					8	\$ 2,128	\$ -	\$ -	\$ -	\$ 2,128	
	607 Effluent Reuse		4	4					8	\$ 2,128	\$ -	\$ -	\$ -	\$ 2,128	
	608 Plant Utilities and Support Facilities		2	2					4	\$ 2,052	\$ -	\$ -	\$ -	\$ 2,052	
	609 Proposed Expansion Plan and Site Layout		4	4					8	\$ 5,732	\$ -	\$ -	\$ -	\$ 5,732	
	610 Implementation Schedule and Cost		8	8					16	\$ 4,916	\$ -	\$ -	\$ -	\$ 4,916	
	611 Deliverable Preparation		8	12	24	40	8	20	112	\$ 17,704	\$ -	\$ -	\$ -	\$ 17,704	
7.0	CIP and Overall Implementation Plan		2	24	2	24	74	0	134	\$ 22,078	\$ -	\$ -	\$ -	\$ 22,078	
	701 Implementation Schedule		4	4					8	\$ 4,216	\$ -	\$ -	\$ -	\$ 4,216	
	702 Capital Improvement Plan		4	4					8	\$ 5,780	\$ -	\$ -	\$ -	\$ 5,780	
	703 Operations and Maintenance Cost Projections		4	4					8	\$ 4,644	\$ -	\$ -	\$ -	\$ 4,644	
	704 Deliverable Preparation		2	12					14	\$ 7,438	\$ -	\$ -	\$ -	\$ 7,438	
8.0	Final Report Preparation		10	28	2	44	60	32	208	\$ 33,166	\$ -	\$ 2,000	\$ 2,000	\$ 35,166	
	801 Outline and Draft Final Facility Plan Update		6	16					22	\$ 23,270	\$ -	\$ 1,000	\$ 1,000	\$ 24,270	
	802 Final Facility Plan Update		4	12	2	12	12	8	58	\$ 9,896	\$ -	\$ 1,000	\$ 1,000	\$ 10,896	
	803 Meetings and Workshops		4	76	10	56	0	4	150	\$ 31,260	\$ 4,800	\$ -	\$ 4,800	\$ 36,060	
	804 Monthly Progress Meetings		4	10					14	\$ 3,310	\$ -	\$ -	\$ -	\$ 3,310	
	805 Technical Workshops		6	6					12	\$ 2,478	\$ 4,800	\$ -	\$ 4,800	\$ 7,278	
	806 Coordination with Other Consultants		6	6					12	\$ 2,478	\$ -	\$ -	\$ -	\$ 2,478	
10.0	Project Management		10	20	0	0	0	0	40	\$ 8,040	\$ -	\$ -	\$ -	\$ 8,040	
	1001 Project Administration		10	20					40	\$ 8,040	\$ -	\$ -	\$ -	\$ 8,040	
Project Totals			52	320	110	554	664	128	1,942	\$ 332,636	\$ 5,800	\$ 2,000	\$ 7,800	\$ 340,436	

**EXHIBIT B-2A
WASHOE COUNTY, NEVADA**

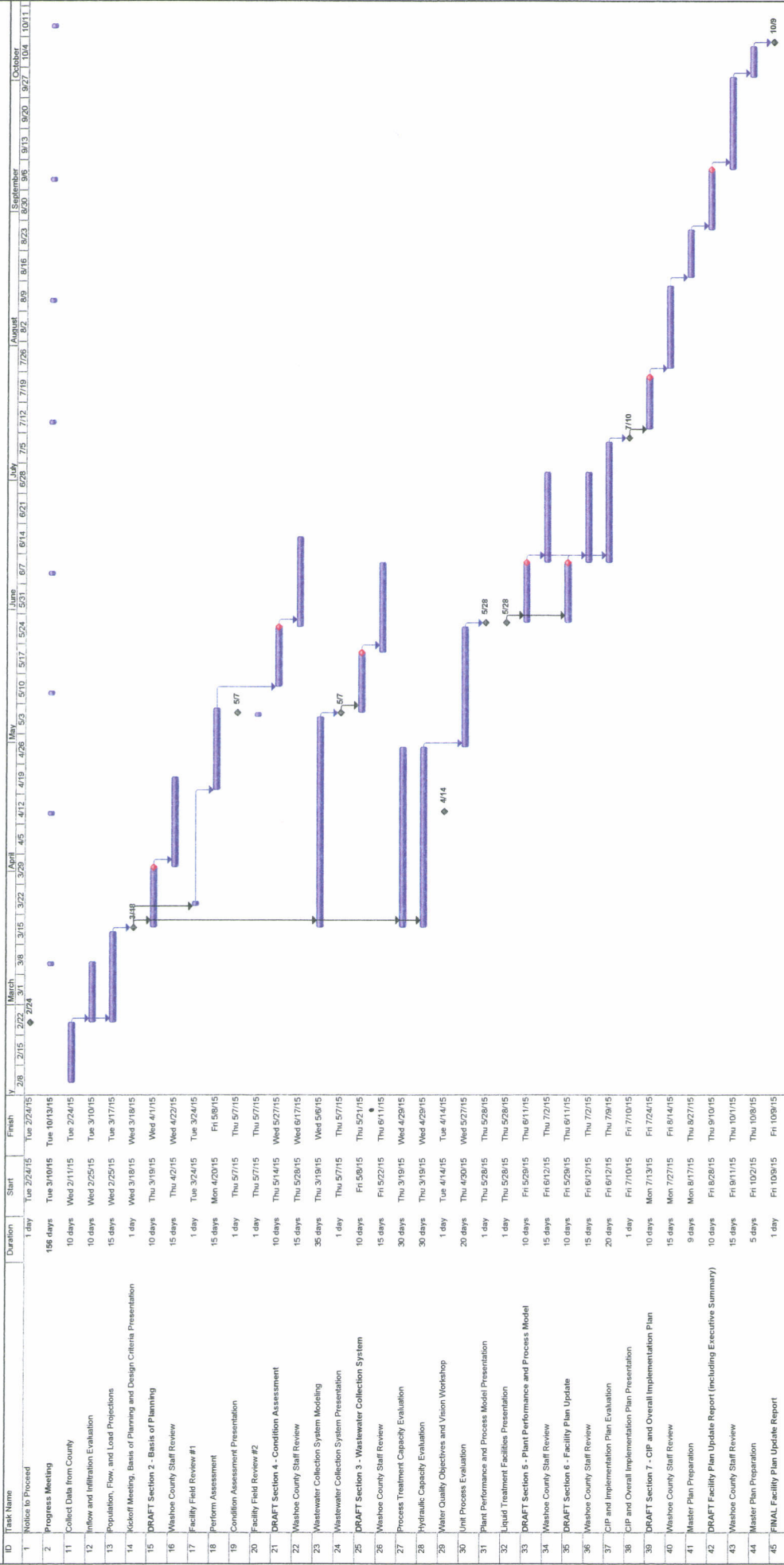
**SOUTH TRUCKEE MEADOWS WATER RECLAMATION FACILITY
FACILITY PLAN UPDATE**

SUMMARY OF PROJECT SCHEDULE

Engineer has reviewed the project with the County and agrees that the following schedule is a reasonable time frame within which to accomplish the work.

<u>Work Elements</u>	<u>Target Completion</u>
Notice to Proceed	February 2015
Task 1 – Section 1: Executive Summary	September 2015
Task 2 – Section 2: Basis of Planning	March 2015
Task 3 – Section 3: Wastewater Collection System	May 2015
Task 4 – Section 4: Condition Assessment	May 2015
Task 5 – Section 5: Plant Performance and Process Model	June 2015
Task 6 – Section 6: Facility Plan Update	June 2015
Task 7 – CIP and Overall Implementation Plan	July 2015
Task 8 – Draft Facility Plan Update	September 2015
Task 8 – Final Facility Plan Update	October 2015

Attachment B-2B
Preliminary Project Schedule



Project: STWRRF Master Plan Schedule
 Date: Wed 2/16/15
 Last Update: 1/14/15
 Updated: Wed 2/16/15

Summary
 Progress
 Milestone
 Task Split
 External Totals
 External Milestone
 Deadline

C-2

If CONSULTANT or Sub-consultant is a sole proprietor, coverage for the sole proprietor must be purchased and evidence of coverage must appear on the Certificate of Insurance. Such requirement may be waived for a sole proprietor who does not use the services of any employees, subcontractors, or independent contractors and completes an Affirmation of Compliance pursuant to NRS 616B627.

Should CONSULTANT be self-funded for Industrial insurance, CONSULTANT shall so notify COUNTY in writing prior to the signing of any agreement. COUNTY reserves the right to approve said retentions and may request additional documentation, financial or otherwise for review prior to the signing of any agreement.

MINIMUM LIMITS OF INSURANCE

CONSULTANT shall maintain coverages and limits no less than:

1. General Liability: \$1,000,000 combined single limit per occurrence for bodily injury, personal injury and property damage. If Commercial General Liability Insurance or other form with a general aggregate limit is used, the general aggregate limit shall be increased to equal twice the required occurrence limit or revised to apply separately to this project or location.
2. Automobile Liability: \$1,000,000 combined single limit per accident for bodily injury and property damage. No aggregate limit may apply.
3. CONSULTANT Errors and Omissions Liability: \$1,000,000 per occurrence and as an annual aggregate. Premium costs incurred to increase CONSULTANT'S insurance levels to meet minimum contract limits shall be borne by the CONSULTANT at no cost to the COUNTY.

CONSULTANT will maintain CONSULTANT liability insurance during the term of this Agreement and for a period of three (3) years from the date of substantial completion of the project. In the event that CONSULTANT goes out of business during the term of this Agreement or the three (3) year period described above, CONSULTANT shall purchase Extended Reporting Coverage for claims arising out of CONSULTANT'S negligent acts, errors and omissions committed during the term of the CONSULTANT Liability Policy.

Should COUNTY and CONSULTANT agree that higher CONSULTANT Coverage limits are needed warranting a project policy, project coverage shall be purchased and the premium for limits exceeding the above amount shall be borne by COUNTY. COUNTY retains the option to purchase project insurance through CONSULTANT'S insurer or its own source.

DEDUCTIBLES AND SELF-INSURED RETENTIONS

Any deductibles or self-insured retentions must be declared to and approved by the COUNTY Risk Management Division prior to the start of work under this Agreement. COUNTY reserves the right to request additional documentation, financial or otherwise prior to giving its approval of the deductibles and self-insured retention and prior to executing the underlying agreement. Any changes to the deductibles or self-insured retentions made during the term of this Agreement or during the term of any policy must be approved by the COUNTY Risk Manager prior to the change taking effect.

OTHER INSURANCE PROVISIONS

The policies are to contain, or be endorsed to contain, the following provisions:

Consulting Engineering Service Agreement - Carollo Engineers 2015

1. General Liability Coverages

- a. COUNTY, its officers, agents, employees and volunteers are to be covered as additional insureds as respects: liability arising out of activities performed by or on behalf of CONSULTANT, including the insured's general supervision of CONSULTANT; products and completed operations of CONSULTANT; or premises owned, occupied or used by CONSULTANT. The coverage shall contain no special limitations on the scope of protection afforded to the additional insureds, nor shall the rights of the additional insured be affected by the insured's duties after an accident or loss.
- b. CONSULTANT'S insurance coverage shall be primary insurance as respects COUNTY, its officers, agents, employees and volunteers. Any insurance or self-insurance maintained by COUNTY, its officers, agents, employees or volunteers shall be excess of CONSULTANT'S insurance and shall not contribute with it in any way.
- c. Any failure to comply with reporting provisions of the policies shall not affect coverage provided to COUNTY, its officers, agents, employees or volunteers.
- d. 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.
- e. CONSULTANT'S insurance coverage shall be endorsed to state that coverage shall not be suspended, voided, canceled or non-renewed by either party, reduced in coverage or in limits except after thirty (30) days' prior written notice by certified mail, return receipt requested, has been given to COUNTY except for nonpayment of premium.

ACCEPTABILITY OF INSURERS

Insurance is to be placed with insurers with a Best's rating of no less than A-: VII. COUNTY with the approval of the Risk Manager may accept coverage with carriers having lower Best's ratings upon review of financial information concerning CONSULTANT and insurance carrier. COUNTY reserves the right to require that the CONSULTANT'S insurer be a licensed and admitted insurer in the State of Nevada, or on the Insurance Commissioner's approved but not admitted list.

VERIFICATION OF COVERAGE

CONSULTANT shall furnish COUNTY with certificates of insurance and with original endorsements affecting coverage required by this exhibit. The certificates and endorsements for each insurance policy are to be signed by a person authorized by that insurer to bind coverage on its behalf. The certificates are to be on forms approved by COUNTY. **All certificates and endorsements are to be addressed to the specific COUNTY contracting department and be received and approved by COUNTY before work commences.** COUNTY reserves the right to review all required insurance policies, at any time.

SUB-CONSULTANTS

CONSULTANT shall include all Sub-consultants as insureds under its policies or furnish separate certificates and endorsements for each Sub-consultant. Sub-consultant shall be subject to all of the requirements stated herein.

MISCELLANEOUS CONDITIONS

Consulting Engineering Service Agreement - Carollo Engineers 2015

1. CONSULTANT shall be responsible for and remedy all damage or loss to any property, including property of COUNTY, caused in whole or in part by CONSULTANT, any Sub-consultant, or anyone employed, directed or supervised by CONSULTANT.
2. Nothing herein contained shall be construed as limiting in any way the extent to which CONSULTANT may be held responsible for payment of damages to persons or property resulting from its operations or the operations of any Sub-consultants under it.
3. In addition to any other remedies COUNTY may have if CONSULTANT fails to provide or maintain any insurance policies or policy endorsements to the extent and within the time herein required, COUNTY may, at its sole option:
 - a. Order CONSULTANT to stop work under this Agreement and/or withhold any payments which become due CONSULTANT here under until CONSULTANT demonstrates compliance with the requirements hereof;
 - b. Terminate the Agreement.