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January 19, 2023

SENT VIA: EMAIL

Mr. Greg Springman
Public Works Director
City of Sweet Home
1400 24th Avenue
Sweet Home, OR 97386

SUBJECT: Proposal for Engineering Services for Sweet Home Mahler Water Reclamation Facility Improvements Project Final Design

Dear Mr. Springman:

This Letter Proposal summarizes West Yost's Project Team, Scope, Budget and Schedule for completing Final Design for the City of Sweet Home (City) Mahler Water Reclamation Facility (MWRF) Improvements Project.

The MWRF Improvement Project was planned to be completed in two phases: Phase 1 was bid by the City and not awarded. As a result, the City is proceeding with a smaller near-term project that includes procurement of new dewatering equipment and construction of a waste activated sludge (WAS) holding tank that will be used as part of the larger MWRF improvements. For simplicity and to avoid confusing project terminology, the Phase 1 and Phase 2 designations are no longer being used for the Project's names and we are now referring to two separate Projects:

> **MWRF Interim Improvements Project (IIP):** small, near-term improvements project targeting expenditure of the City's $7M in grant funding from the Oregon Legislature that expires on June 30, 2023.
>
> **MWRF Improvements Project:** a larger, single-phase project to complete the remaining required upgrades of the City's MWRF.

PROJECT TEAM

West Yost's project team will continue with the same staff currently working on the Project. Key staff include:

Team Member	Role
West Yost	
Corie Moolenkamp	Principal-in-Charge – supporting the City and Project Team
Preston Van Meter	Project Manager and primary point of contact
Brooke Barry	Deputy Project Manager, Civil Design Lead/alternate point of contact
Jane Costello	Liquids Stream Design Manager
Bill Schilling	Liquids Stream Design Manager
Hannah Carpenter	Solids Stream Design Manager
Walt Meyer	QA/QC and Technical Advisor
Tim Banyai	QA/QC and Technical Advisor
Greg Chung	QA/QC and Technical Advisor

Sub-Consultants	
Ace Engineers	Structural Design Lead
Strongwork Architecture	Architectural Design Lead
Interface Engineering	Building A MEP and Overall HVAC Design Lead
Landis Consulting	Electrical, Instrumentation and Controls (EI&C) Design Lead
The Automation Group	Controls and Automation Lead and City Integrator-of-Record
Cadworks	Mechanical CAD Design and 3D Modeling

SCOPE OF SERVICES

West Yost's proposed Scope of Services for City's WWTP Improvements Project is included as Attachment A. The Scope of Services includes the following tasks:

Task 1. Project Management

Task 2. Additional Project Planning and Coordination Activities

Task 3. MWRF Improvements Project Final Design

The construction drawing index for final design documents used for budgeting purposes is included as Scope of Services, Exhibit 1.

Bidding services are not included in this contract amendment and will be contracted separately as part of the Construction Services for the MWRF Improvements Project.

PROJECT BUDGET

West Yost's proposed level of effort and budget is summarized in Table 1 below and Attachment B. West Yost will perform the Scope of Services with a not-to-exceed budget of **$1,560,873**. Any additional services not included in this Scope of Services will be performed only after receiving written authorization and a corresponding budget augmentation.

Table 1. Project Budget

Task	FY 23 Budget, dollars	FY 24 Budget, dollars
Task 1. Project Management	40,284	4,500
Task 2. Additional Project Planning and Coordination Activities	100,496	50,497
Task 3. MWRF Improvements Project Final Design	1,302,659	62,437
Total	**$1,443,439**	**$117,434**

SCHEDULE

West Yost's effort estimate is based on the following completion schedule:

Complete MWRF Improvements Final Design: June 30, 2023

Complete South Santiam River Outfall Final Design: September 30, 2023

An updated project schedule will be included in the Preliminary Engineering Report (PER) currently being finalized by West Yost.

An updated project schedule will be included in the Preliminary Engineering Report (PER) currently being finalized by West Yost.

CONTRACTUAL TERMS AND CONDITIONS

West Yost will complete the Project in accordance with the terms and conditions of our current City Engineer-of-Record contract utilizing West Yost's current 2023 rates as summarized in Attachment C. Billing Rates for Corie Moolenkamp and Preston Van Meter are reduced and proposed as follows:

Preston Van Meter Special Billing Rate:	$273/hour
Corie Moolenkamp Special Billing Rate:	$288/hour

If West Yost's proposal is accepted by the City, a Task Order Agreement with signature blocks will be prepared for all parties to fully execute the contract. To simplify the process of managing and tracking different budgets associated with existing versus new task orders, West Yost proposes setting up this budget augmentation as a new task order utilizing our current billing rates with special rates for staff noted above.

Thank you for providing West Yost the opportunity to be of continued service to the City. We look forward to working with you on this important Project. Please call Preston at 503.784.9536 if you have any questions or require additional information.

Sincerely,
WEST YOST

Greg Chung, PE
Vice President
PE #91820

Preston Van Meter, PE
Principal Engineer
PE #51615

Attachment A

Scope of Services

West Yost proposes to provide the following Scope of Services to complete final design and prepare final Contract Documents (Final CDs) for the MWRF Improvements Project. This scope also includes design and permitting for replacement of the South Santiam River outfall. This scope will be an augmentation of tasks and budget for the current MWRF Improvements Project. Therefore, tasks and sub-tasks may change slightly when these additional tasks are added to the current work breakdown structure for the MWRF Improvements Project.

Task 1. Project Management

Project management includes coordination of West Yost's internal team and subconsultants, quality assurance and quality control (QA/QC) activities, and preparation of monthly project updates and invoices.

Task 1.01. Monthly Project Status Reports and Invoices

Prepare monthly project updates, including a summary of project status, monthly invoice for services performed, earned value analysis (EVA) assessing project completion versus budget utilized, key upcoming project milestones, and any anticipated issues that may impact project budget or schedule. This task includes the preparation of monthly City Council project updates.

Task 1.02. Team Coordination Activities

West Yost will conduct monthly project check-in conference calls with City staff to review and discuss design issues, track project budget and schedule status, identify key coordination items (e.g. permitting) and other elements pertinent to the Project. For budgeting purposes, six additional 1-hour calls are budgeted to be attended by West Yost's Project Manager, Deputy Project Manager and Design Managers.

Task 1.03. City Council Meetings

West Yost's Project Manager will attend two (2) City Council meetings to support City staff with presentations to City Council. Presentations will be developed for each meeting attended by West Yost staff.

Task 1 Assumptions

- The project duration is anticipated to begin in January and continue through September 2023; therefore, ten (10) monthly project progress reports and invoices are budgeted.
- Action items from bi-weekly project check-in conference calls will be sent to attendees via email.

Task 1 Deliverables

- West Yost will provide one electronic (PDF) copy of monthly progress reports with invoices.
- West Yost will provide one electronic (PDF) copy of monthly City Council updates using the standard template currently being utilized.

Task 2. Additional Project Planning and Coordination Activities

Scope of Services for additional project planning, permitting and coordination activities related to the new South Santiam River outfall and updating the General Contractor Pre-Qualification to solicit other interested General Contractors prior to bidding the MWRF Improvements Project will be completed in this task.

Task 2.01. New South Santiam River Outfall Mixing Zone Study

West Yost's team will use the preliminary outfall design developed previously to complete a mixing zone study for the new South Santiam River outfall. The Mixing Zone study will be completed in accordance with DEQ Level 2 Mixing Zone Study Requirements. The Mixing Zone Study will initially be developed using existing river bathymetry (elevation) data collected during the 2017 outfall mixing zone study. The DEQ-preferred mixing zone modeling software CORMIX© will be used.

The Mixing Zone Study will be submitted to DEQ for review and approval and will also be used as part of the environmental permitting process for the project. If validation testing is required by DEQ following installation of the new outfall, a dye tracer study will be scoped separately as a part of construction services.

Task 2.02. South Santiam River Bathymetry and Mixing Zone Model Confirmation

River bathymetry (elevation) data will be collected during low river flows in August 2023 to confirm the mixing zone modeling conducted in Task 2.01. The CORMIX© mixing zone model will be updated, and an Amendment to the Mixing Zone Study will be issued, if required.

Task 2.03. New South Santiam River Outfall Permitting Support Services

West Yost's team will provide the following water quality assessment required for the new outfall using dilution factors developed as part of the Mixing Zone Study:

- Obtain and review existing effluent data, including organics and metals (metals, organics);
- Evaluate organics and metals for anticipated effluent quality following plant upgrades;
- Review existing and new South Santiam River bathymetry data;
- Conduct aquatic life and human health Reasonable Potential Analysis (RPA) for organics and metals using the DEQ RPA spreadsheet;
- Conduct RPA for ammonia based on anticipated effluent concentrations following plant upgrades;
- Conduct assessment for copper using the DEQ-approved biotic ligand model (BLM);
- Conduct thermal load assessment with Willamette Temperature TMDL wasteload allocations;
- Prepare a summary water quality assessment technical memorandum; and
- Meet and coordinate with DEQ as required.

Task 2.04. Re-Issue/Update General Contractor Pre-Qualification

West Yost will reissue the City's General Contractor Pre-Qualification Documents to seek additional Contractors interested in participating in the bidding process for the MWRF Improvements Project. Pre-qualified Contractor's from the City's previous Pre-Qualification Process could be exempted from re-submitting the full Qualifications information, but should, at a minimum, re-submit a statement regarding available bonding capacity due to the increased estimated cost of the Project. West Yost will support the City in reviewing General Contractor submittals and prepare a memorandum summarizing the pre-qualified General Contractors for distribution by City staff.

Task 2 Assumptions

- CORMIX© modeling will initially be completed using 2017 South Santiam River bathymetry data and preliminary design to facilitate completion of design and permitting.
- Detailed South Santiam River bathymetry data will be collected in Summer 2023 (August) and the CORMIX© model and dilution values will be confirmed for the planned new outfall location.
- Copper BLM evaluations will use a simplified approach based on regional default values and estimated effluent concentrations.
- Documents prepared previously for General Contractor Pre-Qualification will be used for solicitation to pre-qualify additional Contractors.

Task 2 Deliverables

- West Yost will prepare one (1) electronic (PDF) copy of meeting agendas and minutes from DEQ and other regulatory meetings.
- West Yost will prepare one (1) electronic (PDF) copy of the draft MWRF South Santiam River Outfall Mixing Zone Study.
- West Yost will provide three (3) hard copies and one (1) electronic (PDF) copy of the Final South Santiam River Outfall Mixing Zone Study.
- West Yost will provide one (1) electronic (PDF) copy of the draft and final MWRF South Santiam River Outfall Mixing Zone Study Amendment incorporating any required updates associated with river bathymetry data.
- West Yost will provide one (1) electronic (PDF) copy of the draft and final MWRF South Santiam River Water Quality Assessment.
- West Yost will provide one (1) electronic (PDF) copy of the draft and final General Contractor Pre-qualification RFP and Pre-qualified Contractor's list for distribution by City staff.

Task 3 MWRF Improvements Project Final Design

Task 3 will carry the current Phase 1 60% design through completion and development of final Contract Documents for bidding. Bidding services will be provided under a separate task order.

Task 3.01. MWRF Improvements Project 90% Final Design

Complete 90% Design and prepare the MWRF Improvements 90% Design Submittal include drawings as summarized in Scope of Services Exhibit 1, specifications including Division 0 and 1 "front end" specifications, updated Engineer's Opinion of Probable Construction Cost (OPCC) and updated project schedule.

Task 3.02. MWRF Improvements 90% Final Design Workshop

Conduct an 8-hour workshop with City staff to review the MWRF Improvements Phase 1 90% Final Design Submittal. For planning purposes, the workshop will be conducted in two 4-hour blocks over two days. All key West Yost team members and sub-consultants will attend the workshop either in-person or via Teams.

Task 3.03. Permitting Reviews and Coordination

Submit the Phase 1 90% Final Design to DEQ, USDA, City Building Official and Linn County (electrical) for review. Lead agency meetings as required to obtain regulatory and funding agency approvals to proceed. This task assumes one (1) meeting with USDA, one (1) meeting with Oregon DEQ and one (1) meeting with the City's Building Official.

Task 3.04. Prepare Final Contract Documents

Incorporate review comments and prepare Final Phase 1 Contract Documents (Final CDs) for bidding. West Yost will prepare Final Contract Documents for bidding including construction drawings noted on the Drawing Sheet List (as modified during final design), specifications, updated Engineer's OPCC and Final Project Schedule.

Task 3.05. South Santiam River Outfall Final Contract Documents

Prepare final contract documents for the new MWRF South Santiam River Outfall using river bathymetry data collected during summer low flows in August 2023. It is anticipated the in-outfall replacement work will be completed on a separate contract from the larger MWRF Improvements project due to the nature of the project work (in-water) and timing of the river data collection. The Contract Documents are anticipated to include three General Drawings, six Civil Drawings, two Mechanical Drawings and two Structural Drawings. The design will be based on the preliminary design developed previously and will include a Draft Final Contract Documents submittal for City review.

Task 3 Assumptions

- No additional topographical surveying, hazardous materials survey or environmental documentation are anticipated to be required as part of the project.
- No services associated with hazardous materials removal or cultural artifacts recovery and monitoring are included in West Yost's Scope of Services.
- Deferred submittals during construction will be used for design-build of the following building systems: (1) Fire Detection and Alarm Systems and (2) Building Automation, Energy Management and Temperature Control Systems.
- Additional deferred submittals will include seismic and anchorage structural calculations for all major systems and equipment. Additional structural deferred submittals may be identified as the design is finalized. All deferred submittals will be listed on the Cover Sheet for the final construction drawings.
- Drawings will be developed for printing and readability based on 11x17 half-size reductions.
- CAD drawings will be developed using the following platforms: (1) Buildings and Structures: AutoCAD Plant 3D and Revit, (2) Civil/Site Work and Yard Piping: AutoCAD Civil 3D and (3) Electrical and Instrumentation: AutoCAD.
- Specifications shall be developed in the Construction Specifications Institute (CSI) 6-digit format. Division 0 and 1 specifications will be based on the MWRF Improvements Phase 1 contract documents developed previously and reviewed by the City Attorney.
- Budgeted hours for the 90% Final Design Review Workshop include time for preparation and team coordination following the workshop.
- Printing of Final CDs for Bidders is not included in West Yost's budget. It is anticipated copies of Final CDs will be issued to Bidders electrically or through a 3rd party printing company.
- Permit reviews and coordination assume that one (1) round of comment/response with permitting agency will be sufficient and that comments from permitting entity will be consolidated into one comment set.
- Building and electrical permits will be pulled by the General Contractor and fees paid by the City of Sweet Home.
- Construction services to be provided by West Yost and sub-consultants beyond Bidding Services will be contracted separately.

Task 3 Deliverables

- West Yost will provide three (3) hard copies and one (1) electronic (PDF) copy of the WWTP Phase 1 90% Design Submittal.
- West Yost will provide five (5) hard copies and one (1) electronic (PDF) copy of the WWTP Final Contract Documents.
- West Yost will provide (1) one electronic (PDF) copy of the agenda and minutes from all Final Design meetings and workshops.

Exhibit 1

Phase 1 Sheet List

Table 1 -1. Sheet List Summary by Discipline	
Sheet List Title	Number of Sheets:
General	9
Civil	36
Architectural	42
Structural	89
Mechanical	80
Plumbing	11
HVAC	10
Building Electrical	11
Technology	3
Process & Instrumentation Diagrams	45
Electrical	168
Instrumentation & Control	114
Total	**618**

Table 1-2. Sheet List Summary by Discipline	
Sheet No.	Sheet Description
GENERAL	
G-000	COVER SHEET
G-001	DRAWING INDEX
G-002	GENERAL NOTES
G-003	SYMBOLS
G-004	ABBREVIATIONS
G-005	DESIGN CRITERIA
G-006	LIQUIDS PROCESS FLOW DIAGRAM
G-007	SOLIDS PROCESS FLOW DIAGRAM
G-008	HYDRAULIC PROFILE
CIVIL	
C-001	CIVIL DETAILS 1
C-002	CIVIL DETAILS 2
C-003	CIVIL DETAILS 3
C-004	CIVIL DETAILS 4
C-005	CIVIL DETAILS 5
C-006	CIVIL DETAILS 6
C-007	BATHROOM RELOCATION DETAILS
C-010	EXISTING CONDITIONS PLAN
C-011	EXISTING UTILITIES PLAN
C-020	SITE DEMOLITION & REHAB OVERVIEW PLAN
C-021	UTILITY DEMOLITION PLAN
C-022	BACKWASH STORAGE/IMHOFF TANK DEMOLITION
C-023	EXISTING IPS PARTIAL DEMOLITION & REHABILITATION
C-024	EX. CHLORINE CONTACT BASIN (CCB) PARTIAL DEMOLITION & REHABILITATION PLAN
C-025	EXISTING (CCB) PARTIAL DEMOLITION & REHABILITATION PLAN SECTIONS
C-026	EXISTING AERATION BASIN PARTIAL DEMOLITION & REHABILITATION PLAN
C-027	EXISTING AERATION BASIN PARTIAL DEMOLITION & REHABILITATION SECTIONS
C-030	OVERALL SITE PLAN, STRUCTURE COORDINATES, STAGING AND ACCESS
C-040	EROSION CONTROL NOTES
C-041	EROSTION CONTROL DETAILS
C-042	EROSTION CONTROL PLAN
C-050	OVERALL GRADING PLAN
C-051	MAIN ELECTRICAL/BLOWER BUILDING GRADING PLAN
C-052	WALL PROFILES

Table 1-2. Sheet List Summary by Discipline	
Sheet No.	Sheet Description
C-060	YARD PIPING PLAN 1
C-061	YARD PIPING PLAN 2
C-062	YARD PIPING PLAN 3
C-070	PIPE PROFILES - 1
C-071	PIPE PROFILES - 2
C-072	PIPE PROFILES - 3
C-073	PIPE PROFILES - 4
C-074	PIPE PROFILES - 5
C-075	PIPE PROFILES - 6
C-076	PIPE PROFILES - 7
C-077	PIPE PROFILES - 8
C-078	PIPE PROFILES - 9
C-079	PIPE PROFILES - 10
C-080	PIPE PROFILES - 11
C-081	PIPE PROFILES - 12
ARCHITECTURAL	
A-001	GENERAL ARCHITETURAL LEGEND AND CODE INFORMATION
A-002	ARCHITECTURAL CODE INFORMATION AND PLANS
A-003	ARCHITECTURAL CODE SITE PLAN
A-004	ARCHITECTURAL DOOR TYPES SCHEDULES
A-005	ARCHITECTURAL WINDOW TYPES AND SCHEDULES AND FINISH SCHEDULES
A-006	GENERAL ARCHITECTURAL DETAILS - VERTICAL ASSEMBLIES
A-007	GENERAL ARCHITECTURAL DETAILS - HORIZONTAL ASSEMBLIES
A-008	GENERAL ARCHITECTURAL DETAILS - DOOR DETAILS - 1
A-009	GENERAL ARCHITECTURAL DETAILS - DOOR DETAILS - 2
A-010	GENERAL ARCHITECTURAL DETAILS - OVERHEAD DOOR DETAILS
A-011	GENERAL ARCHITECTURAL DETAILS - WINDOW DETAILS - 1
A-012	GENERAL ARCHITECTURAL DETAILS - WINDOW AND HATCH DETAILS
A-013	GENERAL ARCHITECTURAL DETAILS - LOUVER DETAILS
A-014	GENERAL ARCHITECTURAL DETAILS - MISC BUILDING DETAILS
A-015	GENERAL ARCHITECTURAL DETAILS - MISC BUILDING DETAILS
A-016	GENERAL ARCHITECTURAL DETAILS - MISC BUILDING DETAILS
A-017	GENERAL ARCHITECTURAL DETAILS - MISC BUILDING DETAILS
A-018	GENERAL ARCHITECTURAL DETAILS - MISC BUILDING DETAILS
A-019	GENERAL ARCHITECTURAL DETAILS - OPENINGS AND MISC BUILDING DETAILS

Table 1-2. Sheet List Summary by Discipline	
Sheet No.	Sheet Description
A-150	SOUTH ELECTRICAL BUILDING PLAN ELEVATIONS & SECTIONS
A-200	BUILDING A - FIRST FLOOR PLAN
A-201	BUILDING A - SECOND FLOOR PLAN
A-202	BUILDING A - ADMINISTRTAION AREA - ENLARGED PLAN 1
A-203	BUILDING A - ADMINISTRTAION AREA - ENLARGED PLAN 2
A-204	BUILDING A - BUILDING ELEVATION 1
A-205	BUILDING A - BUILDING ELEVATION 2
A-206	BUILDING A - REFLECTED CEILING PLANS
A-207	BUILDING A - ROOF PLAN
A-208	BUILDING A - BUILDING SECTIONS
A-209	BUILDING A - WALL SECTIONS
A-210	BUILDING A - WALL SECTIONS
A-211	BUILDING A - INTERIOR ELEVATIONS
A-400	MAIN ELECTRICAL & BLOWER BUILDING ELEVATIONS AND SECTIONS
A-401	MAIN ELECTRICAL & BLOWER BUILDING FLOOR, ROOF, AND RCP PLAN
A-402	MAIN ELECTRICAL & BLOWER WALL SECTIONS
A-500	TERTIARY BUILDING FLOOR, ROOF, AND RCP PLAN
A-501	TERTIARY BUILDING ELEVATIONS AND SECTIONS
A-502	TERTIARY BUILDING WALL SECTIONS
A-503	TERTIARY BUILDING – WALL SECTIONS
A-610	SOLIDS BUILDING FLOOR, ROOF, AND RCP PLAN
A-611	SOLIDS BUILDING ELEVATIONS AND SECTIONS
A-612	SOLIDS BUILDING WALL SECTIONS
STRUCTURAL	
S-001	GENERAL STRUCTURAL NOTES STRUCTURAL ABBREVIATIONS
S-002	SPECIAL INSPECTIONS NAD STRUCTURAL NOTES
S-003	STRUCTURAL MATERIALS NOTES
S-004	STRUCTURAL MATERIALS NOTES CONTINUED
S-005	TYPICAL CONCRETE JOINT DETAILS
S-006	TYPICAL CONCRTE REINFORCING DETAILS
S-007	TYPICAL CONCRTE BASE DETAILS
S-008	TYPICAL MASONRY DETAILS
S-009	TYPICAL MASONRY DETAILS
S-010	TYPICAL GRATING DETAILS
S-011	TYPICAL METAL DETAILS

Table 1-2. Sheet List Summary by Discipline	
Sheet No.	Sheet Description
S-012	TYPICAL RAILING DETAILS
S-110	INFLUENT PUMP STATION - PLAN & SECTIONS
S-111	INFLUENT PUMP STATION - TRANSVERSE SECTION
S-112	INFLUENT PUMP STATION - TRANSVERSE SECTION
S-113	INFLUENT PUMP STATION SECTIONS & DETAILS
S-114	EXISTING INFLURNT SEWER DIVERSION STRUCTURES
S-130	RECYCLE DRAIN PUMP STATION PLANS & SECTIONS
S-131	RECYCLE DRAIN PUMP STATION TOP PLAN
S-132	RECYCLE DRAIN PUMP STATION SECTIONS
S-133	RECYCLE DRAIN PUMP STATION SECTIONS & DETAILS
S-200	BUILDING A FOUNDATION PLAN AND SECOND FLOOR FRAMING PLAN
S-201	BUILDING A FOUNDATION DETAILS
S-202	BUILDING A FRAMING DETAILS
S-230	RAW SEWAGE SCREENING & GRIT REMOVAL FOUNDATION PLANS
S-231	RAW SEWAGE SCREENING & GRIT REMOVAL TOP SLAB & GRATING PLANS
S-232	RAW SEWAGE SCREENING SECTIONS
S-233	RAW SEWAGE SCREENING SECTIONS
S-234	RAW SEWAGE SCREENING BYPASS CHANNEL SECTION
S-235	GRIT REMOVAL SECTION
S-236	RAW SEWAGE SCREENING & GRIT REMOVAL SECTIONS
S-237	RAW SEWAGE SCREENING CHANNEL SECTION
S-238	RAW SEWAGE SCREENING & GRIT CHAMBER CHANNEL SECTION
S-239	GRIT REMOVAL INLET/OUTLET CHANNEL SECTION
S-310	PRIMARY CLARIFIER LOWER FOUNDATION PLANS
S-311	PRIMARY CLARIFIER UPPER FOUNDATION PLANS & TOP SLAB PLAN
S-312	PRIMARY CLARIFIER OVERALL SECTION & INLET CHANNEL SECTIONS
S-313	PRIMARY CLARIFIER LONGITUDINAL SECTION
S-314	PRIMARY CLARIFIER LONGITUDINAL SECTION
S-315	PRIMARY CLARIFIER TRAVERSE SECTION
S-316	PRIMARY CLARIFIER INLET CHANNEL SECTIONS
S-317	PRIMARY EFFLUENT CONTROL STRUCTURE SECTIONS
S-318	PRIMARY EFFLUENT CONTROL STRUCTURE & PRIMARY SCUM WELL SECTIONS
S-320	HEADWORKS ODOR CONTROL FOUNDATION PLAN & SECTION
S-400	MAIN ELECTRICAL & BLOWER BUILDING - FOUNDATION & FRAMING PLANS
S-401	MAIN ELECTRICAL & BLOWER BUILDING - SECTIONS & DETAILS

Table 1-2. Sheet List Summary by Discipline	
Sheet No.	Sheet Description
S-402	GENERATOR FOUNDATION PLAN & SECTION
S-410	AERATION BASIN 1 & 2 FOUNDATION PLAN
S-411	AERATION BASIN 1 & 2 TOP PLAN
S-412	AERATION BASIN 1 & 2 SECTIONS
S-413	AERATION BASIN 1 & 2 MCLS SECTION
S-414	MCLS OUTLET SECTIONS
S-415	EXISTING AERATION BASIN SECTIONS AND DETAILS
S-416	EXISTING AERATION BASIN SECTIONS AND DETAILS
S-420	AERATION BASIN 3 FOUNDATION PLAN
S-421	AERATION BASIN 3 TOP PLAN & SECTION
S-422	AERATION BASIN 3 SECTIONS & DETAILS
S-423	AERATION BASIN 3 SECTIONS & DETAILS
S-424	AERATION BASIN 3 SECTIONS & DETAILS
S-425	AERATION BASIN 3 SECTIONS & DETAILS
S-440	SC 60 RAS/WAS PUMP STATION SECTIONS & DETAILS
S-441	SC 60 RAS/WAS PUMP STATION FOUNDATION & TOP SLAB PLANS
S-450	SC 90 FOUNDATION PLAN AND SECTION
S-451	SC 90 TOP PLAN AND SECTION
S-452	SC 90 RAS/WAS PUMP STATION STATIONS
S-453	SC 90 RAS PUMP STATION SECTIONS
S-454	SC 90 WAS PUMP STATION STATIONS
S-455	SC 90 WAS PUMP STATION SECTIONS
S-500	UV, UTILITY WATER, FLUME FOUNDATION PLAN
S-501	TERTIARY BUILIDNG FOUNDATION PLAN
S-502	TERTIARY BUILDING ROOF FRAMING PLAN
S-503	TERTIARY BUILDING MASONRY SHEAR WALL ELEVATIONS
S-504	TERTIARY BUILDING SECTIONS & DETAILS
S-505	TERTIARY BUILDING SECTIONS & DETAILS
S-520	UV SECTIONS & DETAILS
S-530	FLUME SECTIONS & DETAILS
S-510	FILTERS FOUNDATION PLANS
S-511	FILTERS FOUNDATION AND TOP PLANS
S-512	FILTERS LONGITUDINAL SECTION
S-513	FILTERS TRAVERSE SECTION
S-514	FILTERS DRY PIT TRANSVERSE SECTION

Table 1-2. Sheet List Summary by Discipline	
Sheet No.	Sheet Description
S-610	SOLIDS BUILDING FOUNDATION PLAN
S-611	SOLIDS BUILDING ROOF FRAMING PLAN
S-612	SOLIDS BUILDING MASONRY SHEAR WALL ELEVATIONS
S-613	SOLIDS BUILDING SECTIONS & DETAILS
S-640	PRIMARY DIGESTER UPPER FOUNDATION PLAN
S-641	PRIMARY DIGESTER TOP PLAN
S-642	PRIMARY DIGESTER FOUNDATION PLAN
S-643	PRIMARY DIGESTER SECTION
MECHANICAL	
M-001	MECHANICAL DETAILS 1
M-002	MECHANICAL DETAILS 2
M-003	MECHANICAL DETAILS 3
M-004	MECHANICAL DETAILS 4
M-110	INFLUENT PUMP STATION ISOMETRIC VIEW
M-111	INFLUENT PUMP STATION PLANS
M-112	INFLUENT PUMP STATION SECTION
M-113	INFLUENT PUMP STATION SECTION & DETAIL
M-114	INFLUENT PUMP STATION SECTION & DETAIL 3
M-130	RECYCLE DRAIN PUMP STATION ISOMETRIC VIEW
M-131	RECYCLE DRAIN PUMP STATION PLAN
M-132	RECYCLE DRAIN PUMP STATION SECTIONS & DETAIL
M-230	RAW SEWAGE SCREENING ISOMETRIC VIEW
M-231	RAW SEWAGE SCREENING TOP PLANS
M-232	RAW SEWAGE SCREENING BOTTOM PLAN
M-233	RAW SEWAGE SCREENING SECTIONS 1
M-234	RAW SEWAGE SCREENING SECTIONS 2
M-240	GRIT REMOVAL ISOMETERIC VIEW
M-241	GRIT REMOVAL PLAN & SECTION
M-242	GRIT REMOVAL SECTIONS
M-250	SOLIDS DEWATERING ISOMETRIC VIEW
M-251	SOLIDS DEWATERING PLAN
M-252	SOLIDS DEWATERING SECTION 1
M-253	SOLIDS DEWATERING SECTION 2
M-254	SOLIDS DEWATERING SECTION 3
M-310	PRIMARY CLARIFIERS ISOMETRIC VIEW

Table 1-2. Sheet List Summary by Discipline	
Sheet No.	Sheet Description
M-311	PRIMARY CLARIFIERS TOP PLAN
M-312	PRIMARY CLARIFIERS BOTTOM PLAN
M-313	PRIMARY CLARIFIERS SECTIONS
M-314	PRIMARY CLARIFIERS ENLARGED PLAN 1
M-315	PRIMARY CLARIFIERS ENLARGED PLAN 2
M-316	PRIMARY SCUM PUMP STATION TOP & BOTTOM PLAN, SECTIONS
M-320	ODOR CONTROL MECHANICAL PLANS, SECTION & DETAIL
M-321	ODOR CONTROL MECHANICAL PLANS, SECTION & DETAIL
M-330	SODIUM HYDROXIDE STORAGE & METERING MECHANICAL PLANS & SECTION
M-400	BLOWER ROOM ISOMETRIC VIEW
M-401	BLOWER ROOM & AERATION PIPING PLAN
M-402	BLOWER ROOM & AERATION PIPING SECTION
M-410	AERATION BASIN (AB) 1 & 2 ISOMETRIC VIEW
M-411	AERATION BASIN 1 & 2 LOWER MECHANICAL PLAN
M-412	AERATION BASIN 1 & 2 UPPER MECHANCIAL PLAN
M-413	AERATION BASIN 1 & 2 SECTIONS
M-415	AERATION BASIN 3 ISOMETRIC VIEW
M-416	AERATION BASIN 3 LOWER MECHANICAL PLAN
M-417	AERATION BASIN 3 UPPER MECHANICAL VIEW
M-418	AERATION BASIN 3 SECTION 1
M-419	AERATION BASIN 3 SECTIONS & DETAILS 2
M-420	AERATION BASIN 3 SECTION 3
M-430	MLCS ISOMETRIC VIEW
M-431	MLCS TOP AND BOTTOM PLAN
M-432	MLCS SECTIONS
M-440	SC 60 RAS/WAS PUMP STATION ISOMETRIC VIEW
M-441	SC60 RAS/WAS PUMP STATION TOP PLAN
M-442	SC60 RAS/WAS PUMP STATION BOTTOM PLAN
M-443	SC60 RAS/WAS PUMP STATION SECTIONS 1
M-444	SC 60 RAS/WAS PUMP STATION SECTIONS 2
M-450	SC90 ISOMETRIC VIEW
M-451	SC90 PLANS
M-452	SC90 SECTIONS
M-453	SC90 DETAILS
M-454	SC 90 RAS PUMP STATION ISOMETRIC VIEW

Table 1-2. Sheet List Summary by Discipline	
Sheet No.	Sheet Description
M-455	SC 90 RAS PUMP STATION PLANS
M-456	SC 90 RAS PUMP STATION SECTIONS & DETAILS
M-457	SC 90 WAS PUMP STATION ISOMETRIC VIEW
M-458	SC 90 WAS PUMP STATION PLANS
M-459	SC 90 WAS PUMP STATION SECTIONS
M-500	TERTIARY AREA PLAN
M-511	TERTIARY FILTER PLAN
M-512	TERTIARY FILTERS SECTIONS
M-522	UV DISINFECTION PLAN
M-523	UV DISINFECTION SECTION
M-531	UW PUMP STATION & EFFLUENT FLOW MONITORING SECTIONS
M-533	UW CHLORINATION PLAN & SECTION
M-600	SLUDGE BLEND TANK & MIXING SYSTEM PLAN, SECTIONS AND DETAILS
M-610	SOLIDS BUILDING PLAN
M-630	PRIMARY DIGESTER ISOMETRIC VIEW
M-631	PRIMARY DIGESTER TOP PLAN
M-632	PRIMARY DIGESTER BOTTOM PLAN
M-633	PRIMARY DIGESTER SECTIONS
M-640	DIGESTED SLUDGE HOLDING TANK & MIXING SYSTEM PLAN SECTIONS & DETAILS
PLUMBING	
P-001	PLUMBING SYMBOL LIST AND GENERAL NOTES
P-002	PLUMBING SCHEDULES
P-003	PLUMBING DETAILS
P-004	PLUMBING DETAILS
P-005	GAS RISER DIAGRAM
P-200	BUILDING A - UNDERGROUND PLAN
P-201	BUILDING A - PLUMBING FLOOR PLAN
P-202	BUILDING A - PLUMBING SECOND FLOOR PLAN
P-203	BUILDING A - ENLARGED PLAN
P-500	MAIN ELECTRICAL & BLOWER BUILDING PLUMBING PLANS
P-610	SOLIDS ELECTRICAL & BLOWER BUILDING PLUMBING PLANS
HVAC	
H-001	HVAC SYMBOL LIST AND GENERAL NOTES
H-002	HVAC SCHEDULES
H-003	HVAC SCHEDULES

Table 1-2. Sheet List Summary by Discipline	
Sheet No.	Sheet Description
H-004	HVAC DETAILS
H-100	SOUTH ELECTRCIAL BUILDNG HVAC FLOOR PLAN
H-200	BUILDING A - FLOOR PLAN
H-201	BUILDING A - SECOND FLOOR PLAN
H-400	MAIN ELECTRICAL & BLOWER BUILDING HVAC FLOOR PLAN
H-500	TERTIARY BUILDING FLOOR AND ROOF HVAC PLANS
H-610	SOLIDS BUILIDNG FLOOR AND ROOF HVAC PLANS
BUILDING ELECTRICAL	
BE-001	ELECTRICAL SYMBOLS LIST AND GENERAL NOTES
BE-002	ELECTRICAL LIGHTING CONTROL MATRIX
BE-003	ELECTRICAL DETAILS
BE-004	ELECTRICAL SCHEDULES 1
BE-005	ELECTRICAL SCHEDULES 2
BE-200	BUILDING A - LIGHTING FLOOR PLAN
BE-201	BUILDING A - LIGHTING SECOND FLOOR PLAN
BE-202	BUILDING A - POWER FLOOR PLAN
BE-203	BUILDING A - POWER SECOND FLOOR PLAN
BE-204	BUILDING A - LABORATORY POWER FLOOR PLAN
BE-205	BUILIDNG A - ELECTRICAL SINGLE LINE DIAGRAMS
TECHNOLOGY	
T-001	TECHNOLOGY SYMBOL LIST AND GENERAL NOTES
T-200	BUILDING A - TECHNOLOGY FLOOR PLAN
T-201	BUILDING A - TECHNOLOGY MEZZANINE PLAN
PROCESS AND INSTRUMENTATION	
I-001	LEGEND, SYMBOLS AND ABBREVIATIONS 1
I-002	LEGEND, SYMBOLS AND ABBREVIATIONS 2
I-110	INFLUENT PUMP STATION 1
I-111	INFLUENT PUMP STATION 2
I-130	RECYLE/DRAIN PUMP STATION
I-231	RAW SEWAGE SCREENS 1
I-232	RAW SEWAGE SCREENS 2
I-233	SCREENINGS CONVEYANCE & PROCESSING
I-241	GRIT REMOVAL BASIN
I-242	GRIT CLASSIFIER
I-251	SOLIDS DEWATERING 1

Table 1-2. Sheet List Summary by Discipline	
Sheet No.	Sheet Description
I-252	SOLIDS DEWATERING 2
I-253	POLYMER MAKEDOWN
I-311	PRIMARY CLARIFIER NO. 1
I-312	PRIMARY CLARIFIER NO. 2
I-313	PRIMARY CLARIFIER NO. 3
I-314	PRIMARY EFFLENT DISTRIBUTION STRUCTURE
I-315	PRIMARY SLUDGE PUMPS
I-316	PRIMARY SCUM PUMP STATION
I-321	ODOR CONTROL
I-400	AERATION BLOWERS
I-410	AERATION BASIN 1
I-411	AERATION BASIN 1
I-412	AERATION BASIN 3
I-430	MIXED LIQUOR CONTROL STRUCTURE (MLCS)
I-440	SECONDARY CLARIFIER 60 (EXISTING)
I-441	SECONDARY CLARIFIER 60 RAS PUMP STATION
I-442	SECONDARY CLARIFIER 60 WAS PUMP STATION
I-450	SECONDARY CLARIFIER 90
I-451	SECONDARY CLARIFIER 90 RAS PUMP STATION
I-452	SECONDARY CLARIFIER 90 WAS PUMP STATION
I-510	TERTIARY FILTER NO. 1
I-511	TERTIARY FILTER NO. 2
I-512	TERTIARY FILTER NO. 3
I-520	UV DISINFECTION
I-530	UTILITY WATER PUMP STATION
I-550	EFFLUENT FLOW MONITORING
I-600	SLUDGE BLEND TANK AND MIXING
I-610	SOLIDS THICKENING AND DIGESTER FEED PUMPING
I-611	BOILER AND HEAT EXCHANGER
I-612	HOT WATER LOOP
I-613	WASTE GAS BURNER
I-614	SOLIDS BUILIDNG ODOR CONTROL
I-630	PRIMARY DIGESTER AND DIGESTER MIXING
I-640	DIGESTED SLUDGE HOLDING TANK AND MIXING
I-001	LEGEND, SYMBOLS AND ABBREVIATIONS 1

Table 1-2. Sheet List Summary by Discipline	
Sheet No.	Sheet Description
I-002	LEGEND, SYMBOLS AND ABBREVIATIONS 2
I-110	INFLUENT PUMP STATION 1
I-111	INFLUENT PUMP STATION 2
I-130	RECYLE/DRAIN PUMP STATION
I-231	RAW SEWAGE SCREENS 1
I-232	RAW SEWAGE SCREENS 2
ELECTRICAL	
E-001	ELECTRICAL ABBREVIATIONS
E-002	ELECTRICAL SYMBOL LEGEND
E-003	ELECTRICAL DETAILS 1
E-004	ELECTRICAL DETAILS 2
E-005	ELECTRICAL DETAILS 3
E-006	ELECTRICAL DETAILS 4
E-007	ELECTRICAL DETAILS 5
E-008	ELECTRICAL DETAILS 6
E-009	ELECTRICAL DETAILS 7
E-010	EXISTING CONDITIONS AND DEMOLITION ONE-LINE DIAGRAM
E-011	SERVICE ENTRANCE ONE-LINE DIAGRAM
E-012	MCC-100 ONE-LINE DIAGRAM
E-013	MCC-200 ONE-LINE DIAGRAM
E-014	MCC-300 ONE-LINE DIAGRAM
E-015	MCC-400 ONE-LINE DIAGRAM
E-016	MCC-500 ONE-LINE DIAGRAM
E-020	POWER CONDUIT SCHEDULE 1
E-021	POWER CONDUIT SCHEDULE 2
E-022	POWER CONDUIT SCHEDULE 3
E-023	POWER CONDUIT SCHEDULE 4
E-024	POWER CONDUIT SCHEDULE 5
E-025	POWER CONDUIT SCHEDULE 6
E-026	GROUNDING CONDUIT SCHEDULE
E-027	CONTROL CONDUIT SCHEDULE 1
E-028	CONTROL CONDUIT SCHEDULE 2
E-029	CONTROL CONDUIT SCHEDULE 3
E-030	CONTROL CONDUIT SCHEDULE 4
E-031	CONTROL CONDUIT SCHEDULE 5

Table 1-2. Sheet List Summary by Discipline	
Sheet No.	Sheet Description
E-032	CONTROL CONDUIT SCHEDULE 6
E-033	MECHANICAL & LUMINAIRE SCHEDULE
E-040	PANEL SCHEDULES 1
E-041	PANEL SCHEDULES 2
E-042	PANEL SCHEDULES 3
E-043	PANEL SCHEDULES 4
E-044	PANEL SCHEDULES 5
E-050	SERVICE ENTRANCE - RACEWAY BLOCK DIAGRAM
E-051	SERVICE ENTRANCE CONTROL & NETWORK - RACEWAY BLOCK DIAGRAM
E-052	INFLUENT PUMP STATION - RACEWAY BLOCK DIAGRAM
E-053	RAW SEWAGE SCREEN - RACEWAY BLOCK DIAGRAM
E-054	GRIT REMOVAL - RACEWAY BLOCK DIAGRAM
E-055	SOLIDS DEWATERING - RACEWAY BLOCK DIAGRAM
E-056	PRIMARY CLARIFIER - RACEWAY BLOCK DIAGRAM
E-057	HEADWORKS ODOR CONTROL - RACEWAY BLOCK DIAGRAM
E-058	AERATION BLOWERS - RACEWAY BLOCK DIAGRAM
E-059	AREATION BASINS - RACEWAY BLOCK DIAGRAM
E-060	SECONDARY CLARIFIER SC60 - RACEWAY BLOCK DIAGRAM
E-061	SECONDARY CLARIFIER SC90 - RACEWAY BLOCK DIAGRAM
E-063	TERTIARY BUILDING - RACEWAY BLOCK DIAGRAM
E-064	TERTIARY FILTERS - RACEWAY BLOCK DIAGRAM
E-065	UV DISINFECTION - RACEWAY BLOCK DIAGRAM
E-066	UTILITY WATER SYSTEM - RACEWAY BLOCK DIAGRAM
E-067	OUTFALL - RACEWAY BLOCK DIAGRAM
E-068	SOLIDS BUILDING - RACEWAY BLOCK DIAGRAM
E-069	SOLIDS BUILDING ODOR CONTROL - RACEWAY BLOCK DIAGRAM
E-070	SLUDGE BLEND TANK - RACEWAY BLOCK DIAGRAM
E-071	PRIMARY DIGESTER - RACEWAY BLOCK DIAGRAM
E-072	DIGESTED SLUDGE STORAGE TANK - RACEWAY BLOCK DIAGRAM
E-100	ELECTRICAL SITE DEMOLITION PLAN
E-101	ELECTRICAL OVERALL SITE PLAN
E-102	ELECTRICAL SITE LIGHTING PLAN
E-103	ELECTRICAL HAZARDOUS LOCATION PLAN
E-104	MAIN ELECTRICAL & BLOWER BUILDING FLOOR PLAN
E-105	MAIN ELECTRICAL & BLOWER BUILDING ELEVATIONS

Table 1-2. Sheet List Summary by Discipline	
Sheet No.	Sheet Description
E-106	SOUTH ELECTRICAL BUILDING DEMOLITION FLOOR PLAN
E-107	SOUTH ELECTRICAL BUILDING NEW FLOOR PLAN
E-108	SOUTH ELECTRICAL BUILDING MCC-300 ELEVATIONS
E-110	INFLUENT PUMP STATION OVERALL SITE PLAN
E-111	INFLUENT PUMP STATION HAZARDOUS LOCATION PLAN
E-112	INFLUENT PUMP STATION ELECTRICAL PLAN & SECTION
E-113	INFLUENT PUMP STATION PUMP PANEL & STAND ELEVATIONS
E-130	RECYCLE DRAIN PUMP STATION HAZARDOUS LOCATION PLAN
E-131	RECYCLE DRAIN PUMP STATION ELECTRICAL PLAN & SECTIONS
E-132	RECYCLE DRAIN PUMP STATION DETAILS
E-201	BUILDING A HEADWORKS HAZARDOUS LOCATION PLAN
E-202	BUILDING A POWER & CONTROL PLAN
E-203	BUILDING A LIGHTING PLAN
E-204	BUILDING A ELECTRICAL ROOM ENLARGED PLAN
E-231	RAW SEWAGE SCREEN ELECTRICAL PLAN
E-240	GRIT REMOVAL HAZARDOUS LOCATION PLAN
E-241	GRIT REMOVAL ELECTRICAL PLAN & SECTIONS
E-251	SOLIDS DEWATERING ELECTRICAL PLAN
E-311	PRIMARY CLARIFIER ELECTRICAL PLAN
E-312	PRIMARY CLARIFIER ELECTRICAL SECTIONS & DETAILS
E-410	AERATION BASINS ENLARGED SITE PLAN
E-411	AERATION BASINS LIGHTING & RECEPTACLE PLAN
E-412	AERATION BASINS 1&2 ELECTRICAL PLAN & SECTION
E-414	AERATION BASIN 3 ELECTRICAL PLAN & SECTIONS
E-440	SECONDARY CLARIFIERS ENLARGED SITE PLAN
E-441	SECONDARY CLARIFIER SC60 ELECTRICAL PLAN & SECTIONS
E-442	SC60 RAS & WAS PUMP STATION ELECTRICAL PLAN & SECTIONS
E-443	SC60 RAS & WAS PUMP STATION DETAILS
E-450	SECONDARY CLARIFIER SC90 ELECTRICAL PLAN & SECTIONS
E-451	SECONDARY CLARIFIER SC90 RAS PUMP STATION PLAN & SECTION
E-452	SECONDARY CLARIFIER SC90 WAS PUMP STATION PLAN & SECTION
E-453	SC90 RAS & WAS PUMP STATION DETAILS
E-500	TERTIARY AREA POWER & CONTROL PLAN
E-501	TERTIARY AREA LIGHTING & RECEPTACLE PLAN
E-502	TERTIARY BUILDING ELECTRICAL PLAN

Table 1-2. Sheet List Summary by Discipline	
Sheet No.	Sheet Description
E-510	TERTIARY FILTERS ELECTRICAL PLAN
E-520	UV DISINFECTION ELECTRICAL PLAN
E-600	SOLIDS BUILDING POWER & CONTROL PLAN
E-601	SOLIDS BUILDING LIGHTING & RECEPTACLE PLAN
E-602	SOLIDS BUILDING ELECTRICAL ROOM FLOOR PLAN
E-620	SLUDGE BLEND TANK ELECTRICAL PLAN & SECTIONS
E-630	PRIMARY DIGESTER OVERALL SITE PLAN
E-631	PRIMARY DIGESTER SECTIONS
E-640	DIGESTED SLUDGE STORAGE TANK ELECTRICAL PLAN & SECTIONS
E-901	INFLUENT PUMP STATION - MOTOR SCHEMATIC 1
E-902	INFLUENT PUMP STATION PDP-110-01 LCS
E-903	INFLUENT PUMP STATION - MOTOR SCHEMATIC 2
E-904	INFLUENT PUMP STATION - MOTOR SCHEMATIC 3
E-905	INFLUENT PUMP STATION PDP-110-02 LCS
E-906	INFLUENT PUMP STATION PDP-110-03 LCS
E-907	RAW SEWAGE SCREEN VFD - MOTOR SCHEMATIC
E-908	RAW SEWAGE SCREENS - LOCAL CONTROL STATION
E-909	SCREENINGS WASHPRESS - MOTOR SCHEMATIC
E-910	GRIT CLASSIFIER - MOTOR SCHEMATIC
E-911	SCREENINGS - LOCAL CONTROL STATION
E-912	GRIT REMOVAL SYSTEM - MOTOR SCHEMATIC
E-913	GRIT REMOVAL SYSTEM - LOCAL CONTROL STATION
E-914	PRIMARY CLARIFIER SLUDGE COLLECTOR - MOTOR SCHEMATIC
E-915	PRIMARY CLARIFIER SCUM COLLECTOR - MOTOR SCHEMATIC
E-916	PRIMARY SLUDGE AND SCUM COLLECTOR - LOCAL CONTROL STATION
E-917	PRIMARY CLARIFIER SLUDGE PUMP - MOTOR SCHEMATIC
E-918	PRIMARY CLARIFIER SLUDGE PUMP - LOCAL CONTROL STATION
E-919	PRIMARY SCUM PUMP - MOTOR SCHEMATIC
E-920	PRIMARY SCUM PUMP - LOCAL CONTROL STATION
E-921	RECYCLED DRAIN PUMP STATION - MOTOR SCHEMATIC
E-922	RECYCLED DRAIN PUMP STATION - PDP-130-01
E-923	HEADWORKS ODOR CONTROL BLOWER - MOTOR SCHEMATIC
E-924	HEADWORKS ODOR CONTROL BLOWER - LOCAL CONTROL STATION
E-925	AERATION BASIN SWING-N MIXER - MOTOR SCHEMATIC
E-926	AERATION BASIN SWING-N MIXER - LOCAL CONTROL STATION

Table 1-2. Sheet List Summary by Discipline	
Sheet No.	Sheet Description
E-927	AERATION BASIN IMLR PUMP VFD - MOTOR SCHEMATIC
E-928	AERATION BASIN IMLR PUMP - LOCAL CONTROL STATION
E-929	SECONDARY CLARIFIER DRIVE - MOTOR SCHEMATIC
E-930	SECONDARY CLARIFIER DRIVE - LOCAL CONTROL STATION
E-931	RAS PUMP VFD - MOTOR SCHEMATIC
E-932	SC 60 RAS PUMP - LOCAL CONTROL STATION
E-933	SC 90 RAS PUMP - LOCAL CONTROL STATION
E-934	WAS PUMP VFD - MOTOR SCHEMATIC
E-935	WAS PUMP VFD - LOCAL CONTROL STATION
E-936	TERTIARY FILTER DRIVE - MOTOR SCHEMATIC
E-937	TERTIARY FILTER DRIVE - LOCAL CONTROL STATION
E-938	TERTIARY FILTER BACKWASH PUMP - MOTOR SCHEMATIC
E-939	TERTIARY FILTER BACKWASH PUMP - LOCAL CONTROL STATION
E-940	UTILITY WATER PUMP - MOTOR SCHEMATIC
E-941	UTILITY WATER PUMP - LOCAL CONTROL STATION
E-942	SLUDGE BLEND TANK MIXING PUMP - MOTOR SCHEMATIC
E-943	SLUDGE BLEND TANK MIXING PUMP - LOCAL CONTROL STATION
E-944	BLENDED SLUDGE PUMP - MOTOR SCHEMATIC
E-945	BLENDED SLUDGE PUMP - LOCAL CONTROL STATION
E-946	THICKENER FLOCC TANK MIXER - MOTOR SCHEMATIC
E-947	THICKENER FLOCC TANK MIXER - LOCAL CONTROL STATION
E-948	THICKENER BLENDED SLUDGE PUMP - MOTOR SCHEMATIC
E-949	THICKENER BLENDED SLUDGE PUMP - LOCAL CONTROL STATION
E-950	DIGESTED SLUDGE RECIRCULATION PUMP - MOTOR SCHEMATIC
E-951	DIGESTED SLUDGE RECIRCULATION PUMP - LOCAL CONTROL STATION
E-952	HOT WATER PUMP - MOTOR SCHEMATIC
E-953	HOT WATER PUMP - LOCAL CONTROL STATION
E-954	DIGESTER MIXING PUMP - MOTOR SCHEMATIC
E-955	DIGESTER MIXING PUMP - LOCAL CONTROL STATION
E-956	DIGESTED SLUDGE HOLDING TANK MIXING PUMP - MOTOR SCHEMATIC
E-957	DIGESTED SLUDGE HOLDING TANK MIXING PUMP - LOCAL CONTROL STATION
E-958	DIGESTED SLUDGE TRANSFER PUMP - MOTOR SCHEMATIC
E-959	DIGESTED SLUDGE TRANSFER PUMP - LOCAL CONTROL STATION
E-960	SOLIDS ODOR CONTROL BLOWER - MOTOR SCHEMATIC
E-961	SOLIDS ODOR CONTROL BLOWER - LOCAL CONTROL STATION

Table 1-2. Sheet List Summary by Discipline	
Sheet No.	Sheet Description
INSTRUMENTATION AND CONTROL	
IC-001	INSTRUMENTATION & CONTROL ABBREVIATIONS
IC-002	INSTRUMENTION & CONTROL SYMBOL LEGEND
IC-006	ETHERNET COMMUNICATIONS INTERCONNECT DIAGRAM
IC-010	MNP-100 MAIN PLC OT NETWORK PANEL LAYOUT - FRONT & READ VIEW
IC-011	MNP-100 MAIN PLC OT NETWORK PANEL LAYOUT - SIDE VIEW
IC-012	MNP-100 MAIN PLC OT NETWORK PANEL BILL OF MATERIAL
IC-013	MNP-100 MAIN PLC OT NETWORK PANEL POWER DISTRIBUTION SCHEMATIC
IC-014	MNP-100 MAIN PLC OT NETWORK PANEL IO SLOT 1 INPUT MODULE
IC-015	MNP-100 MAIN PLC OT NETWORK PANEL POINT IO SLOT 2 INPUT MODULE
IC-021	NIP-100 NETWORK INTERFACE PANEL LAYOUT (FOR CP-100)
IC-022	NIP-200 NETWORK INTERFACE PANEL LAYOUT (FOR CP-200)
IC-023	NIP-300 NETWORK INTERFACE PANEL LAYOUT (FOR CP-300)
IC-024	NIP-400 NETWORK INTERFACE PANEL LAYOUT (FOR CP-400)
IC-025	NIP-500 NETWORK INTERFACE PANEL LAYOUT (FOR CP-500)
IC-100	CP-100 ELEVATION VIEW
IC-102	CP-100 TERMINAL STRIP DETAIL
IC-103	CP-100 TERMINAL STRIP DETAIL
IC-110	CP-100 POWER DISTRIBUTION SCHEMATIC
IC-120	CP-100 DIGITAL INPUTS SLOT 3
IC-121	CP-100 DIGITAL INPUTS SLOT 4
IC-122	CP-100 DIGITAL INPUTS SLOT 5
IC-125	CP-100 DIGITAL OUTPUTS SLOT 8 (1 OF 2)
IC-126	CP-100 DIGITAL OUTPUTS SLOT 8 (2 OF 2)
IC-127	CP-100 DIGITAL OUTPUTS SLOT 9 (1 OF 2)
IC-128	CP-100 DIGITAL OUTPUTS SLOT 9 (2 OF 2)
IC-130	CP-100 ANALOG INPUTS SLOT 12 (1 OF 2)
IC-131	CP-100 ANALOG INPUTS SLOT 12 (2 OF 2)
IC-132	CP-100 ANALOG INPUTS SLOT 13 (1 OF 2)
IC-133	CP-100 ANALOG INPUTS SLOT 13 (2 OF 2)
IC-135	CP-100 ANALOG OUTPUTS SLOT 15 (1 OF 2)
IC-136	CP-100 ANALOG OUTPUTS SLOT 15 (2 OF 2)
IC-140	CP-100 INSTRUMENT LOOP DIAGRAM SLOT 7 POINT 0
IC-141	CP-100 INSTRUMENT LOOP DIAGRAM SLOT 7 POINT 1
IC-142	CP-100 INSTRUMENT LOOP DIAGRAM SLOT 7 POINT 2

Table 1-2. Sheet List Summary by Discipline	
Sheet No.	Sheet Description
IC-143	CP-100 INSTRUMENT LOOP DIAGRAM SLOT 7 POINT 3
IC-144	CP-100 INSTRUMENT LOOP DIAGRAM SLOT 8 POINT 0
IC-145	CP-100 INSTRUMENT LOOP DIAGRAM SLOT 8 POINT 1
IC-146	CP-100 INSTRUMENT LOOP DIAGRAM SLOT 8 POINT 2
IC-147	CP-100 INSTRUMENT LOOP DIAGRAM SLOT 8 POINT 3
IC-200	CP-200 ELEVATION VIEW
IC-202	CP-200 TERMINAL STRIP DETAIL
IC-203	CP-200 TERMINAL STRIP DETAIL
IC-204	CP-200 POWER DISTRIBUTION SCHEMATIC
IC-220	CP-200 DIGITAL INPUTS SLOT 3
IC-221	CP-200 DIGITAL INPUTS SLOT 4
IC-222	CP-200 DIGITAL INPUTS SLOT 5
IC-225	CP-200 DIGITAL OUTPUTS SLOT 8 (1 OF 2)
IC-226	CP-200 DIGITAL OUTPUTS SLOT 8 (2 OF 2)
IC-227	CP-200 DIGITAL OUTPUTS SLOT 9 (1 OF 2)
IC-228	CP-200 DIGITAL OUTPUTS SLOT 9 (2 OF 2)
IC-230	CP-200 ANALOG INPUTS SLOT 12 (1 OF 2)
IC-231	CP-200 ANALOG INPUTS SLOT 12 (2 OF 2)
IC-232	CP-200 ANALOG INPUTS SLOT 13 (1 OF 2)
IC-233	CP-200 ANALOG INPUTS SLOT 13 (2 OF 2)
IC-235	CP-200 ANALOG OUTPUTS SLOT 15 (1 OF 2)
IC-236	CP-200 ANALOG OUTPUTS SLOT 15 (2 OF 2)
IC-240	CP-200 INSTRUMENT LOOP DIAGRAM SLOT 6 POINT 0
IC-241	CP-200 INSTRUMENT LOOP DIAGRAM SLOT 6 POINT 1
IC-242	CP-200 INSTRUMENT LOOP DIAGRAM SLOT 6 POINT 2
IC-243	CP-200 INSTRUMENT LOOP DIAGRAM SLOT 6 POINT 3
IC-244	CP-200 INSTRUMENT LOOP DIAGRAM SLOT 6 POINT 4
IC-245	CP-200 INSTRUMENT LOOP DIAGRAM SLOT 6 POINT 5
IC-246	CP-200 INSTRUMENT LOOP DIAGRAM SLOT 6 POINT 6
IC-247	CP-200 INSTRUMENT LOOP DIAGRAM SLOT 6 POINT 7
IC-300	CP-300 ELEVATION VIEW
IC-302	CP-300 TERMINAL STRIP DETAIL
IC-303	CP-300 TERMINAL STRIP DETAIL
IC-310	CP-300 POWER DISTRIBUTION SCHEMATIC
IC-320	CP-300 DIGITAL INPUTS SLOT 1

Table 1-2. Sheet List Summary by Discipline	
Sheet No.	Sheet Description
IC-321	CP-300 DIGITAL INPUTS SLOT 2
IC-330	CP-300 ANALOG INPUTS SLOT 6 (1 OF 2)
IC-331	CP-300 ANALOG INPUTS SLOT 6 (2 OF 2)
IC-340	CP-300 INSTRUMENT LOOP DIAGRAM SLOT 6 POINT 0
IC-341	CP-300 INSTRUMENT LOOP DIAGRAM SLOT 6 POINT 1
IC-342	CP-300 INSTRUMENT LOOP DIAGRAM SLOT 6 POINT 2
IC-343	CP-300 INSTRUMENT LOOP DIAGRAM SLOT 6 POINT 3
IC-344	CP-300 INSTRUMENT LOOP DIAGRAM SLOT 6 POINT 4
IC-345	CP-300 INSTRUMENT LOOP DIAGRAM SLOT 6 POINT 5
IC-346	CP-300 INSTRUMENT LOOP DIAGRAM SLOT 6 POINT 6
IC-347	CP-300 INSTRUMENT LOOP DIAGRAM SLOT 6 POINT 7
IC-400	CP-400 ELEVATION VIEW
IC-402	CP-400 TERMINAL STRIP DETAIL
IC-403	CP-400 TERMINAL STRIP DETAIL
IC-410	CP-400 POWER DISTRIBUTION SCHEMATIC
IC-420	CP-400 DIGITAL INPUTS SLOT 3
IC-421	CP-400 DIGITAL INPUTS SLOT 4
IC-422	CP-400 DIGITAL INPUTS SLOT 5
IC-430	CP-400 ANALOG INPUTS SLOT 7
IC-431	CP-400 ANALOG INPUTS SLOT 8
IC-440	CP-400 INSTRUMENT LOOP DIAGRAM SLOT 7 POINT 0
IC-441	CP-400 INSTRUMENT LOOP DIAGRAM SLOT 7 POINT 1
IC-442	CP-400 INSTRUMENT LOOP DIAGRAM SLOT 7 POINT 2
IC-443	CP-400 INSTRUMENT LOOP DIAGRAM SLOT 7 POINT 3
IC-444	CP-400 INSTRUMENT LOOP DIAGRAM SLOT 8 POINT 0
IC-445	CP-400 INSTRUMENT LOOP DIAGRAM SLOT 8 POINT 1
IC-446	CP-400 INSTRUMENT LOOP DIAGRAM SLOT 8 POINT 2
IC-447	CP-400 INSTRUMENT LOOP DIAGRAM SLOT 8 POINT 3
IC-500	CP-500 ELEVATION VIEW
IC-502	CP-500 TERMINAL STRIP DETAIL
IC-503	CP-500 TERMINAL STRIP DETAIL
IC-510	CP-500 POWER DISTRIBUTION SCHEMATIC
IC-520	CP-500 DIGITAL INPUTS SLOT 3
IC-521	CP-500 DIGITAL INPUTS SLOT 4
IC-522	CP-500 DIGITAL INPUTS SLOT 5

Table 1-2. Sheet List Summary by Discipline	
Sheet No.	Sheet Description
IC-530	CP-500 DIGITAL INPUTS SLOT 7
IC-531	CP-500 DIGITAL INPUTS SLOT 8
IC-540	INSTRUMENT LOOP DIAGRAM SLOT 7 POINT 0
IC-541	INSTRUMENT LOOP DIAGRAM SLOT 7 POINT 1
IC-542	INSTRUMENT LOOP DIAGRAM SLOT 7 POINT 2
IC-543	INSTRUMENT LOOP DIAGRAM SLOT 7 POINT 3
IC-544	INSTRUMENT LOOP DIAGRAM SLOT 8 POINT 0
IC-545	INSTRUMENT LOOP DIAGRAM SLOT 8 POINT 1
IC-546	INSTRUMENT LOOP DIAGRAM SLOT 8 POINT 2
IC-547	INSTRUMENT LOOP DIAGRAM SLOT 8 POINT 3

Attachment B

Budget Spreadsheet

West Yost Associates **PROJECT: Sweet Home MWRF Improvements Final Design**	PE/PS/PG II $288 Moolenkamp	PE/PS/PG I $273 Van Meter	SE/SS/SG I $244 Barry	PE/PS/PG II $288 Costello	SE/SS/SG I $244 Carpenter	PE/PS/PG II $288 Schilling	AE/AS/AG I $204 Drath	ESG II $190 Lang/Retzlaff	SE/SS/SG I $244 Erkert	EM/SM/GM I $303 Kapur	CAD II $165 Barber	ADM III $131 Colorado	EM/SM/GM II $315 Meyer	Labor Hours	Labor Fee	Technology & Admin 6%	ACE	LCE	IFE	MMJ	CAD	MZC	SWA	TAG	Sub. w/ markup 10%	Direct Other Costs	Total Costs
Task 1 Project Management																											
1.01 Add'l Monthly Project Status Reports and Invoices	4	24										12		40	$ 9,276	$ 557								$		$ 9,833
1.02 Add'l Team Coordination Activities		48	24	8	8	8								96	$ 25,520	$ 1,531								$		$ 27,051
1.03 City Council Meetings		24										4		28	$ 7,076	$ 425								$	$ 400	$ 7,901
Subtotal, 1.03 (hours)	**4**	**96**	**24**	**8**	**8**	**8**	**0**	**0**	**0**	**0**	**0**	**16**	**0**	**164**												
Subtotal, 1.03 ($)	**$ 1,152**	**$ 26,208**	**$ 5,856**	**$ 2,304**	**$ 1,952**	**$ 2,304**						**$ 2,096**			**$ 41,872**	**$ 2,512**									**$ 400**	**$ 44,784**
Task 2 Additional Project Planning and Coordination Activities																										
2.01 New Outfall Mixing Zone Study		8								16		2	8	34	$ 9,814	$ 589					$ 32,000			$ 35,200	$ 500	$ 46,103
2.02 South Santiam River Bathymetry & MZ Model Confirmation		8	4							8		2		22	$ 5,846	$ 351					$ 38,000			$ 41,800	$ 2,500	$ 50,497
2.03 New South Santiam River Outfall Permitting Support Services		16	8							68		2	8	102	$ 29,706	$ 1,782									$ 10,000	$ 41,488
2.04 Update General Contractor Pre-Qualification		16	28									6		50	$ 11,986	$ 719									$ 200	$ 12,905
Subtotal, 2.04 (hours)	**0**	**48**	**40**	**0**	**0**	**0**	**0**	**0**	**0**	**92**	**0**	**12**	**16**	**208**												
Subtotal, 2.04 ($)		**$ 13,104**	**$ 9,760**							**$ 27,876**		**$ 1,572**	**$ 5,040**		**$ 57,352**	**$ 3,441**					**$ 70,000**			**$ 77,000**	**$ 13,200**	**$ 150,993**
Task 3 MRWF Improvements Project Final Design																										
3.01 MWRF Improvements 90% Final Design		80	180	240	160	90	240	360	240	0	460	80	48	2178	$ 477,260	$ 28,636	$ 152,700	$ 98,645	$ 61,400	$ 7,400	$ 50,398		$ 50,962	$ 41,540	$ 509,350	$ 1,500	$ 1,016,745
3.02 MWRF Improvements 90% Design Workshop		12	12	12	12	8	8	8			4	2		78	$ 18,966	$ 1,138	$ 1,200	$ 1,500	$ 1,000				$ 1,000		$ 5,170	$ 500	$ 25,774
3.03 Permitting Reviews and Coordination		32	8	4	4	4	4	8	4	16		4		88	$ 22,652	$ 1,359	$ 800	$ 500	$ 500	$ 500			$ 11,776	$ 5,000	$ 20,984		$ 44,995
3.04 MWRF Improvements Final Contract Documents		40	28	37	21	7	42	56	38	0	81	40	24	414	$ 90,193	$ 5,412	$ 17,200	$ 58,515	$ 8,000		$ 10,000		$ 11,776		$ 116,040	$ 3,500	$ 215,145
3.05 South Santiam River Outfall Final Contract Documents		12	40				60	24			128	24	8	296	$ 56,620	$ 3,397	$ 2,200								$ 2,420		$ 62,437
Subtotal, 3.05 (hours)	**0**	**176**	**268**	**293**	**197**	**109**	**354**	**456**	**282**	**16**	**673**	**150**	**80**	**3054**												
Subtotal, 3.05 ($)		**$ 48,048**	**$ 65,392**	**$ 84,384**	**$ 48,068**	**$ 31,392**	**$ 72,216**	**$ 86,640**	**$ 68,808**	**$ 4,848**	**$ 111,045**	**$ 19,650**	**$ 25,200**		**$ 665,691**	**$ 39,941**	**$ 174,100**	**$ 159,160**	**$ 70,900**	**$ 7,900**	**$ 60,398**		**$ 75,514**	**$ 46,540**	**$ 653,963**	**$ 5,500**	**$ 1,365,096**
TOTAL (hours)	**4**	**320**	**332**	**301**	**205**	**117**	**354**	**456**	**282**	**108**	**673**	**178**	**96**	**3,426**												
TOTAL ($)	**$ 1,152**	**$ 87,360**	**$ 81,008**	**$ 86,688**	**$ 50,020**	**$ 33,696**	**$ 72,216**	**$ 86,640**	**$ 68,808**	**$ 32,724**	**$ 111,045**	**$ 23,318**	**$ 30,240**		**$ 764,915**	**$ 45,895**	**$ 174,100**	**$ 159,160**	**$ 70,900**	**$ 7,900**	**$ 60,398**	**$ 70,000**	**$ 75,514**	**$ 46,540**	**$ 730,963**	**$ 19,100**	**$ 1,560,873**

Attachment C

West Yost's Billing Rate Schedule

2023 Billing Rate Schedule

(Effective January 1, 2023 through December 31, 2023)*

POSITIONS	LABOR CHARGES (DOLLARS PER HOUR)
ENGINEERING	
Principal/Vice President	$318
Engineer/Scientist/Geologist Manager I / II	$303 / $315
Principal Engineer/Scientist/Geologist I / II	$273 / $288
Senior Engineer/Scientist/Geologist I / II	$244 / $255
Associate Engineer/Scientist/Geologist I / II	$204 / $217
Engineer/Scientist/Geologist I / II	$163 / $190
Engineering Aide	$95
Field Monitoring Services	$118
Administrative I / II / III / IV	$85 / $108 / $131 / $144
ENGINEERING TECHNOLOGY	
Engineering Tech Manager I / II	$312 / $315
Principal Tech Specialist I / II	$286 / $297
Senior Tech Specialist I / II	$262 / $276
Senior GIS Analyst	$238
GIS Analyst	$225
Technical Specialist I / II / III / IV	$168 / $192 / $216 / $241
Technical Analyst I / II	$121 / $144
Technical Analyst Intern	$97
Cross-Connection Control Specialist I / II / III / IV	$125 / $136 / $152 / $170
CAD Manager	$190
CAD Designer I / II	$147 / $165
CONSTRUCTION MANAGEMENT	
Senior Construction Manager	$306
Construction Manager I / II / III / IV	$185 / $199 / $212 / $268
Resident Inspector (Prevailing Wage Groups 4 / 3 / 2 / 1)	$163 / $181 / $201 / $209
Apprentice Inspector	$147
CM Administrative I / II	$79 / $106
Field Services	$210

- Technology and Communication charges including general and CAD computer, software, telephone, routine in-house copies/prints, postage, miscellaneous supplies, and other incidental project expenses will be billed at 6% of West Yost labor.
- Outside Services such as vendor reproductions, prints, shipping, and major West Yost reproduction efforts, as well as Engineering Supplies, etc. will be billed at actual cost plus 15%.
- The Federal Mileage Rate will be used for mileage charges and will be based on the Federal Mileage Rate applicable to when the mileage costs were incurred. Travel other than mileage will be billed at cost.
- Subconsultants will be billed at actual cost plus 10%.
- Expert witness, research, technical review, analysis, preparation and meetings billed at 150% of standard hourly rates. Expert witness testimony and depositions billed at 200% of standard hourly rates.
- A Finance Charge of 1.5% per month (an Annual Rate of 18%) on the unpaid balance will be added to invoice amounts if not paid within 45 days from the date of the invoice.

* This schedule is updated annually

2023 Billing Rate Schedule

(Effective January 1, 2023 through December 31, 2023)*

Equipment Charges

EQUIPMENT	BILLING RATES
2" Purge Pump & Control Box	$300 / day
Aquacalc / Pygmy or AA Flow Meter	$28 / day
Emergency SCADA System	$35 / day
Field Vehicles (Groundwater)	$1 / mile
Gas Detector	$80 / day
Generator	$60 / day
Hydrant Pressure Gauge	$10 / day
Hydrant Pressure Recorder, Impulse (Transient)	$55 / day
Hydrant Pressure Recorder, Standard	$40 / day
Low Flow Pump Back Pack	$135 / day
Low Flow Pump Controller	$200 / day
Powers Water Level Meter	$32 / day
Precision Water Level Meter 300ft	$30 / day
Precision Water Level Meter 500ft	$40 / day
Precision Water Level Meter 700ft	$45 / day
QED Sample Pro Bladder Pump	$65 / day
Stainless Steel Wire per foot	$ 0.03 / day
Storage Tank	$20 / day
Sump Pump	$24 / day
Transducer Components (per installation)	$23 / day
Trimble GPS – Geo 7x	$220 / day
Tube Length Counter	$22 / day
Turbidity Meter	$30 / day
Vehicle (Construction Management)	$10 / hour
Water Flow Probe Meter	$20 / day
Water Quality Meter	$50 / day
Water Quality Multimeter	$185 / day
Well Sounder	$30 / day

* This schedule is updated annually