

TO: James L. App, City Manager
FROM: Doug Monn, Public Works Director
SUBJECT: North/South River Road – Sewer and Reclaimed Water Pipelines
DATE: August 29, 2006

NEEDS: For the City Council to consider awarding a contract to design a sewer and reclaimed water pipeline in North and South River Road.

FACTS:

1. The 1993 Sewer Master Plan identified the need to upsize the Templeton Interceptor Trunk line from the South City limits to Lift Station No. 1 at North River Road.
2. Consistent with the Sewer Master Plan, the City has completed the following upgrades:
 - a. In 2002 the City upgraded the sewer line from the South City limits to Serenade Drive.
 - b. In 2005 the City reimbursed Harrod Development for installing the upsized sewer line in front of the development at Navajo Road.
 - c. The 13th Street Bridge Project installed the upsized sewer line just south of Creston to just north of Union Road.
3. The next step would be to complete the upgrade of the line from the 13th Street Bridge to Lift Station No. 1.
4. The Nacimiento Water Pipeline will be installed in North and South River Roads. It is proposed that the City upgrade the remaining portions of the Templeton Interceptor Sewer line and include its construction with the Nacimiento Pipeline. Attached is a letter from the County in which they agreed to include the City's project with the Nacimiento Pipeline.

**ANALYSIS
AND**

CONCLUSION: The City's Sewer Master Plan, prepared in 1993, identified the need to install a 30-inch diameter sewer line from Union Road to Lift Station No. 1 along the same route as the Nacimiento Pipeline. In 2001 a Templeton Interceptor Trunkline capacity evaluation was prepared and re-confirmed the need to upgrade the sewer line.

The recommendation to install a reclaimed water line in South/North River Road is identified in the City's Recycled Water Study which is a component of the City's Adaptive Integrated Water Resources Plan (AIWRP). The AIWRP and the Recycled Water Study is in draft form and is expected to be presented to the City Council later this year. It is recommended that design of the reclaimed water line be undertaken at this time because construction of the City's sewer line and reclaimed

water line, as part of the Nacimiento Pipeline, would provide an opportunity for the City to:

- realize a potential cost savings
- prevent the road from being removed and replaced multiple times
- reduce disruption to the public using North and South River Roads.

The design work for these pipelines and obtaining bids could proceed, and its actual construction could be considered and approved, as part of the adoption of the AIWRP later this year.

Boyle Engineering is designing the Nacimiento Pipeline. Therefore it would make sense to have the same firm prepare the design of the City's project.

Staff has identified a potential funding source to install ultimate road improvements for North and South River Roads. We hope to confirm this availability, and upon confirmation will present a request to the City Council to appropriate a budget for this work.

POLICY

REFERENCE: 1993 Sewer Master Plan

FISCAL

IMPACT: The current CIP budget includes up to 4.2 million dollars to upgrade the Templeton Interceptor Sewer under Budget No. 221.910.5452.494 and 495.

- OPTIONS:**
- a. Authorize the City Manager to enter an agreement with Boyle Engineering to prepare the construction documents to upgrade the Templeton Interceptor Trunk and reclaimed water pipeline as part of the construction of the Nacimiento Pipeline, in a not-to-exceed fee amount of \$315,000.
 - b. Amend, modify, or reject the above option.

Prepared by:
Ditas Esperanza, P.E., Capital Projects Engineer

Attachments (2)

- 1) Letter from the County
- 2) Scope of Work and Fee Proposal



NWP NACIMIENTO WATER PROJECT

San Luis Obispo County Flood Control & Water Conservation District

San Luis Obispo County FC&WCD

John R. Hollenbeck, P.E.
Nacimiento Project Manager

Commissioners

Harry Ovitt, SLO County FC&WCD
Frank Mecham, City of Paso Robles
David Brooks, Templeton CSD
Grigger Jones, Atascadero MWC
Dave Romero, City of San Luis Obispo

July 11, 2006

Brad Hagemann, P.E.
Water Resources Manager
City of Paso Robles
1000 Spring Street
Paso Robles, CA 93446

Subject: Nacimiento Project and Paso Robles Sewer Pipeline along South and North River Roads

Dear Mr. Hagemann:

To follow up on a letter received from you on June 29, 2006, the District gives our approval to include construction of the Paso Robles Sewer Pipeline along South and North River Roads simultaneously with the construction of the Nacimiento Water Project. It is our understanding that the City will be responsible for timely preparations of plans, specifications and necessary permits to be included in the Nacimiento project bid.

Please keep the Project Manager informed of your progress and let us know if there is any way we can help. We look forward to working with you.

Sincerely,

A handwritten signature in black ink that reads "John R. Hollenbeck".

JOHN R. HOLLENBECK, P.E.
Nacimiento Project Manager

File: NWP File D.4.1

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CITY OF EL PASO DE ROBLES
PROPOSAL FOR SEWER AND RECYCLED WATER PIPELINES IN RIVER ROAD

PROJECT BACKGROUND

A segment of the future planned Nacimiento pipeline will be located within City right-of-way along South and North River Roads. The City is planning to construct master planned improvements for sewer and recycled water along North and South River Roads during the same construction window. Work related to utility research, topographical survey, and geotechnical survey have already begun for the future Nacimiento pipeline and will be utilized where possible in the design effort outlined in this scope of work.

Boyle recently submitted the Draft Potable Water and Sewer Master Plans (WMP and SMP), and is currently updating the Recycled Water Study for the City of Paso Robles. The latest WMP does not recommend installing the 16-inch water main along River Road between Creston and Navajo that was identified in the 1995 WMP Update, and is therefore not included in this scope of work. The final size of the sewer mains required from Lift Station No. 1 to Union Rd., and from 13th Street to Creston have not been determined. For the purposes of this proposal it is assumed that the Creston to Navajo portion will be approximately 27 inches in diameter and the Lift Station 1 to Union Road main will be 30 inches in diameter. Final pipe sizes and materials will be determined during the preliminary engineering phase of this project and presented in the PDR. The scope of work and fee for designing these two sections of gravity sewer are presented in the proposal as **Option A**.

Recycled water improvements are being planned that will include a pipeline from the wastewater treatment (WWTP) plant to proposed percolation ponds located just outside the City limits along South River Road. The design of a pipeline to convey water from the WWTP to the proposed percolation ponds is also included in this proposal under design **Option B**. For the purposes of this proposal it is assumed that the recycled water line will be 12 inches in diameter.

Primary components for the new pipeline projects will include the following:

- Perform alternatives study for sewer mains to finalize pipe sizes, materials, and alignment using the SMP and supplemental hydraulic and capacity analyses as needed.
- Determine if sections of existing sewer can remain in service and evaluate the possibility of using parallel piping.
- Determine necessary size and alignment of recycled water line.
- Identify and assist the City in acquiring permitting, easements, and approvals necessary for the project.
- Perform geotechnical assessments along the full pipeline alignment.
- Perform utility research and integrate with existing topographical basemap showing existing utilities along the full pipeline alignment. Existing survey from the Nacimiento Pipeline project will be utilized to the extent possible. At this time, additional survey is not deemed necessary.
- Option A - Design approximately 12,000 LF of gravity sewer main
 - Approximately 6,750 feet of 30" sewer main from Lift Station No. 1 to Union Road (size of pipe to be confirmed)

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- Approximately 4,750 feet of 27" sewer main from 13th Street/Creston Road to Navajo Avenue (size of pipe to be confirmed)
- Option B - Design approximately 12,000 LF of gravity sewer main and approximately 23,000 LF of recycled water main
 - Recycled water main from North River Road adjacent to the wastewater treatment plant to the vicinity of the Nacimiento Turnout for the City of Paso Robles. The ends of the main will be capped in anticipation for future extension of the recycled water main.

SCOPE OF WORK

OPTION A (Sewer Pipelines)

Option A involves the design of approximately 12,000 LF of gravity sewer main from Lift Station No. 1 to Union Road and from 13th Street to Navajo Road.

TASK 1.0 PROJECT KICK-OFF AND SITE WALK

Attend kick-off meeting with City staff to review project scope, schedule, responsibilities of project team members, available information, project deliverables, initial pipe alignment alternatives (following discussions with Nacimiento design team), known utility conflicts, easements, and any construction and operational concerns. Upon completion of the meeting a site walk will be attended by the project team to identify any specific concerns prior to the initiation of work.

TASK 2.0 PRELIMINARY ENGINEERING

2.1 Sewer Pipeline Information Review

- Review existing information from the Nacimiento pipeline design documents relevant to the master planned improvements. Existing information includes aerial photography, topographic survey, geotechnical survey and utility research of existing underground utilities.
- Review sewer system record drawings. The drawings will be used to determine tie-in details of the pipeline to the existing system.

2.2 Sewer Pipeline Hydraulic Evaluation / Pipeline Sizing

The sewer pipeline will be based on recommendations from the SMP and may require additional hydraulics evaluation. It is proposed that an alternatives evaluation be conducted to determine if running parallel pipe along sections of the alignment will provide overall cost savings to the City as compared to replacing the existing pipe.

2.3 Sewer Pipeline Survey and Utility Research

It is assumed that the alignment will be located in the same right-of-way as the Nacimiento pipeline. Cannon Associates has conducted a topographic survey along the proposed alignment. An initial review of the survey suggests that additional survey may not be necessary for this scope of work.

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Initial utility research for the Nacimiento pipeline was performed by the Wallace group. Additional Information will be gathered as needed for existing utilities, and all utilities will be plotted on the existing topographic survey map of the proposed alignment.

2.4 Sewer Pipeline Geotechnical Evaluation (Fugro West)

Fugro west of San Luis Obispo will identify the geological issues critical for the design of the new sewer main. A project-specific report for the Sewer pipelines will be prepared to include the following:

- Assessment of subsurface soil, rock and groundwater conditions along the proposed pipeline alignment
- Compaction recommendations for trench backfill
- Temporary slopes and shoring considerations
- Constructability and excavation issues
- Pipeline design criteria

2.5 Coordination With Nacimiento Design Team

Coordinate with the Nacimiento Project design team and the City to determine best method for bidding this work. If included with Nacimiento, it may be necessary to coordinate contract documents and technical specifications to simplify construction and reduce costs.

TASK 3.0 PRELIMINARY DESIGN MEMORANDUM

Once the pipeline size and alignment have been finalized Boyle Engineering will prepare an initial design memorandum that will document the recommended design approach including:

- Recommended pipe diameter/s
- Recommended alignment relative to street centerline and other utilities
- Pipeline materials
- Depth of inverts
- Location and connection details for recommended tie-in locations to the existing sewer system.
- Preliminary opinion of probable construction costs
- Other details as appropriate
- Outline results of Task 2.5 and make recommendations on how best to coordinate with Nacimiento Project. A decision from the City will be required before preparing project specifications.

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TASK 4.0 CONSTRUCTION PLANS AND SPECIFICATIONS

A copy of the 50 percent and 95 percent design drawings will be provided as described below. Project technical specifications will be prepared in CSI format. Final plans will be 1 in. = 40 ft. scale on 24" x 36" sheet size. A total of three (3) copies will be provided. The following design drawings are anticipated (Sheet count may vary depending on final drawing layout):

4.1 Sewer Pipeline Design Plans

Sewer Pipeline Drawings. Drawings will be prepared in plan and profile format using 1 inch = 40 feet scale. We estimate the following drawings will be required:

Sheet 1	Title and Vicinity
Sheet 2	Index and Legend
Sheet 3	General Notes and Typical Details
Sheets 4 - 9	Plan and Profile for 30" sewer main
Sheets 10 - 13	Plan and Profile for 27" sewer main
Sheet 14 - 15	Pipeline details: trench section, & misc. pipe details
Sheet 16	Traffic control, key plan & notes
Sheet 17-18	Traffic control, typical work zone (work and non-work hours)

4.2 Sewer Pipeline Specifications

Boyle will provide technical specifications in accordance with our standard specifications for construction. The technical specifications will be prepared in CSI format.

4.3 Fifty Percent Submittal and Review Meeting

Three copies of the fifty-percent submittal (preliminary drawings and opinion of probable cost) will be provided for review. Boyle will attend one meeting with City staff to review, discuss, and receive one consolidated set of City comments.

4.4 Final Design Submittals

Submit ninety-five percent plans and specifications and meet with City staff to discuss their written comments. Design drawings and specifications will be revised according to City comments. Final design drawings and specifications will be submitted for use in the City's bid package.

4.5 Opinion of Probable Construction Cost

Boyle will prepare and submit a final opinion of construction costs following the acceptance of final project plans and specifications.

Task 5.0 PERMITTING ASSISTANCE

Boyle will provide assistance to the City in obtaining the necessary encroachment permits by preparing and submitting the necessary exhibits, technical and design data. Boyle will not be responsible for payment of any permitting fees or other costs associated with his project; said fees are the sole responsibility of the City.

OPTION B (SEWER AND RECYCLED WATER PIPELINES)

Option B includes the design of approximately 12,000 LF of gravity sewer main from Lift Station No. 1 to Union Road and from 13th Street to Navajo Road, plus approximately 23,000 LF of recycled water main from North River Rd. (across the river from wastewater treatment plant) to the vicinity of the planned Nacimiento Turnout for the City of Paso Robles.

TASK 1.0 PROJECT KICK-OFF AND SITE WALK

Attend kick-off meeting with City staff to review project scope, schedule, responsibilities of project team members, project deliverables, initial pipe alignment alternatives (following discussions with Nacimiento design team), known utility conflicts, easements, and any construction and operational concerns. Upon completion of the meeting a site walk will be attended by the project team to identify any specific concerns prior to the initiation of work.

TASK 2.0 PRELIMINARY ENGINEERING

2.1 Information Review

- Review existing information from the Nacimiento pipeline relevant to the master planned improvements. Existing information includes aerial photography, topographic survey, geotechnical survey and utility research of underground existing utilities.
- Review existing sewer system drawings to be provided by City. Plans provided will be used to determine tie-in details of the pipeline to the existing system.

2.2 Hydraulic Evaluation / Pipeline Sizing

The sewer pipeline will be based on recommendations from the SMP and may require additional hydraulics evaluation. It is proposed that an alternatives evaluation be conducted to determine if running parallel pipe along sections of the alignment will provide overall cost savings to the City.

The recycled water pipeline will be sized based on the projected build-out flows from the Wastewater Treatment Plant, anticipated recycled water demand along the Salinas Corridor as well as estimated percolation potential of the proposed percolation sites located adjacent to the Thunderbird Well field.

2.3 Pipeline Survey and Utility Research

It is assumed that the alignments for the sewer and recycled water pipelines will be located in the same right-of-way as the Nacimiento pipeline. Cannon Associates has conducted a topographic survey along the proposed alignment. An initial review of the survey suggests that no additional survey will be necessary for this scope of work.

Initial utility research for the Nacimiento pipeline was performed by the Wallace group. Additional Information will be gathered as needed for existing utilities, and all utilities will be plotted on the existing topographic survey map of the proposed alignment.

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2.4 Sewer and Recycled Water Pipeline Geotechnical Evaluation (Fugro West)
Fugro west of San Luis Obispo will identify the geological issues critical for the design of the new sewer and recycled water pipelines. A project-specific report for both pipelines will be prepared to include the following:

- Assessment of subsurface soil, rock and groundwater conditions along the proposed pipeline alignment
- Compaction recommendations for trench backfill
- Temporary slopes and shoring considerations
- Constructability and excavation issues
- Corrosion considerations
- Pipeline design criteria

2.5 Coordination With Nacimiento Design Team

Coordinate with the Nacimiento Project design team and the City to determine best method for bidding this work. If included with Nacimiento, it may be necessary to coordinate contract documents and technical specifications to simplify construction and reduce costs.

TASK 3.0 PRELIMINARY DESIGN MEMORANDUM

Once the pipeline sizes and alignments have been finalized Boyle Engineering will prepare an initial design memorandum that will document the recommended design approach the design of both the recycled water and sewer pipelines including:

- Recommended pipe diameters
- Recommended alignments relative to street centerline and other utilities
- Pipeline materials
- Depth of Cover
- Location and connection details for recommended tie-in locations to the existing sewer system.
- Outline results of Task 2.5 and make recommendations on how best to coordinate with Nacimiento Project. A decision from the City will be required before preparing project specifications.
- Preliminary opinion of probable construction costs for both projects will be prepared. If it is determined that both projects will be bid as a single job, a combined opinion of cost will be developed.

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Task 4.0 CONSTRUCTION PLANS AND SPECIFICATIONS

A copy of the 50 percent and 95 percent design drawings will be provided as described below. It is assumed for the purposes of this proposal that separate bid packages will be prepared for the sewer and recycled water pipelines. Project technical specifications will be prepared in CSI format. Final plans will be 1 in. = 40 ft. scale on 24" x 36" sheet size. A total of three (3) copies will be provided. The following design drawings are anticipated (Sheet count may vary depending on final drawing layout):

Task 5.0 PERMITTING ASSISTANCE

Boyle will provide assistance to the City in obtaining the necessary encroachment permits by preparing and submitting the necessary exhibits, technical and design data. Boyle will not be responsible for payment of any permitting fees or other costs associated with his project; said fees are the sole responsibility of the City.

SEWER PIPELINE:

4.1 Sewer Pipeline Design Plans

Sewer Pipeline Drawings. Drawings will be prepared in plan and profile format using 1 inch = 40 feet scale. We estimate the following drawings will be required:

Sheet 1	Title and Vicinity
Sheet 2	Index and Legend
Sheet 3	General Notes and Typical Details
Sheets 4 - 9	Plan and Profile for 30" sewer main
Sheets 10 - 13	Plan and Profile for 27" sewer main
Sheet 14 -15	Pipeline details: trench section, & misc. pipe details
Sheet 16	Traffic control, key plan & notes
Sheet 17-18	Traffic control, typical work zone (work and non-work hours)

4.2 Sewer Pipeline Specifications

Boyle will provide technical specifications in accordance with our standard specifications for construction. The technical specifications will be prepared in CSI format.

4.3 Fifty Percent Submittal and Review Meeting

Three copies of the fifty-percent submittal (preliminary drawings and opinion of probable cost) will be provided for review. Boyle will attend one meeting with City staff to review, discuss, and receive one consolidated set of City comments.

4.4 Final Design Submittals

Submit ninety-five percent plans and specifications and meet with City staff to discuss their written comments. Design drawings and specifications will be revised according to City comments. Final design drawings and specifications will be submitted for use in the City's bid package.

4.5 Opinion of Probable Construction Cost

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Boyle will prepare and submit a final opinion of construction costs following the acceptance of final project plans and specifications.

RECYCLED WATER PIPELINE:

4.6 Recycled Water Pipeline Design Plans

Drawings will be prepared in plan and profile format using 1 inch = 40 feet scale. We estimate the following drawings will be required:

Sheet 1	Title and Vicinity
Sheet 2	Index and Legend
Sheet 3	General Notes
Sheets 4 -22	Plan and Profile for 12-inch recycled water pipeline
Sheet 23 -25	Pipeline details: trench section, & misc. pipe details
Sheet 26	Traffic control, key plan & notes
Sheet 27-28	Traffic control, typical work zone (work and non-work hours)

4.7 Recycled Water Pipeline Specifications

Boyle will provide technical specifications in accordance with our standard specifications for construction. The technical specifications will be prepared in CSI format.

4.8 Recycled Water Percent Submittal and Review Meeting

Three copies of the fifty-percent submittal (preliminary drawings and opinion of probable cost) will be provided for review. Boyle will attend one meeting with City staff to review, discuss, and receive one consolidated set of City comments.

4.9 Recycled Water Design Submittals

Submit ninety-five percent plans and specifications and meet with City staff to discuss their written comments. Design drawings and specifications will be revised according to City comments. Final design drawings and specifications will be submitted for use in the City's bid package.

4.10 Opinion of Probable Construction Cost

Boyle will prepare and submit a final opinion of construction costs following the acceptance of final project plans and specifications.

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PROPOSAL FOR SEWER AND RECYCLED WATER PIPELINES IN RIVER ROAD**

Proposed Schedule

The following table outlines our anticipated schedule:

<u>Milestone Schedule</u>			
City of El Paso de Robles			
Sewer and Recycled water Master Plan Pipeline Improvements in River Road			
		Completion	
Milestone		Option A - Sewer Pipelines	Option B - Sewer and Recycled Water Pipelines
1	Notice to Proceed (NTP)		
2	Base Mapping, Survey, and Geotechnical	12 weeks after NTP	13 weeks after NTP
3	PDR	10 weeks following Survey, Mapping and Geotech	15 weeks following Survey, Mapping and Geotech
4	Submit 50% Design Submittal	Within 8 weeks following City acceptance of final PDR	Within 13 weeks following City acceptance of final PDR
5	Submit 95% Design Submittal w/incorporated with comments	Within 8 weeks of receipt of 50% comments	Within 12 weeks of receipt of 50% comments
6	Submit Final Design Documents	Within 6 weeks of receipt of 95% design comments	Within 10 weeks of receipt of 95% design comments

Budget for Engineering Services

The attached Project Budget (Exhibits A and B) have been prepared based on Boyle's Standard Fees Schedule (Exhibit C) as attached. We propose to perform the scope of work options outlined above on a time-and-materials basis with a not-to-exceed budget of:

	Not-To-Exceed Budget
OPTION A – Sewer Pipeline	\$189,029
OPTION B – Sewer and Recycled Water Pipelines	\$311,663

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Optional Services

These optional services are not included under above scope of work, but can be provided at Client's request for additional fee.

- Construction Bid Services
- Construction Phase Services
- Construction Management
- Full time Construction Observation
- Evaluation of Lift Station 1
- Recycled water permitting / Title 22 compliance