



Board Report

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Agenda Number: 32

REVISED
SYSTEM SAFETY, SECURITY AND OPERATIONS COMMITTEE
MAY 19, 2016

**SUBJECT: CONSULTING SERVICES FOR HEAVY RAIL VEHICLE ACQUISITION,
TECHNICAL SUPPORT SERVICES**

ACTION: AWARD PROFESSIONAL SERVICES CONTRACT

RECOMMENDATION

AWARD a cost plus fixed fee contract for **Technical Support Services for the Heavy Rail Vehicle (HRV) Acquisition, Contract No. OP16523-30433487, to LTK Engineering Services**, in the not-to-exceed amount of \$13,028,744 for a period of 62 months from issuance of a Notice-to-Proceed (NTP) for the 64 HRV Base Order.

ISSUE

This action authorizes contract award to LTK Engineering Services to support Metro's designated Project Manager, or his/her designee, with engineering and technical oversight of the HRV 4000 Vehicle Contractor to ensure performance is consistent with the requirements of the HR4000 Heavy Rail Vehicle Contract. Subject to Metro's direction, the Consultant shall apply appropriate technical and engineering support services and resources to facilitate the timely production and delivery of the HR4000 HRVs and associated deliverables for a period of 62 months for the 64 vehicle HRV Base Order. Should Metro exercise Vehicle Options one (1) thru five (5) staff will return to the Board for approval of the additional not to exceed amount for LTK's services.

DISCUSSION

Metro is currently active in numerous rail line extensions including the Purple Line Extension (PLE), Sections 1, 2 and 3. This rail line expansion, previously named the Westside Subway Extension, extends service from the terminus of the Purple Line at the ~~Wilshire/Vermont~~ Wilshire/Western Station to Westwood.

In accordance with the Rail Fleet Management Plan FY2015-FY2040 (Draft, June 10, 2015, v.7.1), Metro anticipates a need to expand each rail fleet to accommodate anticipated growth in ridership, line extensions; replace vehicles reaching the end of their useful revenue service life; and support the maintenance department with reasonable spare ratios to prevent deferred maintenance issues. The base order of 64 HRVs will address the operational service requirements of the PLE, Section 1, with

34 HRVs; the other 30 HRVs will be used to replace the A650 Base Buy fleet that will be at the end of its useful revenue service life. As such this contract base order will be supporting the fleet replacement efforts under project number 206037 in addition to the PLE section 1 efforts under project number 865518. If in the future, the additional options are executed, project(s) will be directly charged for the option(s) benefitting the respective project(s). There are five (5) Options totaling 218 HRVs for potentially a cumulative purchase of 282 vehicles for the new HRV procurement.

The Options included as part of this action are as follows:

- Option 1 - 24 HRVs: Red Line Expansion
- Option 2 - 84 HRVs: System Expansion
- Option 3 - 20 HRVs: PLE, Section 2
- Option 4 - 16 HRVs: PLE, Section 3
- Option 5 - 74 HRVs: Fleet Replacement of existing 74 vehicles

LTK Engineering Services shall provide support to Metro's designated Project Manager or his/her designee, with technical and engineering oversight of the Vehicle Contractor to ensure that performance is consistent with the delivery requirements of the HR4000 Heavy Rail Vehicle Contract, which may include Metro's exercise of any or all of the five (5) Options. Subject to Metro's direction, LTK Engineering Services will apply appropriate technical and engineering support services and resources to facilitate the timely production and delivery of the HR4000 HRVs and associated deliverables.

The Scope of Services shall include, but not be limited to, document control, review and preparation of correspondence in response to technical submissions, oversight of the Vehicle Contractor's supply chain process, support of Project Reviews, oversight of testing and inspection activity, and other technical support services as directed by Metro.

The Consultant shall provide, on an as needed basis, highly experienced and qualified passenger heavy rail transit Vehicle engineers with demonstrated expertise in all subject areas listed in LTK Engineering Services' Statement of Qualifications for the duration of the Contract.

The Diversity & Economic Opportunity Department (DEOD) has completed its initial evaluation of the Proposer's commitment to meet the twenty percent (20%) Race Conscious Disadvantage Business Enterprise (RC DBE) goal established for this project. LTK Engineering Services exceeded the goal by making a 22.62% DBE commitment and is deemed responsive to the DBE requirements.

DETERMINATION OF SAFETY IMPACT

The approval of this contract award will have a direct and positive impact to system safety, service quality, system reliability and overall customer satisfaction. The procurement of sixty-four (64) new HRVs will support the operational service requirements of Section 1 of the PLE and augment service

levels by replacing the underperforming 30 Base Buy A650 HRVs.

FINANCIAL IMPACT

The total not-to-exceed contract amount to support the base is \$13,028,744. Funding for the base order is within the respective Life of Project (LOP) budgets for the Westside Purple Line Extension (PLE) Section 1 (865518) of \$2,739,510,000 and the Heavy Rail Procurement Project (206037) of \$130,910,000.

The FY17 planned expenditures of \$2,497,043 is included in the annual budgets for the two aforementioned projects in Cost Center 3043, Rail Vehicle Acquisition, and Account 50316, Professional & Technical Services and as per Attachment C.

Since this is a multi-year contract, the cost center Manager, Project Managers, and the Executive Director of Vehicle Acquisitions will ensure that costs will be budgeted in future years.

Impact to Budget

The source of funds for this action affecting Westside PLE Section 1 is Measure R 35%, and is within the Adopted LOP budget. Funding sources for the Westside PLE Section 1 project is planned for the design, construction and procurement efforts; these funds are not eligible for operations.

The source of funds for the Heavy Rail Procurement project is initially Measure R Administration, which is eligible for rail capital activities. The funding sources under this project are sufficient to award the contract base of this recommendation. Staff is actively pursuing additional Federal sources such as MAP-21 and other eligible federal sources. Staff is also pursuing additional State and Local funding sources such as Cap and Trade and similar sources as they become available to meet the funding needs of project 206037.

ALTERNATIVES CONSIDERED

Staff considered using in-house Metro resources to perform this work. This approach is not recommended as Metro does not have sufficient resources and Subject Matter Experts (SME) available to perform this work. The Transit Capital Programs group has only two (2) Senior Mechanical Engineers and two (2) Engineers available to facilitate four (4) rail projects already underway.

The Board of Directors may choose not to authorize the contract award for this project; however, this alternative is not recommended by staff as this project is critical to support the Purple Line Extension, accommodate projected growth in ridership, and increase vehicle spare ratios to enable the Maintenance department to effectively plan and schedule its work.

NEXT STEPS

Upon Board approval, a contract will be awarded and a Notice-to-Proceed will be issued to LTK Engineering Services. Metro and LTK Engineering Services will mobilize required resources and

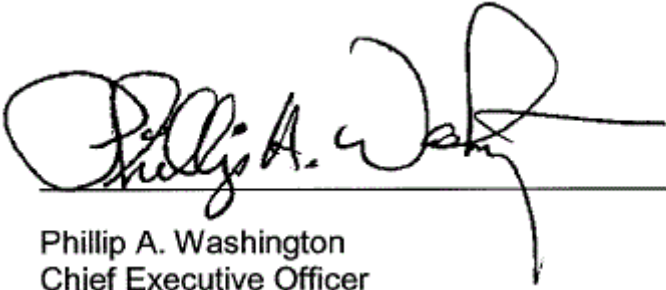
SMEs to ensure timely completion of deliverables by the Vehicle Contractor.

ATTACHMENTS

Attachment A - Procurement Summary
Attachment B - DEOD Summary
Attachment C - Funding/Expenditure Plan

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Phillip A. Washington
Chief Executive Officer

PROCUREMENT SUMMARY

CONSULTING SERVICES FOR HEAVY RAIL VEHICLE ACQUISITION,
TECHNICAL SUPPORT SERVICES / OP16523-30433487

1.	Contract Number: OP16523-30433487	
2.	Recommended Vendor: LTK Engineering Services	
3.	Type of Procurement (check one): <input type="checkbox"/> IFB <input checked="" type="checkbox"/> RFP <input type="checkbox"/> RFP-A&E <input type="checkbox"/> Non-Competitive <input type="checkbox"/> Modification <input type="checkbox"/> Task Order	
4.	Procurement Dates:	
	A. Issued: 08/03/15	
	B. Advertised/Publicized: 08/05/15; 08/06/15; 08/10/15 and 08/13/15	
	C. Pre-proposal/Pre-Bid Conference: 08/18/15	
	D. Proposals/Bids Due: 10/07/15	
	E. Pre-Qualification Completed: 4/13/16	
	F. Conflict of Interest Form Submitted to Ethics: 03/30/16	
	G. Protest Period End Date: 5/24/16	
5.	Solicitations Picked up/Downloaded: 40	Bids/Proposals Received: 2
6.	Contract Administrator: Elizabeth Hernandez	Telephone Number: 213 922-7334
7.	Project Manager: Cop Tran	Telephone Number: 213 922-3188

A. Procurement Background

This Board Action is to approve the award of Contract No. OP16523-30433487 issued in support of the HR4000 Heavy Rail Vehicle Contract to address the need to expand the rail fleet to accommodate anticipated growth in ridership and line extensions; replace vehicles reaching the end of their useful revenue service life; and support the maintenance department with reasonable spare ratios to prevent deferred maintenance issues. The recommended Consultant shall provide technical and engineering support to Metro's designated Project Manager, or his/her designee, and apply appropriate technical and engineering expertise and resources to facilitate the timely production and delivery of the HR4000 HRV Contract, which may include, Metro's exercise of any or all of the five Vehicle procurement Options.

The RFP was issued in accordance with Metro's Acquisition Policy and the contract type is a cost plus fixed fee contract.

Eight amendments were issued during the solicitation phase of this RFP:

- Amendment No. 1, issued on August 21, 2015, clarified requirements and extended the due date for the proposal;
- Amendment No. 2, issued on September 30, 2015, clarified requirements and extended the due date for the proposal;
- Amendment No. 3, issued on October 12, 2015 to the Proposers within the competitive range clarified Element B of the solicitation.

- Amendment No. 4, issued on December 24, 2015 to the Proposers within the competitive range clarified the cost items.
- Amendment No. 5 issued on January 21, 2016 to the Proposers within the competitive range clarified the labor hours.
- Amendment No. 6 issued on January 25, 2016 to the Proposers within the competitive range updated the labor hours.
- Amendment No. 7 issued on March 24, 2016 to the Proposers within the competitive range extended the due date for the Best and Final Offer (BAFO) and clarified terms and conditions.
- Amendment No. 8 issued on March 30, 2016 to the Proposers within the competitive range extended the due date for the BAFO and clarified terms and conditions.

A total of 11 attendees were present at the Pre-Proposal Conference held on August 18, 2015. Two sets of responses were issued to 15 questions asked by the prospective bidders and to provide a list of the contact information for the attendees to the Pre-Proposal Conference.

A total of two proposals were received by the October 7, 2015 due date from the following firms:

1. LTK Engineering Services, and
2. STV/PB, A Joint Venture.

B. Evaluation of Proposals/Bids

A Proposal Evaluation Team (PET) consisting of staff from Metro's Rail Vehicle Acquisition Department was convened and conducted a comprehensive technical evaluation of the proposals received.

The proposals were evaluated based on the following evaluation criteria and weights:

- | | |
|--|------------|
| • Firm's Degree of Skills and Experience | 30 percent |
| • Staffing Quality of Technical Experience | 20 percent |
| • Understanding of Work and Appropriateness of Approach for Implementation | 20 percent |
| • Price | 30 percent |

The evaluation criteria are appropriate and consistent with criteria developed for other, similar professional services procurements. Several factors were considered when developing these weights, giving the greatest importance to skills and experience of the firm in performing similar work.

The two proposals received were determined to be responsive, responsible and within the competitive range. Both proposing firms were determined to be within the competitive range.

Summary of the evaluation process:

The PET reviewed and evaluated the technical non-cost sections of the written proposals in accordance with factors set forth in the evaluation criteria. During the week of November 9, 2015, the PET met with and interviewed the firms. The firms' Project Managers and key personnel had an opportunity to present their experience and qualifications and respond to the PET's questions. In general, each firm's presentation addressed the requirements of the RFP by expanding on its experience and expertise with all aspects of the required tasks, and stressed its commitment to the success of the project. Also highlighted were staffing plans, work plans, and perceived project issues. Each firm adequately responded to questions relative to each firm's proposed alternatives and previous experience.

Qualifications Summary of Firms Within the Competitive Range:

LTK ENGINEERING SERVICES

LTK is based in Ambler, Pennsylvania with regional offices in Los Angeles, Atlanta, Boston, Chicago, Dallas, Denver, Houston, Minneapolis, Newark, New York, Petaluma, Portland, San Francisco, Seattle and Washington, D.C. LTK has assisted in the design, procurement, rehabilitation, inspection and acceptance testing of about 26,000 passenger rail cars operating in North America. LTK has an estimated 360 employees which includes 290 engineers and technicians with expertise in rail vehicle systems planning, engineering and economic analyses.

LTK has provided various engineering, technical, and management services in support of other transit agencies that include New York City Transit (NYCT), Washington Metropolitan Area Transit Authority (WMATA), Southeastern Pennsylvania Transportation Authority (SEPTA), Denver RTD, Bay Area Rapid Transit (BART), Massachusetts Bay Transportation Authority (MBTA), Dallas Area Rapid Transit (DART) and Los Angeles Metro.

The team proposed for this contract consists of LTK as the prime contractor and lead technical resource firm with the following sub-contractors:

- CH2M – vehicle and engineering services support
- Systra Consulting – train control engineering services
- Virginkar & Associates, Inc. – vehicle inspection services
- NDYLTK Rail – quality assurance support; vehicle engineering support
- Ramos Consulting Services, Inc. – document control and administrative support

STV/PB, a Joint Venture

STV Incorporated (STV) and WSP|Parsons Brinckerhoff (WSP|PB), two engineering firms, formed a joint venture, STV/PB Heavy Rail Vehicles, a Joint Venture (STV/PB), to propose for this procurement. Under a similar joint venture those firms proposed, and was awarded the contract to develop the performance-based technical specifications and commercial requirements for LACMTA's ongoing solicitation of the HR4000 vehicle procurement. STV, supported by WSP|PB, developed the specifications for Massachusetts Bay Transportation Authority's (MBTA) procurement of 226 HRVs for the Red and Orange Lines that was awarded to China Railway Rolling Stock Corp (CRRC). The firms are providing MBTA with technical and engineering support services as well as project management support.

STV

STV has provided engineering, architectural, planning, environmental, and construction management support services for the procurement and rehabilitation of rolling stock for subways, light rail and rail road systems for over 30 years. STV has a Vehicle Technology and Operation group within its organization with experience in transit car, commuter rail car, and locomotive engineering.

WSP|PB

WSP and Parsons Brinckerhoff combined to provide engineering and multidisciplinary professional services consulting services with more than 32,000 staff members in 500 offices across 39 countries.

Since 1984, PB has been involved in the procurement and/or rebuilding of over 3,500 rail cars, and has provided program management, engineering, inspection, and follow-up supervision services for major rolling stock procurement/rehabilitation programs either as a prime or a joint venture member.

The firms individually/collectively have provided support to HRV projects that include MBTA, Chicago Transit Authority (CTA), Metrolink, Port Authority of New York and New Jersey (PANYNJ), SEPTA, WMATA, NJ Transit, Long Island Railroad, Metro Red Line Extension, Seattle Monorail, Metro North Railroad, NJ Transit and LRV procurement for Honolulu Rail Transit, MTS San Diego, Utah Transit Authority, and Central Phoenix/East Valley.

Evaluation Summary

The PET evaluated the proposals and assessed strengths, weaknesses and associated risks of each Proposal utilizing the evaluation criteria factors and sub-factors defined in the RFP to determine the score for each firm. Based upon the collective evaluations, LTK Engineering Services is determined to be the PET's

recommendation for the top ranked firm based on the table below that provides the scores.

1	Firm	Average Score	Factor Weight	Weighted Average Score	Rank
2	LTK Engineering Services				
3	Firm's Degree of Skills and Experience	78.76	30.00%	23.63	
4	Staffing Quality of Technical Experience	77.50	20.00%	15.50	
5	Understanding of Work and Appropriateness of Approach for Implementation	80.00	20.00%	16.00	
6	Price	100.00	30.00%	30.00	
7	Total	84.07	100.00%	85.13	1
8	STV/PB, A JV				
9	Firm's Degree of Skills and Experience	80.00	30.00%	24.00	
10	Staffing Quality of Technical Experience	78.75	20.00%	15.75	
11	Understanding of Work and Appropriateness of Approach for Implementation	77.50	20.00%	15.50	
12	Price	95.03	30.00%	28.51	
13	Total	82.82	100.00%	83.76	2

C. Cost/Price Analysis

The recommended price has been determined to be fair and reasonable based upon adequate price competition, Management Audit Services (MAS) audit findings, an independent cost estimate, cost analysis, technical evaluation, fact finding, and negotiations.

	Proposer Name	Proposal Amount		Metro ICE	Negotiated or NTE amount
1.	LTK Engineering Services	Base	\$13,522,892	\$12,736,727	\$13,028,744
		Options	\$9,184,673	\$9,328,565	\$8,677,278
		Total	\$22,707,565	\$22,065,292	\$21,706,022
2.	STV/PB, a Joint Venture	Base	\$14,534,276	\$12,736,727	\$13,519,802
		Options	\$10,366,652	\$9,328,565	\$9,323,417
		Total	\$24,900,928	\$22,065,292	\$22,843,219

D. Background on Recommended Contractor

The recommended firm, LTK Engineering Services, located in Los Angeles, California has been in business for 32 years. LTK is an experienced rail vehicle consultant in North America and specializes solely in rail vehicle and systems engineering with a bench of experts in rail vehicle procurement, engineering, and component systems. LTK has experience in rapid transit car procurements in Los Angeles, Boston, New York City, New Jersey, Philadelphia and Washington, DC.

LTK has provided engineering expertise for over 20 years to LACMTA's vehicle procurement projects that include program management for the acquisition of the light rail vehicles (LRV) for the Blue Line and Green Line. LTK drafted the specifications for the Green Line car procurement and participated in design review, proof of design testing, inspection and commissioning. LTK was also selected to provide engineering support for the acquisition of the LRVs for the Gold Line and more recently the P3010. LTK provided program management, engineering support and vehicle commissioning services for the Red Line vehicle procurement for the base and option car orders.

LTK is currently providing technical support services to the LACMTA's P3010 Light Rail Vehicle procurement.

DEOD SUMMARY

**CONSULTING SERVICES FOR HEAVY RAIL VEHICLE ACQUISITION,
TECHNICAL SUPPORT SERVICES / OP16523-30433487**

A. Small Business Participation

The Diversity and Economic Opportunity Department (DEOD) established a 20% Disadvantaged Business Enterprise (DBE) goal for this solicitation. LTK Engineering Services exceeded the goal by making a 22.62% DBE commitment.

Small Business Goal	20% DBE	Small Business Commitment	22.62% DBE
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	DBE Subcontractors	Ethnicity	% DBE Commitment
1.	Ramos Consulting Services, Inc.	Hispanic American	3.60%
2.	Virginkar & Associates	Sub-Asian American	19.02%
	Total Commitment		22.62%

B. Living Wage and Service Contract Worker Retention Policy Applicability

The Living Wage and Service Contract Worker Retention Policy is not applicable to this contract.

C. Prevailing Wage Applicability

Prevailing wage is not applicable to this contract.

D. Project Labor Agreement/Construction Careers Policy

Project Labor Agreement/Construction Careers Policy is not applicable to this contract.

FUNDING/EXPENDITURE PLAN
 CP 206037 HR4000 HEAVY RAIL VEHICLE (HRV) PROCUREMENT
 CONSULTING SERVICES FOR HEAVY RAIL VEHICLE ACQUISITION,
 TECHNICAL SUPPORT SERVICES

	From Inception to Date (ITD) thru FY14 Jun	7/1/14 - 6/30/15	7/1/15 - 6/30/16	7/1/16 - 6/30/17	7/1/17 - 6/30/18	7/1/18 - 6/30/19	7/1/19 - 6/30/20	7/1/20 - 6/30/21		
Use of Funds		FY15	FY16	FY17	FY18	FY19	FY20	FY21	Total	% of Project
Replacement: 30 Vehicles (CP 206037)	\$0	\$0	\$595,000	\$5,900,000	\$24,497,000	\$24,544,000	\$24,559,000	\$24,477,000	\$104,572,000	35.9%
Professional Services	\$0	\$629,759	\$405,000	\$1,123,200	\$1,921,000	\$1,921,000	\$1,921,000	\$1,821,000	\$9,741,959	3.3%
MTA Administration	\$279,343	\$157,890	\$500,000	\$775,000	\$859,568	\$812,668	\$833,068	\$839,068	\$5,056,605	1.7%
Contingency	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$11,539,436	\$11,539,436	4.0%
Total	\$279,343	\$787,649	\$1,500,000	\$7,798,200	\$27,277,568	\$27,277,668	\$27,313,068	\$38,676,504	\$130,910,000	45.0%
WSE Section 1: 34 Vehicles (Project 865518)	\$0	\$0	\$727,728	\$7,216,124	\$29,961,593	\$30,019,077	\$30,037,424	\$29,937,132	\$127,899,078	43.9%
Professional Services	\$0	\$770,241	\$495,362	\$1,373,803	\$2,349,605	\$2,349,605	\$2,349,605	\$2,227,293	\$11,915,513	4.1%
MTA Administration	\$341,657	\$193,110	\$611,536	\$947,881	\$1,051,313	\$993,951	\$1,018,902	\$1,026,241	\$6,184,591	2.1%
Contingency	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$14,113,517	\$14,113,517	4.8%
Total	\$341,657	\$963,351	\$1,834,626	\$9,537,808	\$33,362,511	\$33,362,634	\$33,405,930	\$47,304,183	\$160,112,700	55.0%
Base Order Total	\$621,000	\$1,751,000	\$3,334,626	\$17,336,008	\$60,640,079	\$60,640,302	\$60,718,998	\$85,980,686	\$291,022,700	100.0%

	From Inception to Date (ITD) thru FY14 Jun	7/1/14 - 6/30/15	7/1/15 - 6/30/16	7/1/16 - 6/30/17	7/1/17 - 6/30/18	7/1/18 - 6/30/19	7/1/19 - 6/30/20	7/1/20 - 6/30/21		
Base Order Summary		FY15	FY16	FY17	FY18	FY19	FY20	FY21	Total Uses	% of Project
Base Order 64 Vehicles	\$0	\$0	\$1,322,728	\$13,116,124	\$54,458,593	\$54,563,077	\$54,596,424	\$54,414,132	\$232,471,078	79.9%
Professional Services	\$0	\$1,400,000	\$900,362	\$2,497,003	\$4,270,605	\$4,270,605	\$4,270,605	\$4,048,293	\$21,657,472	7.4%
MTA Administration	\$621,000	\$351,000	\$1,111,536	\$1,722,881	\$1,910,881	\$1,806,619	\$1,851,970	\$1,865,309	\$11,241,196	3.9%
Contingency	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$25,652,953	\$25,652,953	8.8%
Base Order Summary Total	\$621,000	\$1,751,000	\$3,334,626	\$17,336,008	\$60,640,079	\$60,640,302	\$60,718,998	\$85,980,686	\$291,022,700	100.0%

Sources of Funds	FY15	FY16	FY17	FY18	FY19	FY20	FY21	Total Sources	%
Measure R 35% Per WSE PLE Sec	\$341,657	\$963,351	\$1,834,626	\$9,537,808	\$33,362,511	\$33,362,634	\$33,405,930	\$160,112,700	
<i>Reference the Adopted Uses and Sources for \$2,739,510,000 Life of Project Budget for WSE PLE Section 1</i>									
Measure R Admin (206037)	\$279,343	\$787,649	\$1,500,000	\$3,899,100				\$6,466,092	
Cap and Trade; Other State & Federal sources (206037)*				\$3,899,100	\$27,277,568	\$27,277,668	\$27,313,068	\$38,676,504	\$124,443,908
<i>* Future Local, State & Federal Funds to be identified as they become available.</i>									
Total Funding Sources	\$621,000	\$1,751,000	\$3,334,626	\$17,336,008	\$60,640,079	\$60,640,302	\$60,718,998	\$85,980,686	\$291,022,700

* Staff will pursue additional funding sources to supplement Project 206037 budget which may become available through MAP-21 or other federal sources for this project. Staff will also utilize other State and Local funding sources as opportunities arise such as Cap and Trade or other new sources.