

Torres Rojas, Genara

From: mmslaugh@us.ibm.com
Sent: Wednesday, June 15, 2011 1:05 PM
To: Van Dyne, Sheree
Cc: Torres Rojas, Genara; Duffy, Daniel
Subject: Freedom of Information Online Request Form

Information:

First Name: Margus
Last Name: Slaughter
Company: IBM
Mailing Address 1: 11 Madison Ave
Mailing Address 2: 18th floor
City: new york
State: NY
Zip Code: 10010
Email Address: mmslaugh@us.ibm.com
Phone: 917-627-5754
Required copies of the records: Yes

List of specific record(s):
Asset Works, Inc.s response to RFP- 23090

THE PORT AUTHORITY OF NY & NJ

Daniel D. Duffy
FOI Administrator

August 15, 2012

Mr. Margus Slaughter
IBM
11 Madison Avenue, 18th Floor
New York, NY 10010

Re: Freedom of Information Reference No. 12396

Dear Mr. Slaughter:

This is a response to your June 15, 2011 request, which has been processed under the Port Authority's Freedom of Information Code (the "Code", copy attached) for a copy of the response submitted by Asset Works, Inc. related to RFP No. 23090.

Material responsive to your request and available under the Code can be found on the Port Authority's website at <http://www.panynj.gov/corporate-information/foi/12396-C.pdf>. Paper copies of the available records are available upon request.

Certain material responsive to your request is exempt from disclosure pursuant to Exemption (1) of the Code.

Please refer to the above FOI reference number in any future correspondence relating to your request.

Very truly yours,



Daniel D. Duffy
FOI Administrator

Attachment

AssetWORKS

AssetWorks Response to
The Port Authority of NY & NJ
Vehicle Maintenance Management System (VMMS)
RFP# 23090
DUE: 6 January 2011

Presented By:
AssetWorks Inc

Point of Contact:
Carl Bruce, National Sales Executive
AssetWorks Inc
998 Old Eagle School Road
Wayne, Pennsylvania 19087

Tel: 203-894-1315/ Fax: 610.971.9447

Email: Carl.Bruce@assetworks.com

FASuite



www.assetworks.com | 610.687.9202

Table of Contents

8.1 Letter of Transmittal:	3
8.2 Executive Summary	5
8.3 Agreement on Terms of Discussion	7
8.4 Certifications With Respect to the Contractor’s Integrity Provisions	8
8.5 Documentation of Proposer Prerequisites	9
Attachment F.....	9
8.6 Proposal.....	15
Cost Proposal.....	15
8.6.2 Scope of Work & Quality of Work Plan	22
Relevant Integration Experience:.....	22
Financial Capability:	23
Management Structure and Staffing:	23
a. Supporting Locations.....	24
b. Personnel Experience & Staffing Plan	25
c. Engagement Manager	25
d. Subcontractor.....	25
e. Business Plan	25
II. Hardware Plan	26
III. Technical Project Plan & Timeline	26
a. Integration Experience	26
b. Testing & Acceptance Procedures	26
c. Warranting & Maintaining.....	27
d. Training Program.....	27
e. Methodology for Recording Changes.....	27
f. Quality Assurance Program.....	28
g. Potential Risks & Mitigation Strategy.....	31
h. Implementation Facts	32
i. Attachment F.....	32
j. Security Methodology	32
k. Certifications	32

8.6.3 Product Strength & Capability.....	33
a. Identify Software Products.....	33
b. Functional Checklist & Modifications.....	72
c. Attachment H- Product Capability Matrix.....	72
d. Process Diagram.....	72
e. SAP Interface Requirements.....	72
f. SAP Field detail.....	72
g. SAP Experience & Customers.....	72
h. Other Integrations.....	73
i. Product Status & Version.....	73
j. Product Distinctions.....	74
k. Reseller Network.....	74
l. Certified Integrators.....	74
m. Vendor Alliances & Partnerships.....	74
Environmental Practices Form.....	75
MBE/WBE Participation Plan.....	76
<i>Contractor Identity Check/ Background Screening Plan</i>	77
Adaptability (Applications & References).....	77
License Agreements.....	78
Acknowledgement of Addenda.....	79
Acceptance of Standard Contract Terms & Conditions.....	80
Appendix.....	81

8.1 Letter of Transmittal:

AssetWorks Inc respectfully submits the following information in accordance with the requirements defined in RFP Section 8.1:

- 1.) AssetWorks Inc
998 Old Eagle School Road, Suite 1215
Wayne, PA 19087
Tel: 610-687-9202/ Fax: 610-971-9447
www.assetworks.com
- 2.) Authorized to Negotiate:
Carl Bruce, National Sales Executive
Tel: 203-894-1315/ Email: carl.bruce@assetworks.com

Authorized to Execute Contract:
John H. Hines, III, President
Tel: 610-687-9202/ Email: john.hines@assetworks.com

R. David Sadoo, Vice President
Tel: 610-687-9202/ Email: david.sadoo@assetworks.com

- 3.) Contact Persons for Questions Regarding this Response:
Carl Bruce, National Sales Executive
Tel: 203-894-1315/ Email: carl.bruce@assetworks.com

Rob Hallett, Director of Professional Services
Tel: 858-866-9042/ robert.hallett@assetworks.com

- 4.) Stellar Services
www.stellar4.com
57 West 38th Street, 11th Floor,
New York, NY 10018
Contact: Rozaliya Kiperman, PMP, CSM
Tel: 212-432-2848/ Email: rkiperman@stellar4.com

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- 5.) AssetWorks Inc. (U.S. Tax ID# EX. 1), is based in the United States, incorporated in the State of Delaware and is a stand-alone subsidiary of Trapeze Software Group Inc. (U.S. Tax ID# EX. 1) which is incorporated in the State of Arizona. Trapeze Software Group Inc. is 100% owned by Constellation Software Inc., a Canadian company, (the ultimate parent).

DIRECTORS:

Mark Miller, Chief Executive Officer

Brian Beattie, Chief Financial Officer, Treasurer & Secretary

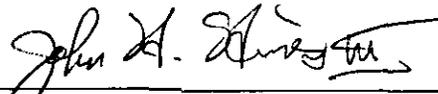
John H. Hines, III, President (Authorized Signatory for AssetWorks Inc)

David Pena, Vice President Finance

David Sadoo, Senior Vice President (Authorized Signatory for AssetWorks Inc)

Please see the Appendix of this response for NYS Department of State Registration, Certificate of Resolution.

I, John H. Hines, III, as President of AssetWorks Inc confirm that the above is true and correct and I further confirm that I am authorized to negotiate on behalf of the corporation.



John H. Hines, III, President
AssetWorks Inc

1-4-2011

Date

8.2 Executive Summary

AssetWorks Inc is pleased to submit our response to your request for proposal in support of the PATH VMMS Statement of Work. AssetWorks is proposing our state of the art web-based, Commercial-Off-The-Shelf (COTS) solution; FASuite. FASuite and particularly its RailFocus and LinearFocus modules are well suited to meet the majority of PATH's requirements out of the box. **AssetWorks offers extensive experience integrating to ERP applications as well as experience integrating to railcar on-board computer systems.** We look forward to the opportunity to put that experience to use in providing PATH with a world class Vehicle Maintenance Management System (VMMS).

AssetWorks is the market leader in Enterprise Asset Management solutions (EAM) for the transit industry and offers its flagship system; FASuite to address the needs of the Port Authority Trans Hudson Corporation (PATH). FASuite will allow PATH to track, manage and optimize performance levels of rail vehicle assets critical to business operations with an ease of use and analytics abilities second to none in the industry. As importantly, with a nearly \$500 million investment in the PA-5 cars, AssetWorks **warranty management capabilities** will offer important differentiators to allow PATH to protect their investment in this new equipment. As a financially sound, solidly backed corporation, with 25+ years of history, and over 200 employees in North America; AssetWorks is a partner that PATH can count on.

Equipment maintenance and repair is a mission-critical activity that is central to the success of any transit, and AssetWorks has more experience in transit than any other vendor. AssetWorks serves more than 85 transit properties throughout North America and is acknowledged as the premier resource in scalable, integrated solutions to Public Transportation organizations. With AssetWorks' world-class solution, FASuite, **PATH will be able to manage labor costs, warranties and inventories without sacrificing reliability or safety** and will be able to make immediate and strategic decisions that require effective data analysis capabilities and reporting. AssetWorks' solution allows our customers meet the many stringent requirements of manufacturers (for warranty purposes), regulatory bodies, such as the Federal Transit Administration (FTA) and the Federal Railroad Authority (FRA) while providing a tool to front line personnel that is intuitive and easy to learn.

AssetWorks recognizes the complexity and importance of regulations imposed on passenger rail organizations and offers our RailFocus and LinearFocus modules to support these requirements. These modules make up the backbone of the FASuite solution for rail transits and are used by Rail Properties throughout North America including: **the Chicago Transit Authority (CTA), Metropolitan Atlanta Rapid Transit Authority (MARTA), the Massachusetts Bay Transportation Authority (MBTA), the Mass Bay Commuter Rail (MBCR), New Jersey Transit (NJT), and Metrolink Los Angeles.**

Additionally, the FASuite product is widely used for management of non-rail transit assets. While we excel in the management of rail transit assets, the FASuite product is specifically designed to accommodate a wide range of asset types including rail transit assets, vehicular assets, facility assets and other stationary equipment. The FASuite product includes viewer tools which are interconnected with our LinearFocus module to allow for visual representation of assets such as track, bridges, tunnels and other linear assets.

AssetWorks also recognizes the vital need for component analysis in order to recycle and rebuild components or larger assemblies, such as truck assemblies, wheel set assemblies, traction motors, or anything that can be rebuilt cost effectively. Rail vehicles are both complex and unique, requiring special

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considerations regarding component rebuilds including scheduling concerns, cost issues, inventory levels, and in-house versus commercial rebuilds. AssetWorks assists organizations in maintaining a quality product by performing component analysis to determine the cause of the failure. FASuite allows our customers to make intelligent, informed and cost effective decisions by tracking assets at a component level as well as at a level of tracking multiple problems and repairs

THE FASUITE SOLUTION IS AN OPEN ARCHITECTURE SOLUTION WHICH ENABLES EASE OF INTEGRATION

The AssetWorks FASuite solutions provide users with a flexible yet powerful tool which has been successfully integrated at numerous transportation organizations ERP systems. This integration is essential to provide the relevant user communities with a *best of breed* product their area of focus. Our goal is to make sure that no one part of the organization has to be burdened by a system which does not meet their needs. Our successful integration experience at many other client sites has eliminated redundancy and optimized accuracy and efficiency. We are confident we can deliver the same results for PATH while also offering other possible sources of efficiency and savings including:

- ⚙ Labor productivity through analysis of technician’s time expended in shops
- ⚙ Equipment cost reductions through identification of excessive cost and consumption
- ⚙ Equipment cost reductions through more effective preventive maintenance
- ⚙ Equipment cost reductions through improved warranty tracking for equipment and major components
- ⚙ Inventory cost reductions through better stocking and purchasing decisions
- ⚙ Improved Fleet and Equipment size and configuration through accurate information on actual equipment usage and demand for availability
- ⚙ Improved effectiveness of equipment replacement programs based on analysis of cost and performance data

DIFFERENTIATION

The solutions, project management skills and experience provided by AssetWorks differ from our competitors in real and proven ways including:

FOCUS:	AssetWorks Inc is 100% focused on off-the-shelf asset management software solutions.
DEDICATION:	AssetWorks Inc is supported by a financially sound, profitable company with unmatched stability at all senior levels of our organization. Our President has been with the company for more than 20 years and our Product Senior VP has been with the FASuite product for more than 14 years. Our Senior VP of Development for the FASuite product has been leading the technological direction of the product for more than 16 years.
EXPERIENCE:	The FASuite product is supported by a team of professionals that are 100% focused on providing a best of breed application for Transportation Enterprise Asset Management.
QUALITY:	FASuite is designed from the ground up with support for rolling stock and other transportation infrastructure.
COMMITMENT:	FASuite is not a module of a much larger application; it meets nearly all requirements off-the-shelf without the need for extensive programming or expensive customization.
RELIABILITY:	AssetWorks Professional Services has a verifiable track record of completing important transit projects on time and on budget. As evidence, we have included press releases and articles that highlight our recent experience at MARTA.
OUR PLEDGE:	AssetWorks Professional Services consultants have significant transit experience. Because of our success in transits, you can be guaranteed that the project managers assigned to this project will have previous transit experience. The resumes included with our proposal are representative of the qualifications and experience we will bring to your project.

8.3 Agreement on Terms of Discussion

Please see the signed Agreement on Terms of Discussion, Attachment A, on the following page.

8.4 Certifications With Respect to the Contractor's Integrity Provisions

Certification Statement

RE: Attachment B

Please see the following exceptions detailed on letterhead as directed by RFP.



10 ATTACHMENT A: AGREEMENT ON TERMS OF DISCUSSION

The Port Authority's receipt or discussion of any information (including information contained in any proposal, vendor qualification, ideas, models, drawings, or other material communicated or exhibited by us or on our behalf) shall not impose any obligations whatsoever on the Port Authority or entitle us to any compensation therefor (except to the extent specifically provided in such written agreement, if any, as may be entered into between the Port Authority and us). Any such information given to the Port Authority before, with or after this Agreement on Terms of Discussion ("Agreement"), either orally or in writing, is not given in confidence. Such information may be used, or disclosed to others, for any purpose at any time without obligation or compensation and without liability of any kind whatsoever. Any statement which is inconsistent with this Agreement, whether made as part of or in connection with this Agreement, shall be void and of no effect. This Agreement is not intended, however, to grant to the Port Authority rights to any matter, which is the subject of valid existing or potential letters patent. The foregoing applies to any information, whether or not given at the invitation of the Authority.

Notwithstanding the above, and without assuming any legal obligation, the Port Authority will employ reasonable efforts, subject to the provisions of the Port Authority's Freedom of Information Policy and Procedure adopted by the Port Authority's Board of Commissioners on November 20, 2008, which may be found on the Port Authority website at: <http://www.panynj.gov/corporate-information/pdf/Freedom-of-Information-Policy-and-Procedure.pdf>, not to disclose to any competitor of the undersigned, information submitted which are trade secrets or is maintained for the regulation or supervision of commercial enterprise which, if disclosed, would cause substantial injury to the competitive position of the enterprise, and which information is identified by the Proposer as proprietary, which may be disclosed by the undersigned to the Port Authority as part of or in connection with the submission of a proposal.

AssetWorks Inc
(Company)

John H. Johnson
(Signature)

President
(Title)

1-4-11
(Date)

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THE PORT AUTHORITY
OF NY & NJ

VMMS

10 ATTACHMENT A: AGREEMENT ON TERMS OF DISCUSSION

The Port Authority's receipt or discussion of any information (including information contained in any proposal, vendor qualification, ideas, models, drawings, or other material communicated or exhibited by us or on our behalf) shall not impose any obligations whatsoever on the Port Authority or entitle us to any compensation therefor (except to the extent specifically provided in such written agreement, if any, as may be entered into between the Port Authority and us). Any such information given to the Port Authority before, with or after this Agreement on Terms of Discussion ("Agreement"), either orally or in writing, is not given in confidence. Such information may be used, or disclosed to others, for any purpose at any time without obligation or compensation and without liability of any kind whatsoever. Any statement which is inconsistent with this Agreement, whether made as part of or in connection with this Agreement, shall be void and of no effect. This Agreement is not intended, however, to grant to the Port Authority rights to any matter, which is the subject of valid existing or potential letters patent. The foregoing applies to any information, whether or not given at the invitation of the Authority.

Notwithstanding the above, and without assuming any legal obligation, the Port Authority will employ reasonable efforts, subject to the provisions of the Port Authority's Freedom of Information Policy and Procedure adopted by the Port Authority's Board of Commissioners on November 20, 2008, which may be found on the Port Authority website at: <http://www.panynj.gov/corporate-information/pdf/Freedom-of-Information-Policy-and-Procedure.pdf>, not to disclose to any competitor of the undersigned, information submitted which are trade secrets or is maintained for the regulation or supervision of commercial enterprise which, if disclosed, would cause substantial injury to the competitive position of the enterprise, and which information is identified by the Proposer as proprietary, which may be disclosed by the undersigned to the Port Authority as part of or in connection with the submission of a proposal.

Stellar Services

(Company)

[Signature]

(Signature)

v. P. of Business Solutions

(Title)

Jan. 04, 2011

(Date)

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January 3, 2011

The Port Authority of NY & NJ
 Procurement Department
 Attn: Bid/Proposal Custodian
 One Madison Avenue, 7th Floor
 New York, NY 10010

Re: AssetWorks Inc. Exceptions to Standard Terms and Conditions in RFP No. 23090

Dear Mr. Summerville,

Pursuant to Section 8.6.10, AssetWorks submits the table below containing AssetWorks specific exceptions to the Standard Terms and Conditions attached as Attachment B to the RFP ("Customer Terms"). AssetWorks has also included its standard agreements for consideration by the Customer ("AssetWorks Terms"). If awarded the opportunity, AssetWorks is prepared to negotiate a mutually agreed contract consistent with this response and the RFP.

	AssetWorks Request:
AssetWorks Standard Agreements	For the Customer's consideration, AssetWorks has included its standard agreements, which include the Software License Agreement (requested by Customer in 8.6.8 of the RFP), Software Maintenance Agreement, and the Professional Services Agreement. The Agreements contain the typical terms under which AssetWorks provides products and performs services for its customers. Any final contract must include license terms that protect AssetWorks intellectual property rights and define the standard maintenance program.
Limitation of Liability (New)	AssetWorks requires limitation of liability provisions substantially the same as those in its standard agreements. Pursuant to corporate policy, AssetWorks will be responsible for direct claims only, with a cap on total liability at the contract value.
General Agreement (11.1)	AssetWorks requests parameters on what is considered incidental to the Scope of Work. Items not included in the scope of work can materially impact price and time
Payments (11.2), Time is of the Essence (11.9)	Work will be completed on a mutually agreed schedule; AssetWorks should not be held responsible or penalized if Customer or other things outside of AssetWorks' control delay a project or prevent AssetWorks performance.
Definitions/ New (11.4)	An order of precedence is required for the Contract Documents. AssetWorks would propose the order be in reverse date order.
Definition (11.4)	"Specifications" definition should reference AssetWorks products specifications or the RFP as clarified by the response.
Intellectual Property (11.6b)	Preexisting software should be expanded to include subsequent updates and revisions. AssetWorks solution includes pre-existing Commercial Off the Shelf (COTS) software that is updated and revised on an ongoing basis and available to customers with a current maintenance agreement.
Default, Revocation or Suspension of Contract (11.11h), Withholding of Payments (11.12)	AssetWorks requests that it be given notice and an opportunity to cure before the Port Authority withholds any payments

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Identity Checks and Background Screening (11.1 (1))	AssetWorks will certify to its compliance, but will not disclose personal information regarding its employees
Warranties (11.18)	AssetWorks provides limited warranties consistent with its standard agreements and industry standards. AssetWorks does not "unconditionally guarantee". Further, AssetWorks reserves the right to reject sites of work that are not safe, are inconsistent with the RFP or misrepresented by Customer.
Rights and Remedies of the Contractor (11.20)/ Termination and Default (New)	AssetWorks should be able to terminate the Contract and cease work if the Customer materially breaches the contract and does not timely cure. AssetWorks should not be required to continue to work without prompt payment in accordance with the contract.
Rights and Remedies of The Authority (11.19a)	AssetWorks does not agree to a contractual obligation to cover or the Customer's right to have another contractor act as AssetWorks' agent.
Indemnification and Risks Assumed by the Contractor (11.26)	AssetWorks accepts responsibility and will indemnify customer for claims arising directly from the acts or omissions of AssetWorks. AssetWorks will not be responsible for claims arising from acts or omissions of the Port Authority, third persons or acts of God or public enemy.
Authority of the Director (11.28)	AssetWorks objects to any unilateral right of the Customer to resolve disputes. AssetWorks requests a process that allows for good faith negotiation, escalation and ultimately objective review.
Integrity (11.34)	AssetWorks can make the requested certifications. In interest of full disclosure, AssetWorks was previously a division of MAXIMUS Inc. and the products and services now sold by AssetWorks were owned by MAXIMUS Inc. before being sold to AssetWorks October 1, 2008.
Confidential Information/ Non-Publication	AssetWorks requests mutuality or protection for AssetWorks confidential information.
General Problem Resolution (13.14.2)	AssetWorks does not accept liquidated damages for breach of service levels in so much that Customer can be compensated with money damages. The damages listed or punitive and have no correlation to actual damages caused by time required to resolve issues. Further, additional parameters are required to define an issue and what is resolution (work around, etc).

AssetWorks welcomes an opportunity to discuss these exceptions with Customer.

Sincerely,

John H. Hines III



8.5 Documentation of Proposer Prerequisites

Attachment F

Requirement	Contract # 1 NJ Transit	Contract # 2 MARTA	Contract # 3 Denver RTD	Contract # 4 Chicago Transit Authority	Contract # 5 Calgary Transit
Contract Dates	2004 – Present	2004 – Present	2005 – Present	2003 - Present	2002 - Present
Property Location (City, State, Country)	Newark, NJ USA	Atlanta, GA USA	Denver, CO USA	Chicago, IL USA	Calgary, AB Canada
	Respond Y or N	Respond Y or N	Respond Y or N	Respond Y or N	Respond Y or N
Rail Transit Provider not FTA/FRA governed (Min 1)	N	N	N	N	Y
Rail Transit Provider Governed under FTA/FRA (Min 2)	Y	Y	Y	Y	N
Non Rail Transit Properties (Min 2)	N	N	N	N	N
US Rail Transit Provider?	Y	Y	Y	Y	N
Minimum 200 Passenger Rail Cars?	Y	Y	N	Y	N
Minimum of 15 miles of track?	N (does not use Linear product)	Y	Y	N (does not use Linear product)	N (does not use Linear product)

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Requirement	Contract # 6 Rochester- Genesee Regional Transit Authority	Contract # 7 Alternate Concepts, Inc.	Contract # 8 Hertz, Inc.	Contract # 9 Metrolink	
Contract Dates	2008 – Present	2001 – Present	2004 – Present	2003 – Present	
Property Location (City, State, Country)	Rochester, NY USA	Boston, MA USA	Parsippany, NJ USA	Los Angeles, CA USA	
	Respond Y or N	Respond Y or N	Respond Y or N	Respond Y or N	
Rail Transit Provider not FTA/FRA governed (Min 1)	N	N	N	N	
Rail Transit Provider Governed under FTA/FRA (Min 2)	N	N	N	Y	
Non Rail Transit Properties (Min 2)	Y	Y	Y	N	
US Rail Transit Provider?	N	N	N	Y	
Minimum 200 Passenger Rail Cars?	N	N	N	Y	
Minimum of 15 miles of track?	N	N	N	Y	

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#	Customer Company Name	Description of Services Provided	Timeframe Start (MM/YYYY)	Timeframe End (MM/YYYY)
1	New Jersey Transit	NJ Transit has been a longstanding customer of the FASuite product for both rail car maintenance and non-revenue vehicle maintenance. NJ Transit has contracted with AssetWorks over multiple phases to migrate from legacy applications to FASuite and expand the use of FASuite through integration to other systems. In the current phase, AssetWorks is completing integration with NJ Transit's ASI material management and payables system as well as an automated rail vehicle inspection system, conductor inspector system, and car wash monitoring through the use of AEI tags. NJ Transit is expected to expand the use of the system for yard management through integration with GPS devices in an upcoming phase.	06/2004	Present
2	MARTA	MARTA's bus maintenance, rail car maintenance, facilities, maintenance-of-way (MOW), and technology teams manage all of their <u>rail transit and non-rail transit assets</u> within the AssetWorks FASuite application since implementing our solution in a high profile, on time and on budget project in 2005. They use FASuite/FleetFocus to manage 1520 vehicles including bus, paratransit, non-revenue, and track work vehicles. MARTA's Rail Car Maintenance has approximately 340 cars managed by FASuite/RailFocus. Facilities and Maintenance-of-Way maintain over 30,000 assets 38 rail stations, 104 miles of mainline track, 3 major yards, and 300 turnouts (switches) within FASuite/LinearFocus. MARTA expanded their use of our products in 2007 with installation of the AssetWorks automated fuel management system, FuelFocus.	11/2004	Present
3	Denver RTD	FASuite—has been RTD's solution for total asset and maintenance management since 2007. RTD uses the AssetWorks solution in all of its maintenance facilities to manage bus, paratransit, support fleet, and light rail operations as well as its maintenance of way, rebuild, body, and electronics, treasury, and	12/2005	Present

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#	Customer Company Name	Description of Services Provided	Timeframe Start (MM/YYYY)	Timeframe End (MM/YYYY)
		facilities operations. RTD tracks all aspects of its operation on AssetWorks' single database, including real-time labor capture, work order management, materials management and fuel and fluid data to ensure that it is tracking real-time operating costs. This project included integrations to RTD's financial management system as well as for purchasing and payroll.		
4	Chicago Transit Authority	The Chicago Transit Authority and AssetWorks engaged in a project to modernize the CTA's Bus and Rail maintenance management information system. Chicago Transit Authority (CTA) selected AssetWorks FASuite – FleetFocus and RailFocus – to manage operations and maintenance activities for CTA's fleet and rail assets. The CTA selected the AssetWorks transportation asset management solution to increase operational efficiency, improve asset utilization, lower maintenance costs, reduce inventory carrying costs, and improve warranty recovery. FASuite's ability to integrate with the Oracle Enterprise Resource Planning (ERP) Suite was a key feature in the selection process.	04/2003	Present
5	Rochester-Genesee Regional Transit Authority	RGRTA selected AssetWorks FASuite in a competitive bid process in which criteria for selection included a track record of success on comparable projects in public transportation, as well as a record of completing projects on schedule and within the defined budget. AssetWorks supplied FASuite software for use at RGRTA's RTS fixed-route operation as well as in the Lift Line paratransit operation. The overall solution also deployed rugged touch-screen kiosks for use by maintenance staff, which provide RGRTA technicians with access to detailed vehicle specifications and vehicle work history. The project also features integration with RGRTA's existing accounting, financial, human resources and other transportation management related systems as well as on-board diagnostic system.	08/2008	Present

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#	Customer Company Name	Description of Services Provided	Timeframe Start (MM/YYYY)	Timeframe End (MM/YYYY)
7	Alternate Concepts, Inc.	Alternate Concepts, Inc. (ACI) provides experienced operations, maintenance and consulting services in the transit industry and operates or is a joint venture partner in several transit operations in North America. ACI utilizes AssetWorks FASuite software at multiple properties at which they are directly involved in the operation, including: Tren Urbano (Urban Train system in San Juan, PR), Paul Revere Transportation (a regional bus operating company), and Massachusetts Bay Commuter Railroad Company (operator of the MBTA Commuter Rail). ACI's utilization of FASuite at Tren Urbano includes use of RailFocus, EquipmentFocus and LinearFocus.	01/2003	Present
8	Metrolink	Serving the Los Angeles basin and Southern California, Metrolink operates 142 trains carrying 40,000 riders daily on more than 500 miles of track, employs 700 people (in-house and contracted), and maintains a rail fleet of over 52 locomotives and 150 rail coaches with an additional 117 on order.. Metrolink licensed AssetWorks FASuite Asset and Maintenance Management application in 2003, and now uses the system to track all rolling stock inspections, work order management, and materials management. Metrolink also deployed AssetWorks real-time labor capture portal (with integrated shop scheduling) on its shop floors and implemented handheld devices (mobile PDA's) for inventory control. Metrolink's use of the FASuite system also extends to linear asset management and maintenance management for the Right-of-Way (ROW). AssetWorks software also provides operations support, including passenger counts, crew management, "on-time" performance measurement, National Transportation Database reporting, and incident management - all of which are critical to Metrolink's daily operations.	03/2003	Present

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Contract #	Client Company Name		Contact Name	Contact email	Contact Phone
1	New Jersey Transit	Prime	Alex Baker	wbaker@njtransit.com	(973) 491-7129
1		Alt	Thomas Muletta	tmuletta@njtransit.com	(973) 491-7129
2	MARTA	Prime	Tim Elsberry	jelsberry@itsmarta.com	(404)848-3790
2		Alt	Michael Cooper	mcooper@itsmarta.com	(404)848-3276
3	Denver RTD	Prime	Dave Ober	david.ober@rtd-denver.com	(303) 299-6931
3		Alt	Gary Romero	gary.romero@rtd-denver.com	(303) 299-6706
4	Chicago Transit Authority	Prime	Dennis Milicevic	dmilicevic@transitchicago.com	(312)681-3700
4		Alt	Chris Bilik	cbilik@transitchicago.com	(312) 907-3455
5	Rochester-Genesee Regional Transit Authority	Prime	Miguel Velazquez	mvelazquez@rgrta.com	(585)654-0257
5		Alt	Joe Jablonski	jjablonski@rgrta.com	(585) 654-0216
6	Alternate Concepts, Inc.	Prime	Susan Altshuler	saltshuler@aciboston.com	(617) 523-3131
6		Alt	Jim Viola	jviola@paulreverbuses.com	(617) 889-5899
7	Metrolink	Prime	Chick Aday	adayc@scrra.net	(213) 494-8387
7		Alt	Linda Doan	doanl@scrra.net	(213) 494-8249

8.6 Proposal

Cost Proposal

A. Implementation

Cost of Software	<u>\$598,981.25</u>
Installation on Port Authority Equipment # hours <u>120</u>	<u>\$23,400.00</u>
<u>Temporary Hosting Services (see assumptions)</u>	<u>\$7,500.00</u>
Configuration to Port Authority Requirements # hours _____	<u>\$3,416,720.00</u>
NOTE: Dollar amount is inclusive of time and travel expenses which	
30 day Operational Test # hours <u>1,092</u>	<u>\$212,940.00</u>
Training (Development & Delivery) \$ _____ per class * X classes	<u>\$659,360.00</u>
NOTE: Training is based on hours: # hours <u>3,504</u>	
One year warranty period (Ongoing maintenance) # hours <u>2,808</u>	<u>\$475,010.00</u>

The one year warranty period begins upon final acceptance of all tasks as defined as the acceptance of the 30-day Operational test. If functionality is phased in, Contractor is responsible for providing warranty services on each completed Phase upon go live.

A-total Implementation Total: \$5,393,911.25

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B. Base Term: On-going Maintenance for three years:

Ongoing Maintenance	<u>\$377,676.00</u>
<u>\$10,491.00</u> per month * 36 months	
Training (Delivery)	
\$ _____ per class * X classes	
B-tot Total:	<u>\$377,676.00</u>

C. Option Period 1: On-going Maintenance

Ongoing Maintenance	<u>\$138,672.00</u>
<u>\$11,556.00</u> per month * 12 months	
Training (Delivery)	
\$ _____ per class * X classes	
C-tot Total:	<u>\$138,672.00</u>

D. Option Period 2: On-going Maintenance

Ongoing Maintenance	<u>\$145,608.00</u>
<u>\$12,134</u> per month * 12 months	
Training (Delivery)	
\$ _____ per class * X classes	
D-tot Total:	<u>\$145,608.00</u>

E. Option Period 3: On-going Maintenance

Ongoing Maintenance	<u>\$152,892.00</u>
<u>\$12,741</u> per month * 12 months	
Training (Delivery)	
\$ _____ per class * X classes	
E-tot Total:	<u>\$152,892.00</u>

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Hourly Rates for Enhancements

F. Base Term:	<u>A. STANDARD Proposed Rate/Hour</u>	<u>B. Estimated number of hours for the base term (3 yrs)</u>	<u>C. Total Estimated 15.1.1 Base Term (A x B = C)</u>
Software Engineer	\$185.00	X 100	\$18,500.00
Program Manager (Professional Services Mgr)	\$230.00	X 100	\$23,000.00
Trainer (Subject Matter Expert)	\$200.00	X 100	\$20,000.00
Jr. Programmer (Report Developer)	\$175.00	X 100	\$17,500.00
Sr. Programmer	\$185.00	X 100	\$18,500.00
E-Tot Total Base Period – 3 years			\$97,500.00

G. Option Period 1	<u>A. STANDARD Proposed Rate/Hour</u>	<u>B. Estimated number of hours for the base term (2 yrs)</u>	<u>C. Total Estimated 15.1.2 Opt Period 1 (A x B = C)</u>
Software Engineer	\$185.00	X 100	\$18,500.00
Program Manager	\$230.00	X 100	\$23,000.00
Trainer	\$200.00	X 100	\$20,000.00
Jr. Programmer	\$175.00	X 100	\$17,500.00
Sr. Programmer	\$185.00	X 100	\$18,500.00
f-Tot Total Option Period 1 – 2 years			\$97,500.00

H. Option Period 2	<u>A. STANDARD Proposed Rate/Hour</u>	<u>B. Estimated number of hours for the base term (2 yrs)</u>	<u>C. Total Estimated 15.1.1 Base Term (A x B = C)</u>
Software Engineer	\$190.00	X 100	\$19,000.00
Program Manager	\$230.00	X 100	\$23,000.00
Trainer	\$205.00	X 100	\$20,500.00
Jr. Programmer	\$180.00	X 100	\$18,000.00
Sr. Programmer	\$190.00	X 100	\$19,000.00
G-Tot Total Option Period 2 – 2 years			\$99,500.00

TOTAL ESTIMATED COSTS	\$6,503,259.25
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I. Assumptions

<p>- Software</p>	<p>The preferred license structure for FASuite software is based on the number of Active Equipment Units and Track Miles managed with the software. Active Equipment Units are vehicles or assets that are active in the customer's fleet in that work is performed or activity about the asset is reported on a recurring basis. Track miles are representative of the overall length of track along the active right of way centerline and is inclusive of all assets along the right of way without limitations. Sold, retired or permanently inactive units do not require a license and the information about such assets can reside permanently in the database. AssetWorks is including a license for up to 400 Active railcar assets and 15 track miles. To the extent that the number of railcars will exceed 400 active equipment units on an ongoing basis or the number of track miles is increased, the license and maintenance fees would be adjusted.</p> <p>AssetWorks has included all relevant modules necessary to meet or exceed the requirements of the RFP. A detailed listing of included modules and of other optional modules that are not included in the proposal are noted following this table.</p>
<p>A. Implementation</p>	<p>AssetWorks understands that PATH is expecting an aggressive timeline for implementation. For the purpose of our proposal, we have provided two project plans. Our "Primary" project plan is based on what we believe is a realistic timeline for the project. The pricing presented in this proposal section is based on this project plan and what we are referencing as our Primary Statement of Work in the Appendix.</p> <p>As requested by PATH in the RFP and reinforced by Addendum, AssetWorks is also including an alternative plan (referenced as our Alternative Statement of Work in the Appendix) that in theory can meet the aggressive timeline requirement to have an operational work order system in line with the timeline defined in the RFP. This plan would be subject to numerous risks that could hamper both PATH and AssetWorks in meeting the timelines. The most significant risks are as follows:</p> <ul style="list-style-type: none"> • Contract negotiation delays contributing to timeline risks • Lack of sufficient project resources to review business process documentation in a timely manner <p>These are not the only risks given the proposed scope, but AssetWorks is</p>

	<p>willing to work with PATH to review these alternatives in a sufficient level of detail to allow both parties to determine the best course.</p> <p>In consideration of the accelerated timeline requirements, AssetWorks is including a provision to temporarily host the application so that the project can commence prior to completion of the Hardware Plan. This will allow the project to move forward in all other respects by removing hardware from the critical path. AssetWorks will host the application through the planned software installation date in our project plan. AssetWorks has included a setup fee for hosting in the proposal and will not charge a monthly fee for the interim hosting period. PATH may elect to extend the temporary hosting on a paid basis. For hosting beyond the planned installation date, AssetWorks can provide a separate proposal for consideration by PATH.</p> <p>We have included a project plan in Microsoft Project format that includes details by hour on the scope of services being proposed for both the Primary and Alternative SOW's.</p>
<p>B. Ongoing Maintenance Base Term</p>	<p>Ongoing maintenance includes unlimited help desk support, software upgrades and quarterly onsite visits (40 hours onsite) by AssetWorks professional services personnel. It is important to note that all current AssetWorks customers do not include an onsite requirement for maintenance. It is possible for AssetWorks to lower our maintenance rates if the Port Authority reconsiders the onsite requirement and accepts AssetWorks standard Maintenance Agreement.</p>
<p>C. Ongoing Maintenance – Option Period 1</p>	<p>Ongoing maintenance includes unlimited help desk support, software upgrades and quarterly onsite visits (40 hours onsite) by AssetWorks professional services personnel. It is important to note that all current AssetWorks customers do not include an onsite requirement for maintenance. It is possible for AssetWorks to lower our maintenance rates if the Port Authority reconsiders the onsite requirement and accepts AssetWorks standard Maintenance Agreement.</p>
<p>D. Ongoing Maintenance - Option Period 2</p>	<p>Ongoing maintenance includes unlimited help desk support, software upgrades and quarterly onsite visits (40 hours onsite) by AssetWorks professional services personnel. It is important to note that all current AssetWorks customers do not include an onsite requirement for maintenance. It is possible for AssetWorks to lower our maintenance rates if the Port Authority reconsiders the onsite requirement and accepts AssetWorks standard Maintenance Agreement.</p>

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E. Hourly Rates for Enhancements – Base Period	Standard hourly rates
F. Hourly Rates for Enhancements – Option Period 1	Standard hourly rates
G. Hourly Rates for Enhancements – Option Period 2	Standard hourly rates based on predicted increase.

FASuite Modules Included in Proposal:

Base System for 400 Active Rail Vehicle Equipment Units (RailFocus)

Base System for 15 Track Miles (LinearFocus)

- Base System Includes keyed modules:
 - Bar Code, Labor Capture, Ad Hoc Query, Shop Scheduling, Service Level Agreement (SLA),
 - Production Planning (Re-build), Equipment Planning, Replacement/ Performance Modeling,
 - Ad Hoc Query, and Enterprise Portal
- EquipmentFocus for Facilities Management
- Incident Management
- Rail Operations
- InfoCenter Reporting
- Shop Activity
- Customer Access
- Performance Measures
- Dashboards
- MaxQueue Integration Module
- Notifications Design Module
- ActionMap! (Linear Viewer)
- Telematics Module
- Illustrated Parts Catalog Integration (Catalog TBD)
- MobileFocus (for 15 handheld devices)
- Crystal Reports Server 2008 (single processor)

Additional Available Modules / Services (not included in proposal):

Motor Pool Management

Motor Pool Reservations

Motor Pool Automation (per site)

Yard Management

Integration Modules:

NAPA TAMS Integration

Networkfleet GPS Integration

Zonar Systems Inspection Integration

Zonar Systems GPS Integration

Trapeze Ops Integration

Trapeze ITS Integration

Lincoln Industrial Fluids Management Integration

FuelFocus (Automated Fuel Management)

Vehicle Data Collector

Hosting Services

Illustrated Parts Catalog Hosting & Setup Services

8.6.2 Scope of Work & Quality of Work Plan

Relevant Integration Experience:

AssetWorks Inc has been implementing and maintaining VMMS solutions for over 25 years and possesses significant experience with integrating with a variety of ERP systems including SAP. In the past three years, AssetWorks has implemented a number of customers including the following comparably sized transit organizations:

DENVER RTD

AssetWorks fully integrated Enterprise Asset Management (EAM) software product line—FleetFocus, RailFocus, EquipmentFocus and LinearFocus, collectively known as FASuite—has been RTD’s solution for total asset and maintenance management since 2007. RTD uses the AssetWorks solution in all of its maintenance facilities to manage bus, paratransit, support fleet, and light rail operations as well as its maintenance of way, rebuild, body, and electronics, treasury, and facilities operations. RTD tracks all aspects of its operation on AssetWorks’ single database, including real-time labor capture, work order management, materials management and fuel and fluid data to ensure that it is tracking real-time operating costs. This project included integrations to RTD’s financial management system as well as for purchasing and payroll.

Please see the Denver RTD Case Study included with this response.

MARTA

The Metropolitan Atlanta Rapid Transit Authority (MARTA) is the ninth-largest transit system in the U.S. Over 450,000 passengers use MARTA every single day. In order to keep that many citizens moving, it takes 4,000 MARTA employees to ensure that its bus, rail, and paratransit service runs safely, smoothly, and on time.

MARTA's bus maintenance, rail car maintenance, facilities, maintenance-of-way (MOW), and technology teams now manage all of their assets within the AssetWorks FASuite application. They use FASuite/FleetFocus to manage 1520 vehicles including bus, paratransit, non-revenue, and track work vehicles. MARTA's Rail Car Maintenance has approximately 340 cars managed by FASuite/RailFocus. Facilities and Maintenance-of-Way maintain over 30,000 assets 38 rail stations, 104 miles of mainline track, 3 major yards, and 300 turnouts (switches) within FASuite/LinearFocus.

Please see the MARTA Case Study included with this response.

Financial Capability:

AssetWorks Inc. financial condition is healthy and there are currently no conditions that would impede our ability to complete the project. With its strong financial backing and depth of resources, AssetWorks has successfully implemented its enterprise asset management solutions over 500 times without a single failure.

Attached at the end of this section are financial statements of the AssetWorks ultimate parent company, Constellation Software Inc. Based on the requirements of U.S. and Canadian securities law applicable to Constellation, AssetWorks is only able to provide financial statements specific to the ultimate parent; Constellation Software Inc.

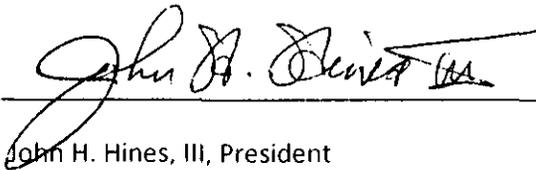
AssetWorks Inc: FEIN #
 Dun & Bradstreet #828548961

AssetWorks Bank References:

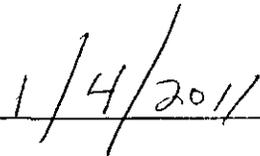
Josh Petlowany, Business Relationship Manager
Wells Fargo Bank
Scottsdale Business Banking
8601 N. Scottsdale Road, Ste. 250
Scottsdale, AZ 85253
480-348-5043 direct/ 480-348-5406 fax

I, John H. Hines, III, as President of AssetWorks Inc affirm the financial condition of the corporation and its ultimate parent, Constellation Software Inc., to be solid and fully capable of meeting the obligations of the project described. As evidence the 2009 Annual Report of Constellation Software is included in the Appendix of this response.

Signed: _____


John H. Hines, III, President

Date: _____

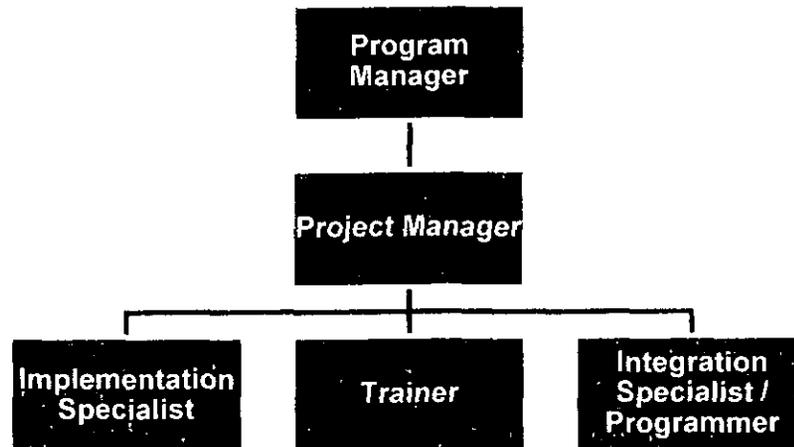


Management Structure and Staffing:

Key members of the customer implementation team include: the Project Manager, Trainer(s), Implementation Specialist and an Integration Specialist to complete any data conversion, modification and interface programming in the specified time frame. In addition, a Program Manager will provide management oversight and support as needed to the project team.

The AssetWorks Project Manager is the principal client contact, and has ultimate responsibility for the successful completion of the project. The Project Manager is responsible for directing the day-to-day activities of the project. The Project Manager will also monitor the project resources to ensure quality delivery of services, provide bi-weekly status reports, and initiate regular project team conference calls to ensure that the team is making sufficient progress toward the end objectives. The Project Manager is the client's first escalation point for any issues arising during the project.

The following chart illustrates the organizational structure of the team:



A team of experienced implementation professionals from AssetWorks will guide you through the implementation process, from pre-implementation planning to post production operations.

AssetWorks has many skilled FASuite consultants in our Professional Services group who are dedicated to providing installation, implementation, and training services. *We have provided resumes in the Appendix of this response for staff that may be committed to your implementation project.*

a. Supporting Locations

AssetWorks Inc maintains four US based office locations and 200 fulltime, regular employees in support of its enterprise asset management solutions. No work is performed outside the Continental United States in the development or support of our products. The following three locations will be primarily responsible for the implementation and milestones as defined by this response:

Headquarters:

998 Old Eagle School Rd
Suite 1215

Wayne, PA 19087

Tel: 610-687-9202/ Fax: 610-971-9447

Regional Office

4275 Executive Square

Suite 330

La Jolla, CA 92037

Tel: 858-452-0458/ Fax: 858-452-0478

Regional Office

300 N. Mullan Rd.

Suite 101

Spokane Valley, WA 99206

b. Personnel Experience & Staffing Plan

Please see the Statement of Work for Staffing Plan and the Appendix of this response for the resumes.

c. Engagement Manager

The Program Manager for this project will be Robert Hallett who serves as the Director of Professional Services. AssetWorks assigns additional staff for projects upon execution of contracts based on availability. Please see the Appendix of this response for the resumes of relevant personnel.

d. Subcontractor

Stellar Services, the AssetWorks MBE partner for this implementation, provides project/program management support using our "OneView" solution, enterprise content management services and IT infrastructure services to federal, state and local government agencies as well as small, medium and large commercial companies throughout the US. Stellar will analyze, design, deploy and maintain solution documentation to enable PATH to efficiently acquire, transform, and utilize the proposed solution to successfully manage their maintenance management

e. Business Plan

AssetWorks does not share business plans or proprietary financial data at the subsidiary level. Please refer to the Constellation annual report for financial data. AssetWorks has a long history of serving the transit market for Enterprise Asset Management software and expects to continue to do so far into the future.

II. Hardware Plan

Please see our Technical Recommendations in the Appendix. AssetWorks has also included detailed provisions for documenting a Hardware Plan in our Statement of Work.

III. Technical Project Plan & Timeline

a. Integration Experience

Our integration experience continues to advance and evolve. AssetWorks has completed many high profile projects requiring integration with ERP/Financial systems, on-board computer systems, automated rail vehicle inspection systems, SCADA systems, and other in-house systems. Our experience with integration to ERP systems includes specific experience integrating with SAP on recent projects at the New York Power Authority and Dominion Resources.

Each integration project is unique, however, AssetWorks does not enter into license agreements for such integrations. In all cases, our integration design work is limited to the FASuite product. For any project requiring integration, it is expected that the client will provide access to subject matter experts that are familiar with the product which will be integrated. AssetWorks works with the SME's to design the FASuite side of the interface such that it will make the information needed by the external system available as required and FASuite will process inbound transactions as required. Our Statement of Work documents our approach for the required integration for this project.

b. Testing & Acceptance Procedures

For any integration delivered by AssetWorks, AssetWorks and PATH will be to develop detailed specifications for each interface and prepare a detailed design document for each. AssetWorks attempts to use existing interface programs whenever possible, but in most cases, custom interface programs or modifications to existing interfaces are required to meet each customer's specific business processes.

The first step in this process is to review the current use of the target application, review business processes and determine the volume and timing of target transactions. Without a thorough understanding of the target application and the planned business processes, it is impossible to determine the exact requirements of any integrations and the corresponding level of effort/cost to put these programs into production.

Once development has been completed and tested by AssetWorks in its test environment, AssetWorks will deliver the interface to PATH for testing in its FASuite test environment. AssetWorks will provide documentation – typically the final development specification – and instruction in how the interface is to be installed and executed.

PATH will be responsible for testing the interface in the environment and providing final approval. Each interface program is tested using the PATH database and test cases defined in the technical specification. The interfaces are then ready to be placed into production.

c. Warranting & Maintaining

AssetWorks has included copies of our standard Software License Agreement (SLA), Software Maintenance Agreement (SMA) and Professional Services Agreement (PSA) in the appendix. The SLA and PSA documents the standard warranty terms for software and our services. The SMA documents our standard maintenance terms. PATH has documented several requirements for Warranty & Maintenance that fall outside our standard agreements. AssetWorks has taken PATH's requirements into account with regard to pricing and has included provisions to meet PATH's requirements where necessary. Should PATH elect to accept AssetWorks standard contracts, AssetWorks is willing to lower our Software Maintenance Fees accordingly.

d. Training Program

AssetWorks training program is documented in our Statement of Work. A sample training manual is included in the Appendix.

e. Methodology for Recording Changes

AssetWorks offers FASuite as a COTS solution. As such, AssetWorks controls all changes to the software source code. For each new version of the product, AssetWorks publishes detailed Release Notes which highlight all software changes, new features and options. By default, the new version is shipped with new features turned off. Customers may turn features on after reviewing the release notes and relevant instructions for any new features. Release Notes and all product documentation is made available to customers on the Support Website (<http://assetworks.com/fa>).

For any API provided by AssetWorks, documentation of the API will be provided at the time of its development. In general, AssetWorks does not make changes to API's unless specifically requested to do so by customers.

In addition to product changes, scope change on any project is inevitable. The key is not eliminating change, but handling it effectively when it occurs. Since successful change management is such a vital part of any project, AssetWorks' project management services clearly define this process, allowing all project participants to be confident of how to handle any adjustments, issues or new ideas that may come up in the course of their implementation.

The Change Management process begins when a member of the project team identifies an issue or new business need. The issue or need is qualified to determine the exact scope and priority, as well as to determine if an adjustment to the plan is indicated.

The technical, procedural and practical feasibility of making the adjustment is evaluated and it is determined whether or not the adjustment falls within the scope of the contracted services. If the adjustment falls within the scope of the contracted services, action will be assigned and taken according to the project priorities. If an adjustment is deemed to constitute a change to the contracted services, a formal Change Request Form is completed to properly scope, evaluate and execute the change, should the customer authorize it.

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By following this model small adjustments can be made quickly, without unnecessarily complex paperwork, and more significant changes can be clearly defined, allowing the customer to make a truly informed decision on whether or not to proceed.

Please see a Sample of the Change Management Control Request form in the Appendix of this response.

f. Quality Assurance Program

AssetWorks is committed to implementing standards of practice to assure that we provide high quality services to our clients. Our vision is to create a 'quality culture' where quality is built into our work efforts at each point where work is being performed. Projects are won from competitive, responsive and compliant proposals. Proposals set the framework for the project manager and should therefore reflect AssetWorks quality standards and processes.

Definition of Quality

Quality is defined as "conformance to requirements." A quality product or service is one that meets the needs and expectations of customers and of AssetWorks. Quality is achieved when:

- The project outcome results in a positive impact on the client organization
- The project objectives, scope, and procedures are achieved, within budget
- Project objectives are achieved in an efficient and timely manner
- All policy and regulatory requirements are met
- Project work is adequately documented and secured
- Clients (and when appropriate, the various governmental oversight agencies) are satisfied and would recommend our work to prospective clients

FASuite PM

Project management refers to the definition and planning of a project, and then its subsequent execution, control, and conclusion. All projects need some level of project management. The larger the project and the more complex it is, the more there is a need for a more formal, standard, structured process. Project management processes help to define the beginning and the end, as well as to provide the framework for executing and managing all of the work that is required to complete the project.

Our proficiency in Project Management is a result of our development and employment of a proven project management methodology (FASuite PM). FASuite PM is based on the best practices and guidelines of the Project Management Institute (PMI) as promulgated in its *Guide to the Project Management Body of Knowledge (PMBOK)*, and has been defined and refined by years of practical application. Our focus on the unique management needs of the different phases of a project—initiation, planning, control, execution, and closure—ensures program success as shown in *Exhibit 1: AssetWorks Management Approach*.

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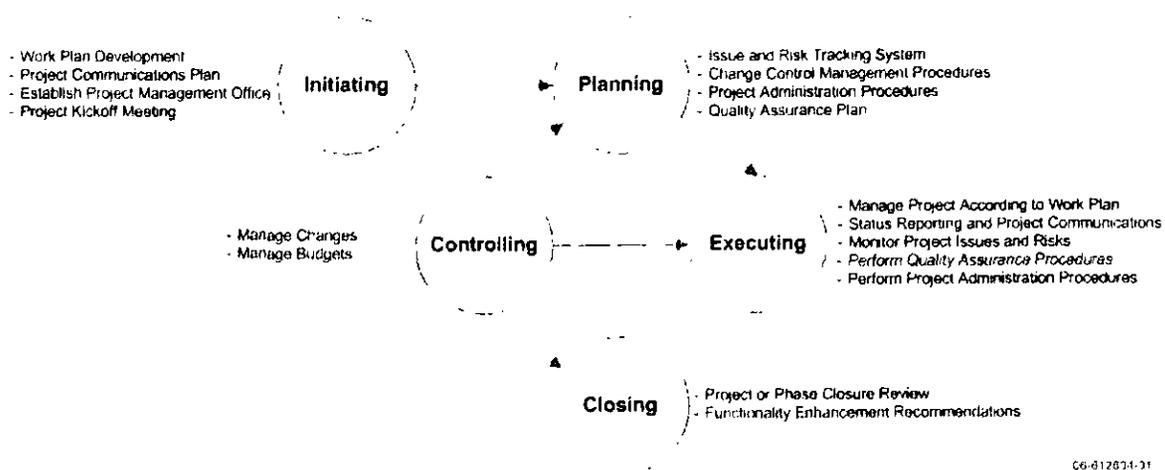


Exhibit 1: AssetWorks Management Approach. *AssetWorks has found that use of these core processes is the key to a sound program implementation.*

AssetWorks adopts a collaborative "one-team" approach with the customer's staff. Our unified working environment results in a better-developed program plan and team schedules, and, coupled with our disciplined approach to program management, ensures the highest probability of program success. This approach uses the same administrative processes to manage the whole team—AssetWorks and the customer's staff.

The AssetWorks approach is designed to ensure that contract activities are managed, controlled, coordinated, supervised, and focused on the contract's goals and objectives. It is critical to the success of any project that project status, problems, issues, and concerns are continually addressed. A formal means for sharing project information must be established and maintained throughout the project lifecycle and communicated to both the client and AssetWorks. Through the many projects we have performed over the past three decades that AssetWorks has been in business, we have learned that both a successful project and a satisfied client require ready access to the AssetWorks Project Manager and to AssetWorks Corporate Management. Hence, our Project Management processes allow for a high level of communication and interaction between project and corporate management.

Among the many tasks for which the Project Manager is responsible, perhaps none is more important than preparing a well thought out plan and schedule for executing the project. To prepare the Project Management plan, the Project Manager needs to consider all of the activities that must be performed, by whom, and when and the FASuite PM processes that they will use to manage the project.

The key project management processes of the FASuite PM method includes:

- Project planning and Resource Management
- Quality management
- Communication Planning and Reporting
- Risk Management
- Monitoring Project Performance
- Project Financial Management
- Project Documentation and Record retention

FASuite Professional Services

AssetWorks Professional Services provides complete project management and technical expertise in implementing systems with complex requirements. Our superior knowledge of fleet management systems, industry technologies, and the business processes of the fleet industry allows our Professional Services team to implement your fleet management system in a cost-effective, timely manner.

AssetWorks Professional Services' project management methodology makes us unique in the industry. Our sophisticated end to end project management methodology is comprised of a robust set of implementation methodologies providing the best solution approach based on products, project scope and the complexity of the proposed project.

AssetWorks Professional Services has developed an implementation project management methodology for success, reflecting the proven expertise of our staff, and industry-recognized Best Practices. Our proven methodology guides our services processes to provide our customers with reliable and consistent project management services. The AssetWorks methodology includes the delivery of all of our existing services offerings, as well as the development of new offerings customized to meet the emerging needs of our diverse customer community. AssetWorks project management encompasses every aspect of project management, from the inception of the project through successful transition to a production environment and ongoing systems operation. Universal processes and delivery phase processes are defined in simple, clear terms, allowing easy adoption by all project participants.

Implementation Methodology - Universal Processes

Project Management and Quality Assurance, Change Management, and Acceptance are three universal processes at the core of the program. We describe these processes as universal, because they are involved in every phase of project management. The phases of project management that comprise the program are described later in this document.

Project Management and Quality Assurance

AssetWorks' philosophy of comprehensive project and quality management is made real through the elements of the project management process. The following are the key areas that it addresses:

- Plan Management
- Staffing & Resource Management
- Change Management
- Risk Management
- Issues Management
- Status Management
- Financial Management
- Communications Management
- Quality Management

AssetWorks has a staff of highly skilled and experienced project managers who work as a team to ensure that the customer's project is proceeding in an efficient, timely and cost-effective manner, according to the services contract. AssetWorks' project managers are facilitators in the best sense of the term, making sure that project participants have what they need, when they need it and keeping the project aligned with the customer's goals and priorities. They also provide, along with the other members of the AssetWorks implementation team, focused advice based upon extensive product and industry experience, on the Best Practices for successful implementation of AssetWorks' FASuite.

g. Potential Risks & Mitigation Strategy

Results of a study concluded in 2006 at the Software Engineering Institute at Carnegie Mellon University identified the following most common risk factors during a software implementation project. AssetWorks has built an implementation methodology that addresses these risks and others encountered in our 25+ years of experience and over 500 successful implementations:

RISK	MITIGATION
Inadequate implementation planning	AssetWorks takes our standard implementation methodology and tailors it to the specific needs of the Customer. Our baseline methodology comes from more than 25 years of experience and over 450 FleetFocus implementations, including over 200 cities, without a single failure. Our implementation plan is cornered by: <ul style="list-style-type: none"> ➤ A Statement of Work with a clear vision, defined scope and executive authority ➤ An identified project team with documented roles and responsibilities ➤ An implementation and project management methodology ➤ A specific and documented multi-phase implementation process supported by a <i>detailed project plan</i> ➤ A Change Management Program (CMP) and Change Control process
Poor project management	The AssetWorks project managers are fleet professionals who understand the inner workings of fleet operations. Our project managers are not system generalists but possess real life 'under-the-hood' experience. Our proven quality practices ensure a timely and efficient project which will: <ul style="list-style-type: none"> ➤ Maintain scope and prohibit 'scope creep' or unofficial scope changes; ➤ Manage the project proactively and use metrics to measure progress and drive continuous improvements; ➤ Respond quickly and efficiently to internal or external reported incidents or deviations; ➤ Deliver the speed and predictability of an on-time, on-budget project coupled with a solution configured to the desired way of doing business and which achieves predicted results.
Poor quality data for data conversion	As part of our standard implementation, AssetWorks reviews the quality of the data with the Customer and makes recommendations as to its conversion or possible clean-up before the actual conversion.
Integration difficulties	AssetWorks has significant experience in developing third-party integrations with a wide variety of financial, purchasing, scheduling and ERP solutions.
Challenged user adoption	Our trainers are former fleet managers, administrators and technicians who understand the workflow on the shop floor. Our documentation has been specifically written to address the user's task or role in that process.
Failure to identify change management	AssetWorks provides a clean and concise Statement of Work to mitigate obstacles which: <ul style="list-style-type: none"> ➤ identifies potential resistance and creates a plan for change obstacles and incorporates as needed formal change management mitigation strategy.
Unorganized training	AssetWorks recognizes that quality training is essential to leverage the system capabilities and realize the benefits. Our Statement of Work offers a clear and organized training plan to meet the Customer's needs.
Over customization	The FleetFocus software is highly customizable and scalable. To avoid over-customization, AssetWorks encourages new customers to fully investigating re-configuration options, business process work-arounds or an interim period of trial before committing to customization can violate the integrity of the software, delay project progress, lead to excessive costs and impose significant risk to project success.

h. Implementation Facts

AssetWorks solutions for transportation management have been implemented successfully over 500 times and the proposed solution, FASuite, has been implemented successfully and continues to perform at over 80 transit organizations throughout North America.

i. Attachment F

Please see section 8.5 of this proposal where Attachment F was previously required.

j. Security Methodology

The IT Control Requirements defined by PATH in Attachment I are addressed as part of AssetWorks Inc annual SAS70 certification. AssetWorks Inc, specifically the controls exhibited and enforced on our ASP (Application Service Provider) environment, has been granted the designation "Authorized to Operate" (ATO) as a system housing CUI (Controlled Unclassified Information) data at our facility based on the Department of Justice (DOJ) assessment using NIST 800-53 guidelines for FISMA (Federal Information Standards Management Agency) standards. This independent audit and subsequent designation was conducted by the Department of Justice (DOJ) at the request of the Department of Homeland Security (DHS), a current AssetWorks ASP customer.

A part of this annual audit includes strict adherence to a series of Control Requirements governing the development, maintenance, distribution, testing, storage of and access to the software solution being proposed to PATH.

k. Certifications

As indicated above, AssetWorks Inc, specifically the Control Requirements governing the overall SDLC work flow and process of our software solution production and distribution, undergoes annual SAS70 Level II certification by an independent auditor.

NOTE: In June 2011, the SSAE No. 16 will replace the SAS 70 as the standard for reporting on service organizations and AssetWorks Inc will comply with new standards.

8.6.3 Product Strength & Capability

a. Identify Software Products

AssetWorks is including the FASuite product and the relevant modules noted in this section. AssetWorks has also included a section for options that are not included in the proposal but are available for an additional charge in a section labeled Options.

Standard System Functionality

Equipment

FASuite tracks equipment units and maintains up-to-date information about each unit. The information is readily accessible for display, printing, and updating.

FASuite tracks each equipment unit from before acquisition to beyond disposition. For each equipment unit, FASuite tracks life-cycle status, locations, department and operator assignments, availability for use, warranties, and other equipment specific information.

FASuite also supports entry of specification data, including weights, capacities, and component warranties. Users can define and track any information desired about any number of subsystems, such as body, engine, electrical, belts, filters, hoses, rail wheel trucks, traction motors, facility and stationary equipment subsystems and more, any of which FASuite can print on PM work orders.

The screenshot shows the FASuite software interface. At the top, there is a menu bar with 'Menu', 'Preferences', and 'Help'. Below the menu bar is a toolbar with various icons. The main area displays a table of equipment units. Below the table, there is a section for 'Equipment ID' with a 'New equipment unit' button. Below that is a 'Basic Info' section with various fields for equipment details.

Year	Manufacturer ID	Model ID	Equipment description	Serial number	Asset number	Department ID	Open	Latest	Latest meter 1 source	Last
2009	GILLIG	HYBRID	2009 GILLIG LOW HYBRID	15GGE301691091768	09636	180	0		WORK ORDER	10/2
2009	GILLIG	LOW FLOOR	2009 GILLIG LOW FLOOR	15GGB271191176428	09635	180	0		WORK ORDER	10/2
2009	GILLIG	LOW FLOOR	2009 GILLIG LOW FLOOR	15GGB271891176426	09625	180	0		METER READING	09/2
2009	GILLIG	LOW FLOOR	2009 GILLIG LOW FLOOR	15GGB271X91176427	09626	180	0		SERVICE REQUEST	05/2
2008	GILLIG	LOW FLOOR	2008 GILLIG LOW FLOOR	15GGB211471078192	07621	180	0		SERVICE REQUEST	10/2
2008	GILLIG	LOW FLOOR	2008 GILLIG LOW FLOOR	15GGB211371078197	07633	180	0		METER READING	09/2
2008	GILLIG	LOW FLOOR	2008 GILLIG LOW FLOOR	15GGB211171078196	07630	180	0		WORK ORDER	10/2
2008	GILLIG	LOW FLOOR	2008 GILLIG LOW FLOOR	15GGB211371078197	07633	180	0		WORK ORDER	10/2

Equipment ID: [Field]

Basic Info

Model year: 2009
 Manufacturer ID: GILLIG
 Model ID: HYBRID
 Equipment type: 09-GILL-HYBRID
 Description: 2009 GILLIG LOW HYBRID
 Color: [Redacted]
 Serial number: 15GGE301691091768
 Asset number: [Redacted]
 Associated file: [Redacted]
 Path and file name: http://local/host/InfoCenter/images/Gillig/hybrids
 Description: 2009 GILLING DOCUMENTS

PM program type

CLASS
 INDIVIDUAL
 NONE

Equipment procurement

FASuite tracks the equipment purchasing and assembly process starting at the time specifications are established for units. The process moves from an initial equipment budget request through purchase estimate, purchase order, vendor performance monitoring, on-site inspections at vendors, to the delivery of the equipment units.

Users may specify a complete bill of materials for new units based on bills of materials already defined for existing equipment units in FASuite' equipment subsystem and component relationship tables.

Component tracking

Users may define relationships among equipment units, from large-scale systems down to the lowest-level components of those systems with unlimited parent/ child relationships. Any equipment unit can be designated as a component of another unit, to any level of nesting. **FASuite supports an unlimited number of equipment units within each nesting layer.** A screen displays the complete component hierarchy for an existing equipment unit.

Warranty Tracking

FASuite tracks bumper-to-bumper warranty expiration date and meter values for each equipment unit. It supports any number of user-defined subsystems, and tracks the warranty expiration date and meter for each subsystem of an equipment unit. When users open a repair order, FASuite automatically and immediately flags warranty repairs for an equipment unit or any of its subsystems.

FASuite tracks warranty claims made to manufacturers and vendors for equipment, equipment subsystems, or parts under warranty, and credits settlement amounts against repairs.

The screenshot shows a software interface for 'Warranty Claims'. On the left, there are navigation buttons for 'Manage Claims', 'User', 'Manufacturer', 'Status', and 'Days'. At the top right, there is a 'Go to Claim ID' section with an input field and a 'Go' button. The main area displays a 'Current Workload Summary by Days' table with columns for 'Warranty Status' and 'Claims'.

Warranty Status	Claims
Red (0% to 10% of days remain)	0
Yellow (11% to 25% of days remain)	0
Green (26% to 100% of days remain)	2

Historical cost and downtime tracking

FASuite tracks equipment costs by category and produces displays and reports, including cost per meter unit, for any user-defined period. Cost categories include: fuel quantity and cost, fluid quantity and cost, repair and PM labor and parts costs, capital costs, depreciation costs, and more.

FASuite maintains repair and PM history data for each unit. **This data is available online in real-time**, including both summary information and the complete details of any open or closed work order. FASuite simultaneously calculates downtime from the perspectives of the shop and user department to which the unit is assigned.

Multi-unit projects

To support work campaigns and recall work, or any other circumstance in which an identical activity for multiple equipment units is performed, FASuite supports multi-unit projects. Each project consists of a project description and a list of equipment units to which the project applies. The project description includes the start date, completion date, and the originator of the entry, the reason for repair, whether the work is warranty-related, and all associated tasks. The list of equipment units to which the project applies can be based on any combination of the equipment manufacturer, model, year, VIN range, maintenance class, and other items.

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Work order processing

Using FASuite's Work Order center, users may:

- Assign user-defined repair reasons for each repair order and task
- Identify repair work as warranty or non-warranty
- Assign pending defects to a work order or defer them
- Print PM checklist items on PM work orders
- Enter comments
- View messages that identify whether the unit is late, due, or soon due for PM or inspection; is under warranty; is experiencing a potential comeback; is ready for disposition; or has other open work orders
- Post unlimited labor, parts, and commercial charges
- Track work delays due to insufficient resources such as bays, labor, parts, etc.
- Close work orders online, and print a fully costed report
- Create estimate work orders and post estimated labor, parts, and commercial charges to them without generating any actual charges

FASuite Shop Activity screens have been designed to require a minimum amount of data entry while providing all the information a supervisor or technician needs to manage their work day, in an easy to use portal layout. This both increases the efficiency of the organization, as well as decreases the training time for first time users.

Work Order Main:

Work Order Main
This WO in delay L - WAITING LABOR 10/01/2009 21:53

Equipment ID	1626 1M8PDMPAX3P055948 2003 MCI D4500 WHITE 2003 MCI D4500 COACH	License Number	1167478
Asset Number	00674 Station Location	Job Status	OPEN
Work Order ID	PWSHOP-2009-5937	Technician	84779 - ALLEN DORSEY
Job Type	REPAIR	Due	09/30/2009 21:06
Unit In	09/29/2009 21:06	Service Status	
Repair Location	PWSHOP - VEHICLE MAINTENANCE SHOP		

Tasks: 2

Task ID	Task Description	WAC
26-20	TELEVISION	CT
22-12	WINDSHIELD	RA

Actions

Main Page	Stop Delay	View/Edit Detail
Part Actions	Comments	
Equipment History	Test Results	Related Files
Messages	Print Work Order	
Commercial Work		

Notes

-- 10/01/2009 18:35 - 86159 - CODY BALL --
 TASK-22-12 FINISHED INSTALLING WINDOW INSTALLED LOCKING STRIPS CLEANED WINDOW, AND VACUUMED ALL GLASS FRAGMENTS FROM COACH

-- 10/01/2009 14:07 - 84779 - ALLEN DORSEY --
 CHECKED AND CONFIRMED SYMPTOM STATED BY SCOTT DEFERRED SATELLITE ISSUE TILL AFTER W/S R&R

[New Note](#)

[New Task](#)

Service Requests / Defects: 0

[Add / Manage](#)

[Back](#) [Assignments](#) [New Appointment](#)

Shop scheduling

FASuite Shop Scheduling module allows users to:

- Manage all resources including labor; work bays; parts and materials; and tools and equipment
- Generate schedules for employees, job trades, or work crews.
- Schedule tasks by priority
- Differentiate between critical repair orders and PM work
- Display online work schedules for a shop
- Schedule work for an equipment unit around other known commitments for the unit
- Support over-scheduling at user-specified percentages for each shop
- Re-generate schedules online at any time to account for changes in work loads, available resources, priorities, or start dates
- Consider planned vacations and other employee absences in schedules
- Provide analysis of resource requirements for a schedule, including personnel resources by skill type; tool and equipment requirements; work bay requirements; and parts and material requirements

Real-Time labor capture functionality

FASuite labor capture functionality consists of a screen on which technicians log on and log off of activities (work orders and indirect activities) by scanning bar codes with a wedge, entering data on the keyboard, or simply touching a touch screen. By deploying FASuite on the shop floor (touch screen enabled), or in the field with a handheld computer (FASuite MobileFocus Software), agencies can utilize real-time labor capture, dramatically cut down on double data entry, and provide technicians with an invaluable tool for improved job performance.

Display screens show the technicians currently logged on to a particular work order or the current activities of all technicians in a shop. Technicians using handheld computers can also be displayed when using a wireless enabled device.

Supervisor Portal:

My Shops

Current Working Location: PWSHOP - VEHICLE MAINTENANCE SHOP

<p>Shop Activity</p> <ul style="list-style-type: none"> 11 Assigned to shift 1 Clock in on shift 0 Clock in other shifts 1 On work orders 0 On indirect 0 Pending part return requests <p>Employee Management Part Return Requests</p> <p>Equipment Management</p> <p>Search: <input type="text" value="Eq ID - License # - Asset # - VIN #"/> <input type="button" value="Go"/></p>	<p>Location Work Orders</p> <table border="1" style="width: 100%; text-align: center;"> <thead> <tr> <th></th> <th>Planned</th> <th>Open</th> <th>Work Finished</th> </tr> </thead> <tbody> <tr> <td>All Asset Types</td> <td>35</td> <td>43</td> <td>3</td> </tr> <tr> <td>ASSET</td> <td>35</td> <td>43</td> <td>3</td> </tr> <tr> <td>COMPONENT</td> <td>0</td> <td>0</td> <td>0</td> </tr> </tbody> </table> <p>Actions</p> <p style="text-align: right;"><input type="button" value="View Calendar"/></p> <p><input type="button" value="Work Order Management"/> <input type="button" value="Review and Close"/></p>		Planned	Open	Work Finished	All Asset Types	35	43	3	ASSET	35	43	3	COMPONENT	0	0	0
	Planned	Open	Work Finished														
All Asset Types	35	43	3														
ASSET	35	43	3														
COMPONENT	0	0	0														

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Technician Portal:

My Work
SHOP TECH 1 (SHOP) @ PWSHOP - VEHICLE MAINTENANCE

Work Order: PWSHOP-2010-6022 Task Time Code: DI - STANDARD DIRECT

Task: 6-K GILLIG - GILLIG 6000 MILE PM SERVICE

Equipment: 1716 15GGB271X91176427 2009 GILLIG LOW FLOOR 2009 GILLIG LOW FLOOR

00h 00m Indirect Time

Edit/Stop Task Today's Timesheet

PM Checklist

Current Job: **My Work Orders: 4**

Priority: 1 Service Status: Due: 06/24/2010 20:23

Asset No: 09626 License No: 1275384 Unit In: 06/24/2010 14:23

Work Order Tasks

Start 6-K GILLIG - GILLIG 6000 MILE PM SERVICE WAC:

Actions Notes

View/Edit Detail Part Actions

Equipment History Test Results

Print Work Order

Commercial Work Related Files

Component Warranty Messages

Start Delay Finish Work Order

Add / Manage SRs

Search:

Preventive Maintenance (PM) scheduling

FASuite automatically schedules preventive maintenance (PM) for all equipment units based on PM programs defined for equipment PM classes or for individual units. PMs become due based on the earlier of elapsed time, meter usage (odometer or hour meter), or fuel consumption. When the user requests a list of equipment units due for PM, FASuite analyzes equipment usage and fuel consumption rates to project when units will come due for PMs in the future, and includes them on the list when appropriate.

Current Working Location

Current Location: BCT02 - BCT GARAGE 2 - NORTH SIDE

Services and Inspections Due: 371

Open Work Orders for All Units Listed Group services due onto one work order per equipment unit

Equip ID: Desc	Reason Due	Task of Job Code	Date Due	Days Late/ (Early)	Meter 1 Late/ (Early)	Meter 1 Due	Meter 2 Late/ (Early)	Meter 2 Due
<input type="checkbox"/> R223: SUBURBAN EXPRESS BUS 45FT	DATE	A	2010-12-18	0	(4000)	22134	0	
<input type="checkbox"/> R222: SUBURBAN EXPRESS BUS 45FT	DATE	A	2010-12-17	0	(4000)	18712	0	
<input type="checkbox"/> R221: SUBURBAN EXPRESS BUS 45FT	DATE	A	2010-12-14	0	(4000)	20753	0	
<input type="checkbox"/> R206: TRANSIT BUS	DATE	B	2010-12-15	0	(4000)	18638	0	
<input type="checkbox"/> R205: TRANSIT BUS	DATE	B	2010-12-11	0	(4000)	16323	0	
<input type="checkbox"/> R225: SUBURBAN EXPRESS BUS 45FT	DATE	A	2010-12-10	1	(4000)	19910	0	
<input type="checkbox"/> R202: TRANSIT BUS	DATE	A	2010-12-10	1	(4000)	14954	0	

Current Filter

Projection Days: 30, Include Services Soon Due by Meter N, Exclude Services on Open Work Orders. Y

Flexible labor costing

FASuite supports a multi-tiered hierarchical labor rate structure including task flat rates, task hourly rates, customer-based rates, employee-based rates, shop-based rates, and an average hourly rate for all employees at all shops.

Parts inventory and purchasing management

FASuite includes fully integrated parts inventory control and purchasing functionality for an unlimited number of warehouse locations. User may:

- Manage the purchasing and stocking of parts centrally for all warehouses, or individually by warehouse
- View complete data for any part online from all locations
- Track quantity and value on hand and on order for all parts
- Issue parts and relieve inventory through the same transaction
- Issue parts to equipment, departments, or account codes without a work order
- Automatically generate purchase orders for all parts whose current stock is below the reorder point
- Track vendor contracts, including amounts spent and remaining
- Use average, FIFO, or LIFO pricing on parts issues
- Receive automatic on-screen notification when quantity on hand falls below reorder point
- Process an order, receipt, and issue of a part to a work order as a single transaction
- Track monthly quantity and value statistics by warehouse and part for orders, receipts, issues, adjustments, and transfers
- Transfer parts between locations, including online transfer requests and responses
- Automatically apply inventory counts to adjust current stock levels
- Catalog an unlimited number of manufacturer and aftermarket supplier IDs and part numbers, and cross-reference those to stock parts and to each other
- Track an unlimited number of vendors which supply the same part, including delivery lead time, minimum order quantity and value, warranty terms, etc., for each vendor and part
- Automatically identify parts which have been used on equipment no longer in use to reduce inventory on-hand
- Automatically assemble kits from kit component lists

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FileFocus - [Parts - Location Information] - Windows Internet Explorer provided by Yahoo!

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Menu Preferences

Row #	Part ID	Part	Inventory location ID	Keyword	Product category ID	Part classification ID	Part short description
1	107794X	0	PWPART	DRIER	PARTS	C	DESC. DRIER CART KIT REPLACES GILLIG # 82-10884-000
2	1117850	0	PWPART	ALTERNATOR	PARTS	NA	ALTERNATOR BUS GILLIG
3	44202R	0	PWPART	LAMP LED RED	PARTS	C	LAMP LED RED 41 LEDS GILLIG3 PRONG PLUG BRAKE AM
4	4592-AD-CMT22A	0	PWPART	BRAKE SHOE	PARTS	C	BOLTED BRAKE SHOE 10" GILLIG
5	4661	0	PWPART	STAT SEAL THERM	PARTS	NA	STAT SEAL THERMOSTAT BUSES GILLIG
6	51-09322-001	0	PWPART	TAL LAMP ASY G	PARTS	NA	TAL LAMP ASY GILLIG
7	51-14840-027	0	PWPART	NEW PART	NEW PART	C	NEW GILLIG BATTERIES

Part ID: _____
 Part suffix: _____
 Inventory location ID: _____

Basic Info

Keyword: _____ Date and time added: _____
 Short description: _____
 Product category ID: _____
 Part classification ID: _____
 Unit of measure: EACH

Quantity on hand: _____
 Current unit price: _____
 Value on hand: _____
 Quantity on order: _____
 Value on order: _____

Bins	Row #	Delete	Bin ID	Description
		<input type="checkbox"/>	P-2 B-21	PALLET PARTS ROOM UPSTAI

Parts stock check

FASuite includes an online parts stock check function that automatically determines the most efficient course of action for users requiring parts. For each part requested, FASuite suggests that the user obtain the part from inventory at that location, expedite pending or back orders, transfer the part from another location's inventory, or place a new order.

Work Order Parts

Equipment ID: 1716 15GGB271X91176427 2009 GILLIG LOW FLOOR 2009 GILLIG LOW FLOOR
 Asset Number: 09626 Station Location: License Number: 1275384
 Work Order ID: PWSHOP-2010-6022
 Unit In: 06/24/2010 14:23 Due: 06/24/2010 20:23
 Repair Location: PWSHOP - VEHICLE MAINTENANCE SHOP
 Service Status: _____

Part Search By

Stock Location: PWPART - PWPART
 Task: 6-K GILLIG - GILLIG
 Keyword: equals
 Part ID: equals
 Description: equals

Successfully added 7 part(s) to cart.

Select Parts for Shopping List - Parts Found: 7

<input type="checkbox"/>	Task	Part ID	Suffix	Description	Qty	UOM	On Hand	On Order	Bin	Serial
<input type="checkbox"/>	6-K GILLIG	LF-513	0	NEW PART: OIL FILTER	1	EACH	0	0		N
<input type="checkbox"/>	6-K GILLIG	15W40	0	OIL: OIL	24	QUART	2751	0	OIL ROOM	N
<input type="checkbox"/>	6-K GILLIG	82-46240-000	0	FILTER FUEL: PRIMARY FUEL FILTER	1	EACH	0	0	B-3 5-3	N

Add to Cart View Cart

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Bar Code functionality

FASuite Bar Code functionality provides full support for use of bar codes to collect labor and parts data. FASuite can print bar code patterns on:

- Hard copies of work orders (bar codes for work order ID and each expected task or PM service)
- Part bin labels and receipt labels
- Lists of repair task IDs, PM service codes, direct and indirect time codes, employees, parts, vendors, and location IDs



The Ad-Hoc Reporting Module

The Ad-Hoc Reporting Module gives managers and supervisors the ability to access FASuite's vast amount of data in the form of reports, charts and graphs without advanced computer skills or additional training. This browser-based module provides a user-friendly view into the FASuite database putting the information into the hands of people who understand how to manage assets best.

Filter Field	Operator	value(s)	Blank
UNIT_ID#_ISSSTRANS_V1	Equals (Field)	UNIT_ID#UNIT_MAIN	<input type="checkbox"/>
ISSUE_DT	Between	01-01-2007 And 12-31-2008	<input type="checkbox"/>

FleetFocus™

Total Issues: 93375.303

Unit Number: 322

Issue Date	Issue Quantity	Odometer
1/2/2007 3:12:28 PM	42.000	2173.0
1/2/2007 4:07:05 PM	60.000	2173.0
1/3/2007 3:15:43 PM	35.600	2173.0
1/15/2007 7:51:31 AM	49.600	2173.0
1/23/2007 3:07:14 PM	53.500	2173.0
1/23/2007 3:07:49 PM	1.000	2173.0
1/25/2007 2:59:15 PM	23.700	2173.0
1/25/2007 3:00:42 PM	1.000	2173.0
1/25/2007 3:02:36 PM	1.000	2173.0
1/27/2007 3:03:55 PM	20.300	2173.0
1/30/2007 2:25:00 PM	45.800	15.0
322.500	21768.0	

Unit Number: 400501

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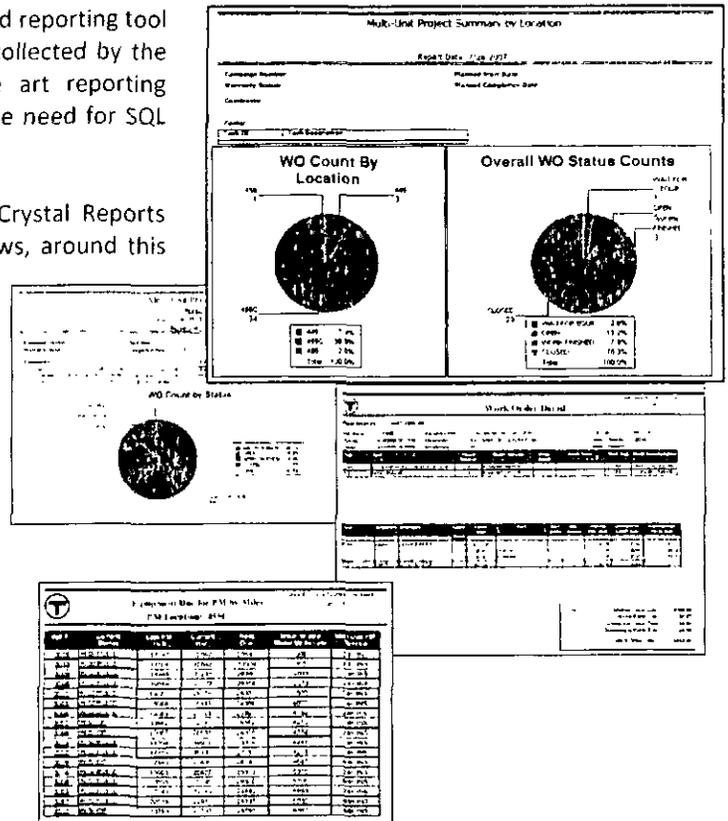
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The Reporting Module

The Reporting module is powerful business intelligence and reporting tool that allows users to dynamically analyze trends in data collected by the FASuite database. This module provides state of the art reporting management allowing users access to reports without the need for SQL expertise or report-writing experience.

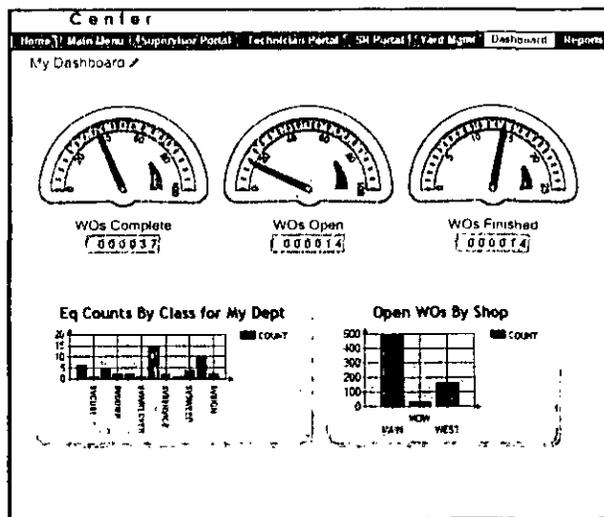
At the core is a reporting engine licensed from SAP, Crystal Reports Server.. AssetWorks developed the data modules, or views, around this engine to allow easy access to subsets of the FASuite database. Since the views are pre-built and pre-calculated, users can start using the system immediately without the help of an IT Department.

Drill-down capabilities allow users to move immediately from one level of detail to the next. The Reporting module is a querying tool that easily retrieves FASuite data through a user-friendly catalog representing the database. The simplicity of the FASuite catalog permits the user to extract information without requiring SQL expertise or report-writing experience..



The Dashboard Module

The Dashboard module provides real-time access to the FASuite database through easy-to-interpret, out-of-the-box gauges and charts. Dashboard elements provide instant insight into maintenance key performance. Users may provide access to dashboards to anyone in the organization, without the need to install any software on their machines. Customers use the Dashboard module to add dashboard content to their maintenance management portal for viewers both inside and outside of the maintenance organization. Dashboards may be implemented on pages all by themselves or integrated into existing screens within the FASuite application.



The Notifications Module

The Notifications module provides users with a means to send messages and, optionally, emails to designated FASuite users, and provides:



- Instant alerts of important and need-to-know scenarios
- Flexibility in the “what” and “how” of notifications that lets users choose what scenarios are important and specify how the alerts should arrive (email, pager, on-screen messages)
- Better communication and information sharing between departments
- Instant value from the system without having to train customers on the system
- A collection of out-of-the-box notification scenarios to get users started
- A tool with which AssetWorks can create custom notification scenarios to meet the unique needs of the organization

The Customer Access Module

The Customer Access module is designed to allow equipment operators or using department representatives to access information about equipment and administer pertinent department level information related to the equipment. The module is designed to be accessed using simple web pages requiring little to no training. *Customer Access provides the ability to record Service Requests and Driver Assignments*

Service Requests provides Shop staff with the users’ comments and contact information about equipment problems. Users can view existing, pending or closed Service Requests before adding a new request.

Administer Equipment

Department 180 - DPW TRANSIT FIXED ROUTE

Equipment Units: 52

Equip ID	Equipment Info	License	Last Meter	Operator Info	PM Location
1610	1996 GILLIG CORP GILLIG PHANTOM	E365496	599703		PWSHOP - VEHICLE MAINTENANCE SHOP
1611	1996 GILLIG CORP GILLIG PHANTOM	E365495	563924		PWSHOP - VEHICLE MAINTENANCE SHOP
1612	1996 GILLIG CORP GILLIG PHANTOM	E365494	557214		PWSHOP - VEHICLE MAINTENANCE SHOP
1607	1985 GILLIG CORP GILLIG PHANTOM	E368848	551671		PWSHOP - VEHICLE MAINTENANCE SHOP
1609	1994 GILLIG CORP GILLIG PHANTOM	E437143	528175		PWSHOP - VEHICLE MAINTENANCE SHOP

Current Filter

No filter defined

[Click here to see the complete list of equipment units](#)

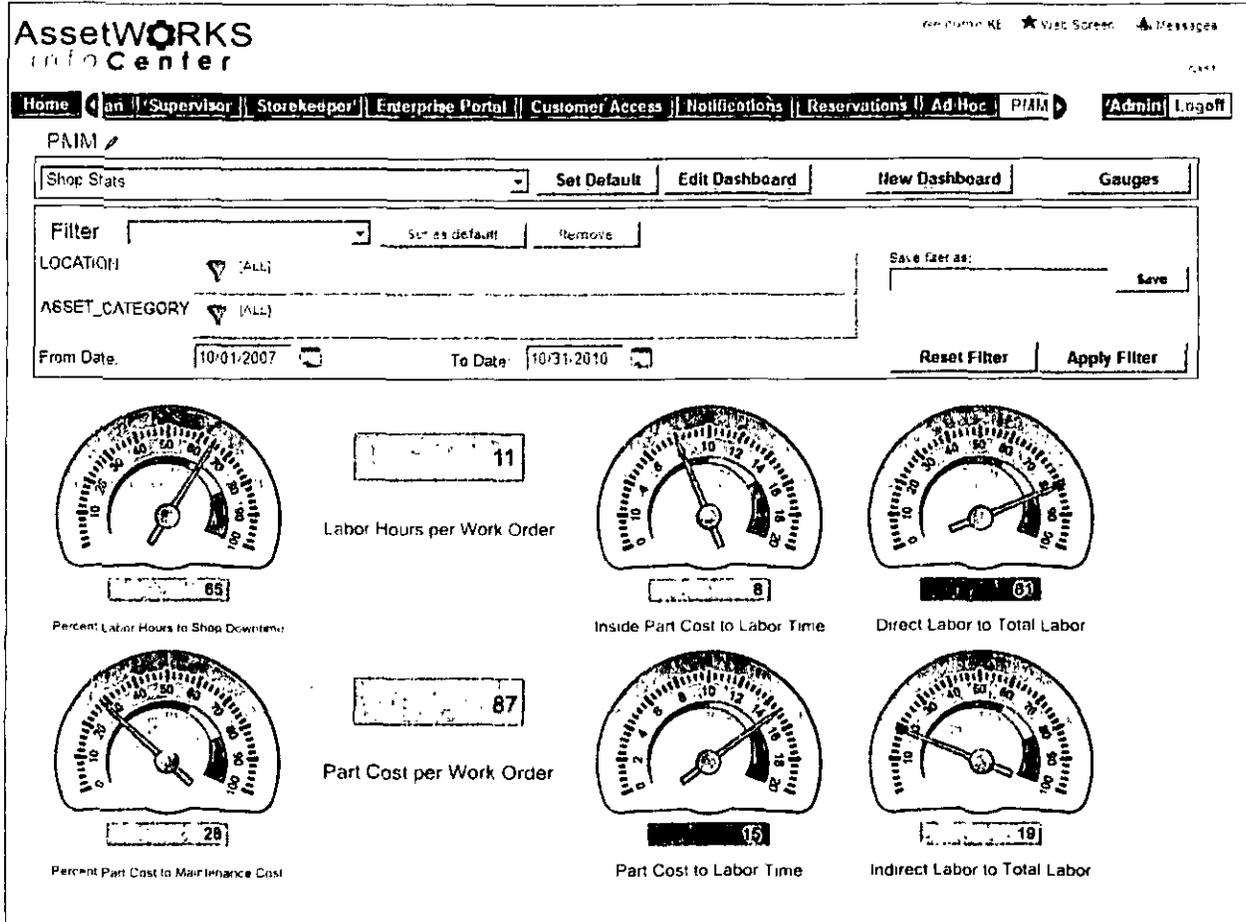
What Do You Want To Do?

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Performance Measures & Monitors (PMMs) Module

Performance Measures and Monitors are ratios of Key Maintenance Data points (KMD) which are useful in determining the performance of a maintenance organization in a graphical representation. PMMs measure maintenance factors, such as labor hours, work order types, parts cost, etc. over set ranges of time, i.e. trends. PMM points are calculated as a summary of data by combinations of data types such as location and equipment type, department and maintenance class, or other combination of data over a time period. This module is not simply for upper management or administrators, but can also provide important information to fleet customers and employees about the organization's strengths and weaknesses.



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Telematics Integration Module

The onboard computers that are delivered in transit vehicles today are capable of communicating information that is useful in understanding the health of the vehicle. Since many of these computers are capable of transmitting this information; FASuite has been designed to capture and manage this information with regard to maintenance related data. The Telematics Integration module consolidates all telemetry data sources into FASuite's single client-managed database. This module is useful for capturing both non-actionable readings (such as run time, or voltage) and actionable faults (such diagnostic trouble codes). The Telematics module can be set to the parameters to meet the needs of your fleet.

fleet focus - [Data Capture - Telematics - Alerts] - Windows Internet Explorer

Filter NEW COPY Paste Sort UNDO

Menu Preferences Help

Row #	Equipment ID	Description	Action type	Acknowledged	Number	Symptom	Subsystem code	Subsystem	Element code	Element type	Element	Range
1	49000	Data valid but above normal operational range	SERVICEREQUEST	N	10	B02-06	128	ENGINE #1	110	PID	ENGINE CYLINDER #21 KNOCK SENSOR	0
2	49000	Voltage below normal or shorted low	SERVICEREQUEST	N	255	B02-06	128	ENGINE #1	111	PID	ENGINE CYLINDER #22 KNOCK SENSOR	4
3	49000	Data valid but below normal operational range	NONE	Y	9		128	ENGINE #1	158	PID		1
4	49000	Voltage Below Normal Or Shorted Low	NONE	Y	126		33	BODY CONTROLLER	8997	SPN		4
5	49000	Voltage above normal or shorted high	SERVICEREQUESTWITHNO		1	B02-04	128	ENGINE #1	94	PID	TIMING ACTUATOR #2	3

Equipment ID: 49000
Alert key: [094 FORD L7500 2000 FORD STERLING L7500 10 FOOT BN]

Basic Info

Description: Voltage above normal or shorted high
Severity: []
Action type: SERVICEREQUESTWITHNO
Number of occurrences: 1
Symptom: B02-04
 Acknowledged
Begin date and time: []
End date and time: []
Next 1 reading: []
Latitude: []
Longitude: []
Direction: []
Speed: []

Codes

Subsystem: ENGINE #1
Subsystem code: 128
Element: TIMING ACTUATOR #2
Element type: PID
Element code: 94
Range type code: 3

Service Level Agreements (SLA) monitoring

FASuite Service Level Agreements module assesses the performance level a Fleet and Equipment Maintenance organization provides to operations and analyzes the data by both service area and pull out time. A SLA consists of a commitment by the Fleet Maintenance organization to make a number of equipment units of a category available for a specific pull-out period, for a specific service area. The number of units required can vary over user-defined time periods or can be the same for all time periods.

Availability Summary

22 Spares

210 Vehicles Required

244 Vehicles Assigned

55 Vehicles Unavailable

Filter

Quick Filter

SLA Category %

Avail Location %

Department %

Equip Status ALL

Service Status

Equipment ID

Reset Filter Apply Filter

Save Quick Filter As Save

Equipment Found - Available: 3812. Unavailable: 639

Equipment ID	Work Order ID	Job Type	Repair Reason	Sort	WD Service Status
Eq ID: 8678 08-CM-T80606	Service Status:	Dept: 442 ROCKRIDGE BUS OPERATIONS	Avail Loc:	SLA Cat: YELLOW 40FT	
<input type="checkbox"/> 3572	442-2004-17358	PM			
Eq ID: 8679 08-CM-T80606	Service Status:	Dept: 432 NORWICH BUS OPERATIONS	Avail Loc:	SLA Cat: YELLOW 40FT	
<input type="checkbox"/> 3579					
Eq ID: 8680 08-CM-T80606	Service Status:	Dept: 435 EAST MAIN BUS OPERATIONS	Avail Loc:	SLA Cat: YELLOW 40FT	
<input type="checkbox"/> 3580					
Eq ID: 8681 08-CM-T80606	Service Status:	Dept: 442 ROCKRIDGE BUS OPERATIONS	Avail Loc:	SLA Cat: YELLOW 40FT	
<input type="checkbox"/> 3581	442-2004-14104	REPAIR			
<input type="checkbox"/> 3582	442-2004-17357	PM			

New Service Status Update Checked WOs

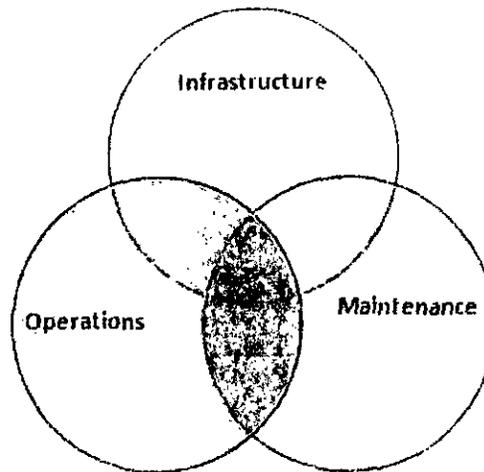
The SLA module tracks actual availability of equipment units (bus or rail cars) of each category designated to each service area during each time period and compares the number of available units to the operation's stated requirements for equipment of the category. The module documents time periods in which availability falls below the specified level. The module identifies all units which are out of service for any reason, maintains real-time information on the current status of each vehicle, and accounts for all out of service time by determining the responsible party for the unit being out of service. Operations and maintenance track this information in real-time throughout the day, and FASuite provide historical analytics, out of the box.

Replacement Analysis Module

The Replacement Analysis module seeks to identify in advance, the optimum replacement point for each individual equipment unit in its life. The module considers the optimum replacement point for an equipment unit to be the time at which the accumulated lifetime cost per meter unit achieves a minimum value. It uses a neural network to project the costs and usage of each equipment unit for future periods, including the probability of major cost repairs. FASuite trains the neural network with historical data for similar equipment units at similar points in its lives, and then projects equipment future performance.

Specific Functionality for Bus and Rail Transit

Based on 25 years experience in the Transportation business, AssetWorks' has developed optional modules that can be added to the base application functionality to give Transit Maintenance, Transportation and Engineering a common platform from which to more effectively manage the operation and through which to deliver better service. It is at the intersection of Infrastructure, Operations and Maintenance that efficient service delivery is realized.



The following describes both our robust (and market-leading) Incident Management Module, and the rail specific functionality within FASuite.

Incident Management Module

Incident recording and reporting is an important function in a Transit operation. The Incident Management module has been designed specifically for the need of public transportation operations, including bus and rail operations. Incident Management functionality facilitates the identification, tracking and analysis of incidents across all organizational divisions including transportation, mechanical and engineering, and security departments. The Incident Management module provides extensive functionality to help users track an incident from the time it is reported until the incident is closed. A variety of screens are available to collect detailed information about each incident and the operation's response to the incident. Often, a group of incidents are related. For instance, an equipment failure can lead to a delay in subsequent trains. The Incident Management screen is designed to record not only the details of a single incident, but also list all related incidents.

Incident Management Screen

Internet Explorer provided by Yahoo!

assetworks.com

Row #	Incident ID	Incident type	Status	Priority	Service impacted	Offroad required	Date and time occurred	Date and time reported	Reported by
63	63	INCIDENT	CLOSED	N	N	N	07/06/2003 16:15	07/06/2003 16:15	09218
64	64	INCIDENT	CLOSED	Y	Y	N	07/07/2003 05:23	07/07/2003 05:23	06704
65	65	INCIDENT	CLOSED	Y	Y	N	07/07/2003 06:00	07/07/2003 06:00	06704
66	66	INCIDENT	CLOSED	Y	Y	N	07/07/2003 05:49	07/07/2003 05:49	06704
67	67	INCIDENT	CLOSED	N	N	N	07/07/2003 06:53	07/07/2003 06:53	06704

Incident ID: _____ Entered by: _____ View details Incident type: _____

Basic Info

Status: CLOSED Date and time occurred: 07/07/2003 06:00 Priority: _____
 Date and time reported: 07/07/2003 06:00
 Date and time closed: _____
 Operator: 09149
 Reported by: 06704
 Inspector employee ID: _____
 Weather: SUNNY/HUMID
 Temperature: 092
 Equipment ID: 0153
 Parent incident ID: 0

System failure Offroad required
 Responsibility: MECHANICAL
 System: F06

Open a new unrelated incident Open a new incident related to this incident

Users are able to press one of the incident "wizard" buttons at the bottom of this screen to collect additional incident information of the appropriate type (delay, injury, accident, etc.).

Incident Management Screen - More Info

assetworks.com

Row	Incident ID	Incident type	Status	Priority	Service impacted	Offroad required	Date and time occurred	Date and time reported	Reported by
63	63	INCIDENT	CLOSED	N	N	N	07/06/2003 16:15	07/06/2003 16:15	09218
64	64	INCIDENT	CLOSED	Y	Y	N	07/07/2003 05:23	07/07/2003 05:23	06704
65	65	INCIDENT	CLOSED	Y	Y	N	07/07/2003 06:00	07/07/2003 06:00	06704
66	66	INCIDENT	CLOSED	Y	Y	N	07/07/2003 05:49	07/07/2003 05:49	06704
67	67	INCIDENT	CLOSED	N	N	N	07/07/2003 06:53	07/07/2003 06:53	06704

More Info

Schedule ID: 23-098 Stop ID: 45
 Trip ID: 0 Marker ID: _____
 Location: _____ Segment ID: _____
 Offset: 0.0000
 Line ID: BLUE
 Portion of run: ENROUTE Reporting classification: OTHER THAN POWER BRAKE

HotRec

Row #	Delete	Contact type	Employee ID	Name	Phone number
	<input type="checkbox"/>	BM	00118	SMITH ROBERT	

Delay Management

The Incident Management module facilitates the documentation, management and analysis of delay incidents. It puts valuable, context-sensitive support on the operator's desk for the retrieval of detailed trip history as well as equipment and schedule information. Reporting tools are provided for detailed service analysis including access to delay information (by cause, responsible party, location minutes delayed and passengers affected).

The Incident Management module provides users with two ways to enter delay information, either as part of Trip Management, or on its own screen.

For each delay event, the detailed information includes:

Primary Delay (checkbox)

Delay Type

Delay Cause

Responsible Party

Date, time, location

Comments

Notifications

Incidents – Delays Screen

Row	Incident ID	Parent incident ID	Status	Priority	Service Impacted	Offload required	Date and time occurred
1	3624	3611	REPORTED	URGENT	Y	N	03/11/2005 11:45
2	3660	3659	REPORTED		N	N	08/05/2005 08:00
3	3661	3659	REPORTED		N	N	08/05/2005 08:00

Incident ID	Entered by
-------------	------------

Basic Info	
Status	REPORTED
Date and time occurred	03/11/2005 11:45
Date and time reported	03/11/2005 11:45
Date and time closed	
Operator	00139
Reported by	00139
Inspector employee ID	
Weather	
Temperature	
<input checked="" type="checkbox"/> Service impacted	<input type="checkbox"/> Offload required
Equipment ID	6003
Responsibility	MECHANICAL
Symptom	R01
Parent incident ID	3611

Injuries

The Injuries screen is used to record information about each injury associated with an incident. Each agency has specific reporting requirements for injuries and this function assists managers in keeping track of the status of required reports.

Incidents - Injuries Screen

Row	Incident ID	Parent incident ID	Status	Priority	Service impacted	Offload required	Date and time occurred
1	3636	3611	REPORTED	URGENT	Y	N	03/11/2005 11:45

Incident ID	Entered by
-------------	------------

Basic Info	
Status	REPORTED
Date and time occurred	03/11/2005 11:45
Date and time reported	03/11/2005 11:45
Date and time closed	
Priority	URGENT
Operator	00139
Reported by	00139
Inspector employee ID	
Weather	
Temperature	
<input checked="" type="checkbox"/> Service impacted	<input type="checkbox"/> Offload required
Equipment ID	6003
Responsibility	MECHANICAL
Symptom	R01
Parent incident ID	3611

Accidents

The Accident function is used to record important information about an accident.

Incidents - Accidents Screen

Row	Incident ID	Parent incident ID	Status	Priority	Service impacted	Offload required	Date and time occurred	Date and time reported
1	3668	3666	REPORTED		N	N	08/05/2005 09:04	08/05/2005 09:27

Incident ID	Entered by
-------------	------------

Basic Info	
Status	REPORTED
Date and time occurred	08/05/2005 09:04
Date and time reported	08/05/2005 09:27
Date and time closed	
Priority	
Operator	
Reported by	71071
Inspector employee ID	
Weather	CLEAR
Temperature	7
<input checked="" type="checkbox"/> Service impacted	<input type="checkbox"/> Offload required
Equipment ID	
Responsibility	
Symptom	R01
Parent incident ID	3666

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Alarms

The Alarms screen is used to record information about each alarm incident. In addition to the standard incident details recorded for all types of incidents, users can also specify one of six pre-defined alarm types: VEHICLE (BUS or RAIL), INTERLOCKING, SIGNAL, SWITCH, STATION SUBSYSTEM, COMPUTER NETWORK. There is also a field to record a message associated with the alarm.

Incidents - Alarms Screen

Row	Incident ID	Parent incident ID	Status	Priority	Service impacted	Offload required	Date and time occurred	Date
1	2225	0	FOLLOW UP REQUIRED	ASAP	N	N	03/01/2004 08:30	03/01/2004 08:30

Incident ID	Entered by		
-------------	------------	--	--

Basic Info			
Status	FOLLOW UP REQUIRED	Date and time occurred	03/01/2004 08:30
		Date and time reported	03/01/2004 08:30
		Date and time closed	
Weather	CLEAR	Operator	
Temperature	45	Reported by	15007
		Inspector employee ID	
<input type="checkbox"/> Service impacted	<input type="checkbox"/> Offload required	Equipment ID	6002
Responsibility	OPS SUPPORT		
Symptom	E50		
		Parent incident ID	0

Complaints

The Complaints incident screen includes a tab where users can enter whether the complaint is related to Transit infrastructure, or a particular Transit asset. If a passenger makes the complaint, space is provided to record passenger name and contact information.

Rail Specific Functionality

Consist Management

AssetWorks FASuite allows the user to identify which specific sets of cars will be available for today's trains. As the train is assembled the status and next PM due date for each car is displayed to assist the planner. The total seat capacity and other important statistics are calculated automatically and shown on the "More Info" tab. When using the optional Operations module, the consist may be assigned to a train cycle using the dispatch screen and will automatically calculate the miles run as each trip is completed.

Consist Management Screen

Row	Consist ID	Description	Status	Equipment list
1	01	CONSIST 01	PLANNED	539 - 2011 - 2424 - 2213 - 2015 - 2536 - 2313 - 2445 - 2225 - 2252
2	29	CONSIST 29	ACTIVE	535 - 2337 - 2002 - 2133 - 2077 - 2540 - 2046 - 2516 - 2129
3	05	CONSIST 05	ACTIVE	521 - 2032 - 2054 - 2226 - 2319 - 2531 - 2005 - 2067 - 2318 - 2441

Consist Management

Basic Info

Consist ID: _____ Equipment list: _____
 Description: _____ Location ID: _____
 Status: **ACTIVE** Square
 Date and time required: _____
 Date and time activated: _____
 Date and time inactivated: _____

Row #	Delete	Order	Equipment ID	Description	Equipmen
1		1	1488	1488 B IN 459-HEE METERS 140 1 00-855-1 LCL 11121 1	
2		2	1500	1500 B IN 483-PCIEP ELEZ 1-HEE METERS 140 2 00-855-1 LCL 11121 1	
3		3	1497	1497 B IN 483-PCIEP BILE 1-HEE METERS 140 2 00-855-1 LCL 11121 1	
4		4	1492	1492 B IN 483-PCIEP BILE 1-HEE METERS 140 2 00-855-1 LCL 11121 1	

More Info

Passenger capacity: _____
 Disabled passenger capacity: _____

Wheel Measurements

The FASuite Wheel Measurements feature offers online, integrated wheel tracking capabilities. This includes:

- History and measurement data for each wheel
- A list of all wheels of a specified wheel type
- A list of all wheels currently mounted on a specific equipment unit
- A list of all wheels associated with a specific stock part number
- Flange height, flange thickness, rim thickness, wheel size, conditions, etc.

Rail Operations Module

Transit organizations faced with increased service demands and stiff regulation requirements need an end-to-end Vehicle Management system that handles the maintenance management of their fleet and rail assets, as well as the day-to-day operations. Operators need a powerful yet easy-to-use system that simplifies the daily tasks of the transportation department while providing critical information required for delivering reliable service.

By providing the Operations module as a component of AssetWorks FASuite software solution – Transit organizations are able to automate performance tracking, delay analysis, evaluation of crew and equipment utilization, review of ridership trends and many other management tasks.

The Operations module was created specifically for to enhance the software by providing essential functionality to Transit and Commuter Rail operations managers, staff and analysts.

- *Managers have easy access to status information and up-to-the-minute operations reports.*
- *Operations staff has up-to-date information on crews, equipment, schedules, delays, reported defects, FRA/FTA restrictions and scheduled track repairs. Clerical and reporting chores can be reduced and simplified. Analysts have access to detailed data and powerful tools to prepare reports and queries for performance monitoring, ridership analysis, delay analysis and equipment and crew utilization reporting to meet FTA requirements and improve service.*

The major functional areas of the Operations module are:

- *Train Management*
- *Performance Monitoring (including Trip Management and Ridership Analysis)*

Train Management

The train management functions include the train planning details – the baseline of information for daily operations, including:

- *Train Schedules*
- *Equipment Cycles*
- *Dispatching*

Train Schedule is used to define the trains that will run within the operation.

Schedules Screen

Row	Schedule ID	Description	Schedule type ID	Effective date	Discontinued date	Capacity required
1	5404	RV NYC	WEEKDAY	01/01/2010		0
2	5404C	RV NYC	WEEKDAY	09/30/2010	10/01/2010	0
3	5426	RV NYC	WEEKDAY	01/01/2010		0

Schedule ID

Basic Info

Description: **LAKESHORE WEST M/F 7:55 OUT** Non-revenue

Schedule type ID: _____

Effective date: 01/01/2004

Discontinued date: 12/31/2008

Capacity required: 0

Inbound/outbound: **OUTBOUND**
 INBOUND

Route ID: _____ Peak type: _____

Direction: _____

Stops

Distance: 0.0000
Enter distance of 0 to recalculate from route data

Default stop information from route

Departure: _____ Stop ID: _____ Time: _____

Destination: _____

Row #	Delete	Order	Stop ID	Stop name	Arrival time	Departure time
1	<input type="checkbox"/>	1	UNION	UNION STATION		07:55:00
2	<input type="checkbox"/>	2	EXHIBITION	EXHIBITION STATION	08:01:00	08:01:00
3	<input type="checkbox"/>	3	MIMICO	MIMICO STATION	08:08:00	08:08:00

Equipment cycle links trains together in order, starting with the first train dispatched from the yard and continuing on with each train as it turns. This function calculates planned mileage for the equipment to assist planners in balancing equipment utilization.

Equipment Cycles Screen

Row	Equipment cycle ID	Description	Minimum number of equipment required	Effective date	Discontinued date
1	5404	5404	0	01/01/2010	

Equipment cycle ID

Basic Info

Description: 5404

Distance: 30.0000 Enter distance of 0 to recalculate from schedule data

Minimum number of equipment required: 0

Effective date: 01/01/2010

Discontinued date:

Schedule cycle

Order	Schedule ID	Schedule description	Departure stop ID	Departure stop description
1	5404	PY/INC	F&PITAN	F&PITAN
2	5711	F&NYC	NEW YORK CITY	NEW YORK CITY
3	5426	NY/INC	F&PITAN	F&PITAN

Frequency

Sunday
 Monday
 Tuesday
 Wednesday
 Thursday
 Friday

Train dispatch identifies which consist will run each equipment cycle "today" and where it will start. The first train on the equipment cycle is called the dispatched train (e.g., it is dispatched from the yard, track or terminal point).

Dispatch Trips Screen

Row #	Schedule ID	Trip ID	Trip date	Status	Consist ID	Route ID	Direction
1	S404	B	09/29/2010	ON TIME		RV	
2	A-MF 7:55AM O	2	10/29/2004	ON TIME	17	A	
3	MCS-FR-703AM	R	08/22/2006	ON TIME		MCS-FR R	

Basic Info

Trip date: [] View delays Status: []
 Default actuals based on scheduled information Enter new delay

Actual Stop ID: [] Time: []

Departure: []

Destination: []

Minutes late: []

Distance: [] Location ID: [] Contractually late: []

Dispatcher signoff: []

Assistant dispatcher signoff: []

Once the train schedules and equipment cycles have been defined, the Dispatch screen is used to assign consists to equipment cycles for the current day. Consists are assigned to the AM or PM dispatch train for each cycle. This is then assigned to each train in the cycle. If a change is made to the makeup of a consist during the day, the change will be reflected on all trains operated after the consist change was made. If no trip records have been created for this date, users will have the option of creating them. The only information entered on this screen is the track number and the consist for the day's line up. The rest of the information comes from the schedule record automatically.

Performance Monitoring

The Operations module provides tools to document all transit/commuter rail operations and compare planned operations with the actual operations. This includes:

- Trip Management
- Ridership Analysis

Trip Management

Trip management is a key function of the Operations module. Once the schedules and equipment cycles are in place, the Dispatch Trips screen can be used to create appropriate trip records created each day, primed with the schedule data and planned crew and equipment information. This function provides online access to arrival and departure time; crew and consists information; ridership and delay details. This screen and the actual arrival/departure times by stops screen can also receive data from train control and other automated systems. As train history grows, the system provides the tools for detailed service analysis including, access to delay information (by cause, responsible party, location, minutes delayed and passengers affected) and ridership data (by train, route, division, peak and time period).

Trips Screen

Row #	Schedule ID	Trip ID	Trip date	Status	Consist ID	Route ID	Dir
1	5404	8	09/29/2010	ON TIME		RV	
2	A-MF 7:55AM O	2	10/29/2004	ON TIME	17	A	
3	MCS-FR-703AM	8	06/22/2006	ON TIME		MCS-FR B	

+	Schedule ID	Trip ID	Trip date	Status
---	-------------	---------	-----------	--------

Basic Info

Trip date: Default actuals based on scheduled information View delays Enter new delay Status

Actual Stop ID Time

Departure

Destination

Minutes late

Distance Location ID

Contractually late

Dispatcher signoff

Assistant dispatcher signoff

Trips

Trips are created based on that day's train schedule. Trips are created with default data either automatically when the Dispatch Trips function is used, or by entering the Schedule ID and Trip Date on this screen. Trip information includes:

- Schedule ID
- Date
- Route
- Direction
- Schedule type
- Peak type
- Scheduled departure and arrival times and locations
- Actual departure and arrival locations and miles traveled
- Trip status
- Consist ID/Description
- Passenger info
- Passenger count

Trip crew information can be entered on the Crew tab. Crew members must be valid employees and can be one of four Employee types: ENGINEER, CONDUCTOR, OPERATOR, and SECURITY.

Trips Screen – Crew

Crew Runs										
Required number of crew		1								
Crew run ID	Crew run description	Sun	Mon	Tues	Wed	Thurs	Fri	Sat	Holiday	
45-10		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Ridership Analysis

Ridership data is collected and can be analyzed by train, route, division, peak and time period. Key data-entry fields include:

- Actual departure station and time
- Actual arrival station and time
- Number of passengers on
- Number of passengers off
- Number of disabled on
- Number of disabled off
- Number of bikes on
- Number of bikes off
- Number of standees
- Crew and equipment utilization

Trips Screen - Stops

Stops										
Passengers - total		Standees		Disabled		Other 1		Other 3		Other 5
Passengers - peak				Bicycles		Other 2		Other 4		
Row #	Stop ID	Stop description	Scheduled arrival time		Actual arrival time					
1	UNION	UNION STATION								
2	EXHIBITION	EXHIBITION STATION	08:01:00		08:01:00					
3	UNION	UNION STATION	08:08:00		08:08:00					
4	LUMBER BRANCH	LUMBER BRANCH STATION	08:14:00		08:14:00					

Shift Operations

The Shift Operations function provides a method for staff to report information about the shift that they have just completed. Time is a required field. Although this is primarily a place for unlimited free text, several pre-defined fields have been created to allow for consistency in reporting. They include:

- Weather
- Safety Rule of the Day
- Bulletins
- Notices
- Comments

Shift Log Screen

Employee ID [2288] [SOURCE: 01/27/04]	
Basic Info	
Location ID [445] [SOURCE:]	
Shift date and time [04/26/2004 03:30]	
Employee transfer to []	
Weather	Safety rule of the day
BARRY-VACATION DALEY-INJURED POWELL CALLED @ 5:30-SHE WILL BE LATE (MAYBE OUT) DUE TO MIGRAINE HEADACHE-CALLED BACK @10:15-WILL BE OUT Bulletins 2 CRADLES SENT BACK TO EVERETT WELSH & NEVERS TO EVERETT @ 11:30 FOR PARTS THEN GOING TO AVE TO GET PRIMING CAN FROM SERVICE TRUCK BACK @ 1:40	MCCALLION IN YARD STEAM CLEANER (NO HEAT) CALLED IN TO RICH DERBY THROUGH PHIL KEENAN-CONFIRMED @ 10:25-TO BE IN TOMORROW CARPENTERS HERE INSTALLING LEAK DIVERTERS Notices J.GASKIN CALLED-REFRIGERANT WILL BE HERE TODAY TO START A/C PROGRAM SCOTT DALEY CALLED @ 2:10 FOR CHECK IN-HE BELIEVES HE WILL BE OUT UNTIL AFTER RECEIVING SURGERY

Shift Log - Comments

2 CRADLES SENT BACK TO EVERETT WELSH & NEVERS TO EVERETT @ 11:30 FOR PARTS THEN GOING TO AVE TO GET PRIMING CAN FROM SERVICE TRUCK BACK @ 1:40	
Comments	
Comments	ALL CREWS COMPLETED SHIFTS. NEED ROSTER CHANGES POSTED IN LUNCH ROOM AND UNION STAFF BOARD.

LinearFocus for Maintenance-of-Way

LinearFocus allows users to:

- Define, manage and maintain linear assets such as track and catenary
- Support a distinctive "linear reference system" approach for managing linear assets
- Manage defects, repairs and scheduled maintenance for linear assets
- Handle the special inspection management required for linear assets
- Support work order management and asset repair history

Rail organizations are responsible for maintaining linear assets such as rail track, catenary lines and poles, electric traction and more. Organizations today are looking for solutions to help plan and track their rail inspections, defects, repairs and maintenance. Depending on the size of the operation, data collection can be as simple as a manual recording system or as sophisticated as a computer software solution. By utilizing the LinearFocus application, critical data is recorded and stored in a powerful database giving users immediate access which can assist in making key decisions about train scheduling and performance throughout the entire rail system.

AssetWorks' approach has been to design a distinct application for the needs of the Maintenance of Way and Signals department, integrated into one database and materials management system, for a true Enterprise Asset Management suite. The LinearFocus application extends the maintenance management functionality provided by the AssetWorks RailFocus base system to accommodate the use of a linear reference system. LinearFocus manages the data necessary to link maintenance and inspection activities to the RailFocus Operations module. This capability provides rail operations the ability to identify how those activities will affect train scheduling and performance throughout the entire rail system.

Linear Asset Definitions

Asset and defect locations are typically defined using a linear reference system. For example:

- Track #1 needs a new weld 50 feet west of catenary pole C-123; or
- Resurface the main line from milepost #N10 to #N12

The ability to implement and use this type of linear reference system is core to the LinearFocus application functionality. Before defining any individual linear assets in AssetWorks RailFocus, users must first set up Segments and Markers. These two data types are the foundation of defining the linear reference system. Each linear asset must be entirely contained within one Segment. The purpose of the screen below is to define each Segment in the linear system.

LinearFocus Segments Screen

Row #	Segment ID	Description	Length	Owner
1	54	54TH ST. YARD	99999999.0000	DG
2	61	61ST ST. YARD	99999999.0000	SM

Segment ID	[CHAMBLEE YD]	[CHAMBLEE YARD]
Basic Info		
Description	[CHAMBLEE YARD]	
Length	[5000.0000]	
Owner	[MARTA]	
Beginning marker ID	[CHMYD-01]	[CHAMBLEE YD - MF01]
Ending marker ID	[CHMYD-02]	[CHAMBLEE YD - MF02]
Line ID	[GREEN]	

Segments in the LinearFocus application are assigned a unique ID. Both Segment ID and Description are required fields on this screen. A segment defines the centerline (i.e. no offsets) of a physical section of the transportation network. Length of the segment may also be entered here using the units of length a user chooses. For operations where segment ownership is variable, a free-form text field is provided for Owner name. Segments can have beginning and ending marker IDs, but these are not required fields. Implicit in the assignment of begin and end markers is the segment's direction. For example, if the beginning marker is 1A, and the ending marker is 1B, AssetWorks LinearFocus assumes the segment's direction is from 1A to 1B.

LinearFocus-- Setup - Markers Screen

Row #	Marker ID	Description	Segment ID
1	0	MILEPOST 0	RED LINE
2	00	NORTHERN START POST	LS-1
3	00.5PTS CENTER	CENTER POINT - 5 POINTS	SOLITHVD

Marker ID	
-----------	--

Basic Info

Description	CENTER POINT - 5 POINTS
Segment ID	CHAMBLEEYD
Offset from segment start	0.0000
Latitude	43.4
Longitude	22.5

Primary marker

Markers are key to defining and using the linear reference system. Structures - either physical or virtual - may be used as markers. Examples include mileposts, prominent assets (such as catenary wire poles), intersections with streets, station platforms, or any system used to measure and note distance along the reference system. When defining each marker, users are required to input a unique Marker ID and Description, as well as the ID of the segment (defined on the LinearFocus Segments screen) along which the marker occurs. Each Marker ID/Segment ID combination must be unique in the database. When the marker does not occur at the segment start, users enter the offset distance in the units defined on the Linear Assets Setup Options screen (see below).

Primary Markers are used by the system for mapping the linear network. For example, catenary poles occur every 100 feet. Users define which of these poles represents a primary marker by checking the Primary Marker box.

Linear Assets – Setup - Options Screen

Linear assets setup options	
Options	
Units for offset from segment start	MILES YARDS FEET INCHES KILOMETERS METERS
Units for offset from marker	YARDS FEET INCHES KILOMETERS METERS CENTIMETERS

A linear asset is defined not only by name, but also by location and, when applicable, extent. Offsets are key to defining the exact location of the asset.

Units for offset from segment start specifies the unit of measurement used when specifying a location based on its distance from the start of a linear segment (segments are defined on the Equipment Units→Linear Assets→Setup→Segments screen). Example: 5 miles from the start of Segment SW395.

Units of offset from marker defines the unit of measurement used when referencing a location at a specific distance from a linear asset marker (markers are defined on the Equipment Units→Linear Assets→Setup→Markers screen). For example, an engineer may report a potentially hazardous object located 100 feet from Marker 1A.

Primary Information

The tab-level descriptions provided for the Linear Assets Primary Information screen include:

- Basic Info
- Offsets

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LinearFocus - Primary Information Screen - Basic Info

Row #	Equipment ID	Model year	Manufacturer ID	Model ID	Asset number	Equipment type
1	MPMRVYZ2W220	2006	ALLSCHALM	FT2029		TRACK
2	LUB-MOZ-WL	2000	ALLSCHALM	FT2029		TRACK
3	LUB-WL-AKE-WR	2000	ALLSCHALM	FT2029		TRACK

Equipment ID	
Basic Info	
Model year	2000
Manufacturer ID	ALLSCHALM
Model ID	FT2029
Equipment type	TRACK
Description	WEST LAKE RAIL LUBRICATOR
Serial number	FT55565656
Asset number	
Associated file	
Path and file name	http://intranet1/webshare/linegraphs.ipg
Description	

The Basic Information tab is used to enter the unique Equipment ID for the linear asset, as well as its Description. Users can also specify whether the asset has a PM program on this tab. A linear asset is defined not only by ID and Description, but also location. The offset screen displays the elements of an asset's location (and, when applicable, extent).

LinearFocus - Primary Information Screen - Offsets

Offsets	From: (or single point position information)	To
Marker ID/segment ID	18400 : W	18400 : W
x offset	0.0000	0.0000
y offset	0.0000	0.0000
z offset	0.0000	0.0000
Elevation	0.0000	0.0000
Single point or distance between From and To		
Latitude		
Longitude		
Line ID		

Each linear asset has one or two marker references. Both markers must be on the same segment, and each linear asset must be contained entirely within one segment. An example marker/segment reference is milepost #N10, segment S001. In the AssetWorks FASuite database, each marker/segment combination is unique.

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In addition to one or two marker references, each linear asset has an "offset vector" combination (a "from" and "to" point). An offset vector is comprised of three elements:

The xOffset is the distance along the segment from the marker

The yOffset is the distance perpendicular to the centerline

The zOffset is the distance away from ground level.

All offset components can be negative, zero, or positive. The signs of the xOffset and yOffset indicate the offset vector's direction relative to the segment's direction. A negative zOffset means that the asset is below ground level at that xOffset/yOffset location, not at the segment centerline or starting point.

Latitude and longitude can be represented using either a base-60 number system (the latitude "39 degrees 13 minutes 26.686 seconds north" - abbreviated as 39°13'26.686"N) or a degree decimal system ($39 + 13/60 + 26.686/3600 = 39.2240794443$). Note if the "N" in the base-60 had been "S", then the decimal equivalent would have been negative.

LinearFocus - Primary Information Screen - PM Sections

Row #	Equipment ID	Model year	Manufacturer ID	Model ID	Asset number	Equipment type
1	MPWRVZZV220	2006	ALLISCHALM	FT2029		TRACK
2	LUB-MOZ-WL	2000	ALLISCHALM	FT2029		TRACK
3	LUB-WLAKE-WR	2000	ALLISCHALM	FT2029		TRACK

PM service	From marker ID	From segment ID	From x offset	To marker ID	To segmen
TSA-5-CC-MO	1B400	W		1B400	W

A linear asset may extend a significant distance and include components that require one or more PM programs. For instance, one asset may include both Class I and Class II track types. On this tab, each "PM section" for an asset of this type is defined. This information is the method by which work is identified on work orders. Each section is defined by a "From" and "To" marker ID as well as a "From" and "To" xOffset.

Linear Asset Work Order Processing

Work Order Processing is the same process as for rolling stock, but incorporates the location reference.

Using Work Orders, users can:

- Assign user-defined repair reasons for each repair order and task
- Identify repair work as warranty or non-warranty
- Assign pending defects to a work order or defer them
- Apply operating restrictions to equipment with safety related defects
- Print PM checklist items on PM work orders
- Enter comments
- View messages that identify whether the unit is soon due for PM or inspection; is under warranty; is experiencing a potential comeback; is ready for overhaul; or has other open work orders
- Post unlimited labor, parts, and commercial charges
- Track work delays due to insufficient resources such as bays, labor, parts, etc.
- Close work orders online, and print a full cost report
- Create estimate work orders and post estimated labor, parts, and commercial charges to them without generating any actual costs

LinearFocus - Work Order Screen

Work Order	DP-2010-1	Task Time Code	ST - STRAIGHT TIME	00h 00m	Indirect Time
Task	CAT - CATENARY			Edit/Stop Task	Today's Timesheet
Equipment	RED-CATEN HB	RED LINE	MAINLINE CATENARY HB		
Current Job	My Work Orders: 2				
Priority	C - WAIT FOR PLANNED OUTAGE	Maintenance Class	CATENARY - CATENARY WIRE	Due	12/13/2010 10 08
Line		Segment	RED LINE	Unit In	12/13/2010 10 08
Work Order Offset	0 +0 to 0 +100				
Work Order Tasks	(Start) CAT - CATENARY	WAC:	Actions	Notes	Comments
			View/Edit Detail		Part Actions
			Equipment History		Test Results
			Print Work Order		
			Commercial Work		Related Files
					Messages
			Start Delay		Finish Work Order
Add / Manage SRs		New Task		Start Task	

PM Scheduling

As with rolling stock and vehicle functionality, users can choose to define individual PM programs for each linear asset. When users request a list of linear assets due for PM, AssetWorks LinearFocus looks at whether a service is due based on date and also analyzes equipment usage based on inspection results and records to project when units will become due. The next PM service due is automatically added to the PM work order.

Repairs

LinearFocus extends the full repair Work Order functionality available for rolling stock to linear assets. When a work order is opened for a linear asset, meter readings fields are dynamically replaced with from/to marker, segment and offset fields so that the repair location is accurately recorded.

Maintenance of Way Condition Monitoring

Rail properties must collect and record linear asset conditions (such as track wear) and provide reports on these conditions for the rail network as a whole, route-by-route, or depot-by-depot. The Linear Assets module allows reporting on changes in track condition over time for these same categories.

Track condition measurements can be both subjective (excellent, good, fair, requires repair) and specific measurements (e.g. track height and thickness). The Linear Assets Module condition monitoring functionality provides users the capability to record the fact that different sections of track may have different allowable speeds, and that track conditions and changes in those conditions affect the speed limits and other rules established for that section of track.

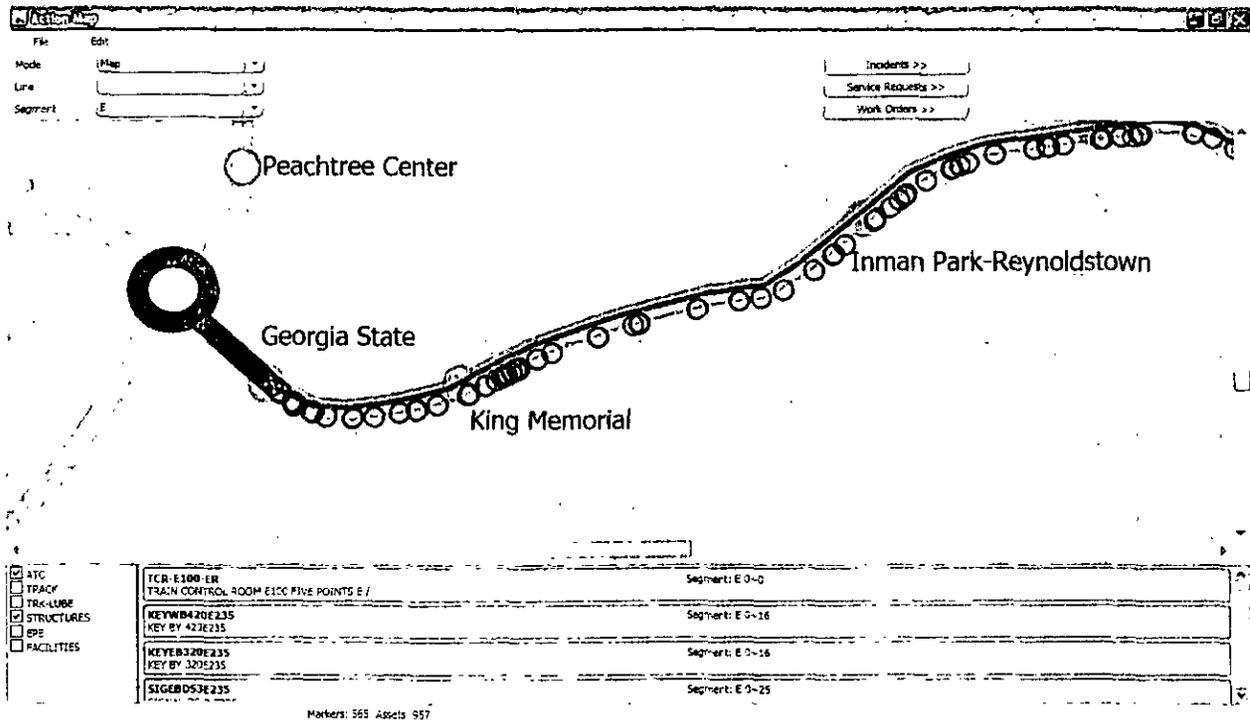
Measurements

Making and recording measurements of various types is essential when managing linear assets. Examples include gauge measurements of track and catenary wires. The Linear Assets module provides easy-to-use screens to record measurement results that are based on a linear reference system.

Measurements can be set to acceptable ranges for each type of measurement data being collected. When measurement information recorded falls out of the acceptable range, users can launch work orders to address linear asset in question. Users will be notified via a pop-up window when measurements entered are outside of established acceptable range limits. Also, reports will reflect those measurements that were recorded outside of established acceptable range limits.

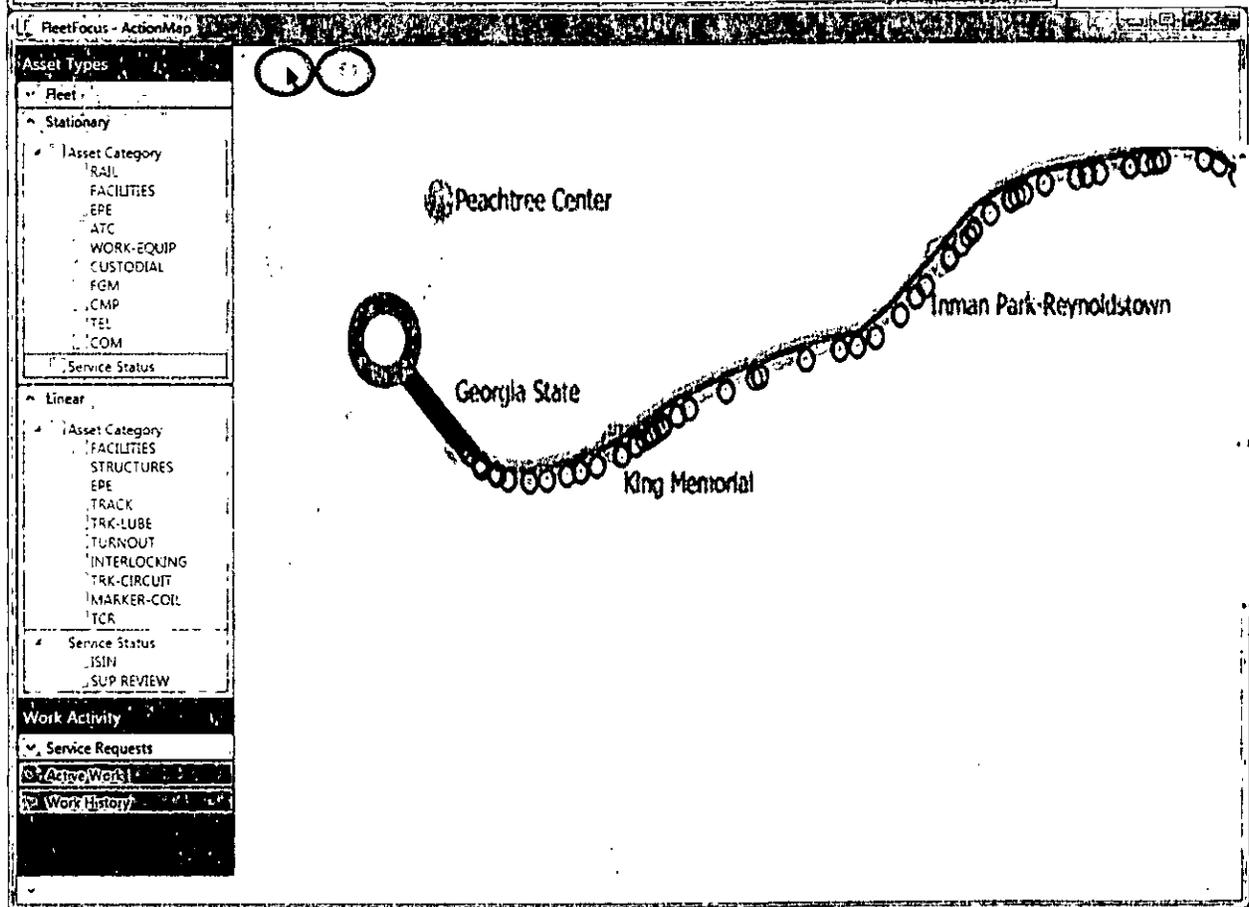
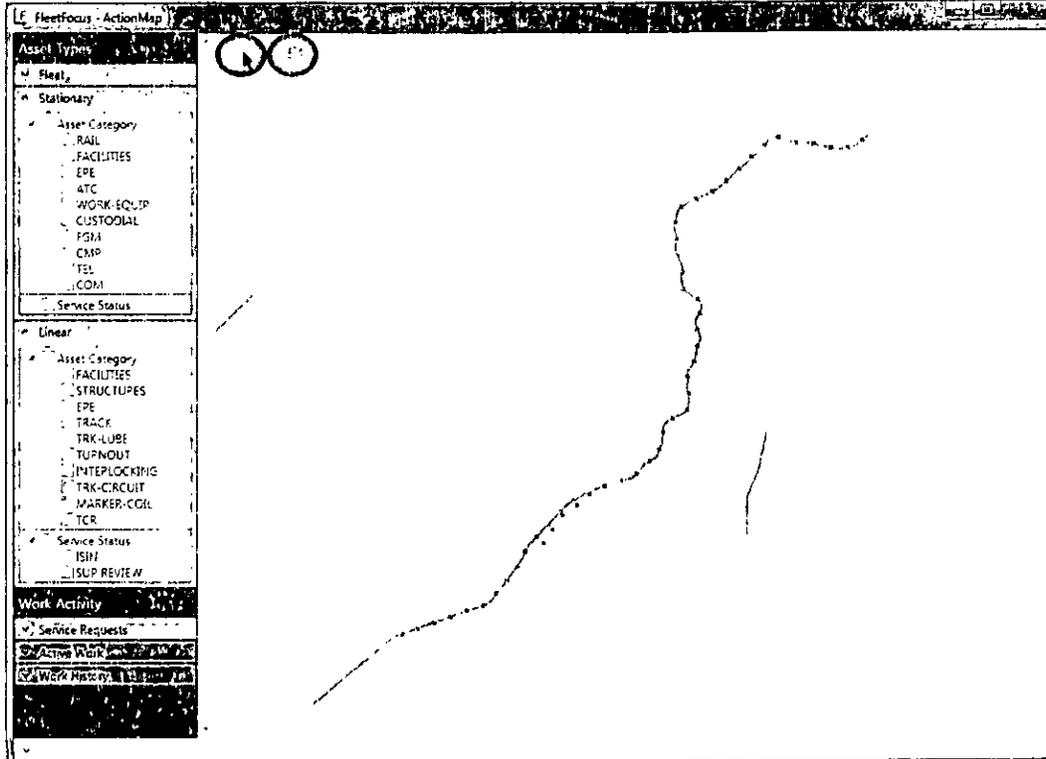
FASuite - ActionMap

The FASuite ActionMap brings a whole new level of management tracking to all assets. Incorporating GIS integration, the FASuite ActionMap offers a visual representation of assets:



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EquipmentFocus

EquipmentFocus expands the asset categories which can be managed and maintained in FASuite to include:

Facilities and Facility Assets (stations, bus stops, terminals, garages)

Shop equipment

Warehouse equipment

Equipment to support assembly and fabrication

Peripheral equipment units such as lifters and cranes, rail stampers

Ticketing equipment, fare boxes, etc

Optional Modules

Motor Pool Reserve

For larger transits with a pool of administration or work vehicles, FASuite offers a robust motor pool management solution. The reservation process can be pushed out on the organization's intranet to allow users to reserve vehicles. Additionally, AssetWorks also provides an automated electronic vehicle key dispensing solution; KeyValet.

Reservation Information

Reservation For
OPR: OPERATOR 1 An e-mail confirmation will be sent to dingergo@yahoo.com

Pickup and Return Info

Pickup Date	<input type="text" value="12/20/20"/>	<input type="button" value="..."/>	Return Date	<input type="text" value="12/20/20"/>	<input type="button" value="..."/>
Pickup Location	<input type="text" value="Arlington"/>	<input type="button" value="..."/>	Return Location	<input type="text" value="Arlington"/>	<input type="button" value="..."/>

Additional Information

Account ID	011-22-001-8807	EQUIPMENT ACCOUNT CODE	<input type="text"/>
Secondary Email	<input type="text"/>		
Destination city	<input type="text" value="ARLINGTON"/>	Destination state	<input type="text" value="TX"/> <input type="button" value="..."/>
Qty of passengers	<input type="text" value="0"/>		
Reservation Note	<input type="text" value="Need snow chains for remote location"/>		

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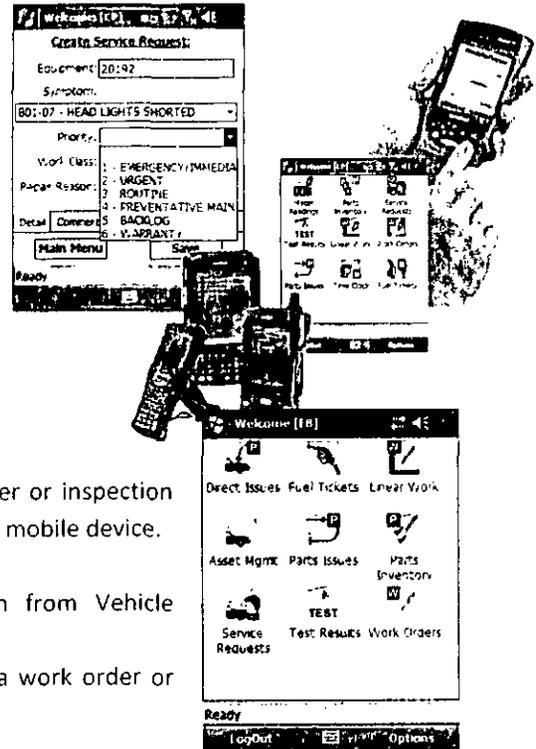
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Mobile Software

Hand held bar code technology, via PDA's, has completely changed the way organizations capture data. Outsourced technicians on the move can capture data via a portable hand held device and ensure users have the most reliable data from which to make business decisions.

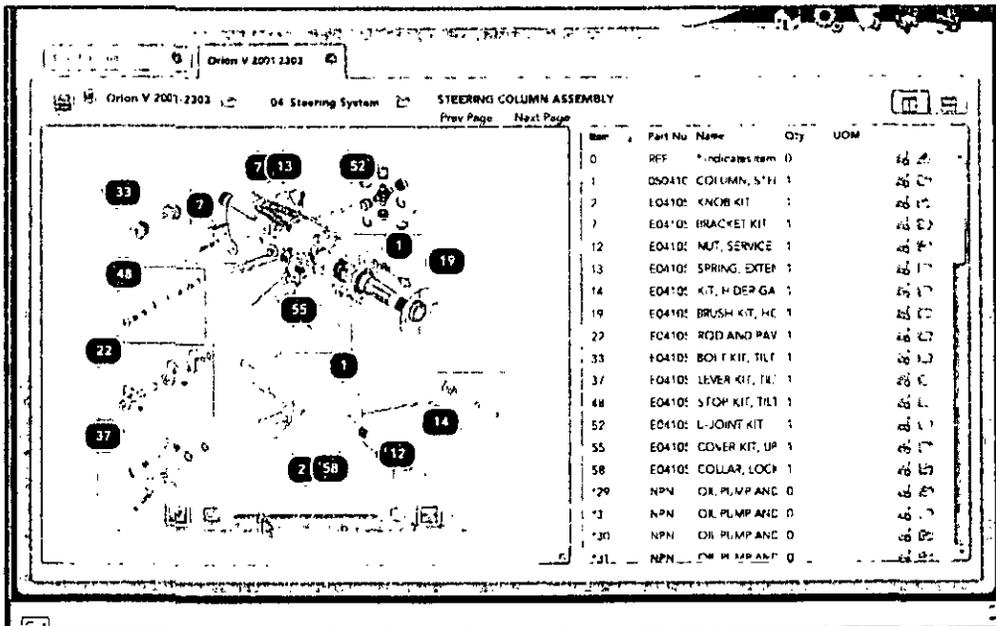
MobileFocus is a comprehensive mobile computing platform that enables remote parts and labor capture functionality as well as barcode capabilities using "ruggedized" Windows OS devices. The mobile device software allows users to access many features in a remote mobile environment:

- Inventory and Receiving – perform a complete inventory, issue parts to a specific work order, receive parts into inventory, and perform direct issues of parts
- Work Order and Inspection Management – record all work order or inspection tasks from a remote location, open new work orders directly on a mobile device.
- Yard Management – perform yard checks, update meter readings
- Service Requests – input service request/defect information from Vehicle Condition Cards
- Labor Capture – capture all labor transactions associated with a work order or inspection



Online Parts Catalog (OPC)

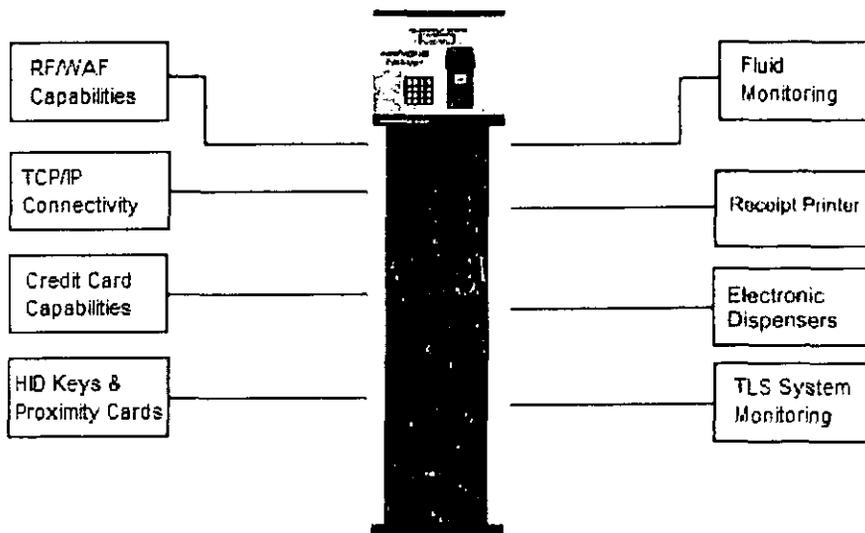
AssetWorks' Documoto OPC allows technicians to quickly look up parts needed by drilling into schematic diagrams and transfer that list of needed parts to an open work order or parts request, saving time and effort.



FuelFocus

AssetWorks is the only Enterprise Asset Management software solution provider to also offer an automated fueling solution (FMS). The FuelFocus Fuel Management System is a comprehensive fuel management package providing automated fuel dispensing for fleet operations. The primary control device of the FuelFocus FMS System is the fuel Island Control Unit (ICU). The Island Control Unit is located at the fuel island and it is used to control and record all fuel dispensed to fleet equipment. The FMS software provides inventory management features, tank sensing interfaces and fuel consumption control features.

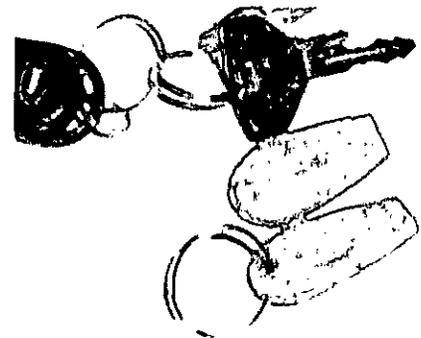
FuelFocus FMS enables users to tailor the system to meet varied operational demands as well as to expand the choices with minimal hardware modification.



Each FMS Island Control Unit contains an internal microprocessor providing access to the fuel system without central site computer dependency. Microprocessor control at the pump site enables the system to capture and edit data regardless of central site computer status. **Island Control Units (ICU's) can function on a totally stand-alone basis, as a server to the central processor or as an on-line device of the central processor.** This approach is far superior to either stand-alone or centrally controlled systems.

There are several different methods of vehicle and employee identification that can be used, we are proposing HID cards. We have included the use of the RF Option in this RFP. Keypad input is always an option.

- **Keypad Input** - Operators can manually key in employee and vehicle numbers on the ICU front panel.
- **HID Proximity Key** - Unlike standard "push" keys, there are no wear points whatsoever on this readily available option. These cards are covered by a lifetime warranty.
- **WAF (RF) Transmitter Option** - Wireless transmitters such as the Vehicle Information Box (VIB) may be used for true "cardless" system.

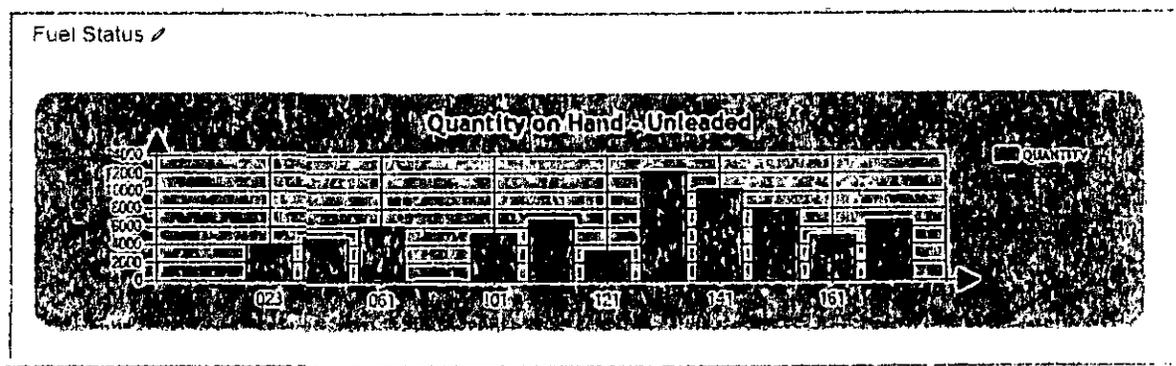
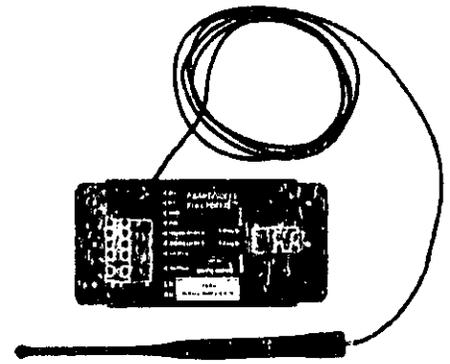


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Odometer readings, engine hour readings, and vehicle ID's are automatically downloaded to the ICU via a wireless radio signal, no operator intervention is required. Simply insert the fuel nozzle equipped with a passive tag into the filler neck and all data is passed seamlessly to the controller – no wires on the hose to break as with competing systems.

Interface to tank level sensors (that utilize the Veeder Root protocol). FuelFocus automatically will reconcile book to physical quantities and journal the adjustments for a complete audit trail. The user may optionally specify automatic inventory adjustments. This option will cause any variance between stick and book to be journaled to a user specified indirect account with the stick reading becoming the book balance. Further, the user may specify whether the loss/gain value should be redistributed to inventory or posted to the indirect account.



b. Functional Checklist & Modifications

Please see Attachment H

c. Attachment H- Product Capability Matrix

Attachment H has been completed in Microsoft Excel format and is attached separately. Please note that the items included in the Product Compatibility Matrix did not always have corresponding descriptions in RFP Attachment C, Statement of Work. In cases where there was no additional description available, AssetWorks has interpreted the requirement, which is obvious in most cases and has indicated compliance with the requirements strictly based on the phrase included in the "SOW Item Description" column of the Product Compatibility Matrix. For items which have no description in Attachment C, we have marked the "Standard Product Offering" columns with the label "No*" as a method to identify those items. In very few cases, we are not able to adequately interpret the scope of the requirement and have marked the cost column for product changes with the label "TBD". We would welcome the opportunity to further review the requirements in question to provide a revised Product Compatibility Matrix if necessary.

d. Process Diagram

Please see the Interface Requirements documented in our Statement of Work

e. SAP Interface Requirements

Please see the SAP Interface Requirements documented in our Statement of Work

f. SAP Field detail

Please see the SAP Interface Requirements documented in our Statement of Work

g. SAP Experience & Customers

AssetWorks has completed numerous projects that have required integration with SAP and in each project the requirements have been unique. AssetWorks has developed integration with SAP for the following clients:

- New York Power Authority
- Port Authority of NY / NJ (PANYNJ uses an older generation FleetFocus product at Central Motor Pool)
- Pacific Gas and Electric
- First Energy
- Allegheny Power
- City of Ottawa
- City of Toronto
- Manitoba Hydro
- City of Phoenix
- Dominion Resources

h. Other Integrations

As the solution of choice for transportation asset management, AssetWorks has developed a variety of interfaces over the years to assist our customers in avoiding duplicate entry and data redundancy. The open architecture of the FASuite solutions lends itself to ease-of-integration with some of the most common integrations include those with third party fuel and product dispensing vendors, GPS & Telematics as well as parts/inventory suppliers. A representative listing of integration experience is noted below:

ERP/Financial

Peoplesoft
SAP
Oracle eBusinesss
Lawson
Microsoft Dynamics GP
Proprietary/Other

Timekeeping

Kronos
Peoplesoft

Automated Train Control

Siemens

Automated Rail Vehicle Inspection

Delta Rail / ENSCO

Electronic Track Charts

Bentley Optram

Automated Fuel Management

Gasboy
FuelMaster
FleetWatch
EJ Ward
FuelForce
Petrovend
Trak
Other

i. Product Status & Version

The FASuite product was originally developed in 1997 as a client-server application and replaced a mainframe application known as EMS. In 2002, the application was expanded to include a web-based user interface. The current version of the product, version 6.3 was released in December 2010. More than 300 organizations are using this product in a supported version. AssetWorks currently supports versions 6.0 or greater. Software patches are released several times annually as needed. AssetWorks typically produces one new major version annually.

j. Unique Characteristics

The characteristics of the FASuite product that are advantageous to PATH are the following:

- FASuite is designed for Enterprise Asset Management with an emphasis on rolling assets and related infrastructure, i.e. Rail Vehicles, automobiles, facilities, track, signals, etc.
- There is typically no need to “develop” new software to support existing business processes for transit operations. Various workflows are supported out of the box by selecting setup options.
- FASuite is designed to allow multiple jobs on one work order. Many competing products enforce a 1:1 relationship which will allow only one job per work order.
- FASuite is not an “module” of a larger enterprise system. Many competing products will highlight their “Transportation Module” which typically is underfunded and neglected in the overall process of development of upgrades of the larger product.
- FASuite is not an amalgamation of multiple products that have been acquired over time designed to interoperate within the same umbrella user interface.
- AssetWorks focuses on the transit market. We are active at industry trade shows and conferences. We have a large transit client base. The end result is that we pay attention to your needs. Transit specific asset management needs do not take second place to non-asset management requirements in a product development pipeline.
- AssetWorks development pipeline is focused on new features requested by the user community which consists of more than 80 transit agencies across North America and a larger number of transportation focused clients. The result is that improvements to the product are relevant to *all customers*.
- All AssetWorks staff are US based. No development is done offshore. No support calls are directed offshore. Our support and development staff is based in Wayne, PA, La Jolla, CA and Spokane, WA.
- Our professional services staff has relevant transit implementation experience
- Our professional services staff averages more than 15 years experience
- Our professional services staff averages more than 5 years experience with the product
- AssetWorks does not outsource the implementation of our product to third parties. While we do occasionally use subcontractors to supplement our staff for labor intensive projects, we retain our own staff of highly skilled project managers to manage our implementations.

k. Reseller Network

AssetWorks does not offer our products through a reseller network.

l. Certified Integrators

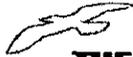
AssetWorks does not certify any third party integrators.

m. Industry / Vendor Alliances & Partnerships

AssetWorks is active in relevant industry associations including APTA and Regional Public Transportation agencies across the country. AssetWorks will also be participating in FTA State of Good Repair workshops in 2011.

Environmental Practices Form

Please see the following page for the completed form.



THE PORT AUTHORITY OF NY & NJ

VMMS

17 ATTACHMENT G - Certified Environmentally Preferable Products/Practices

Proposer Name: Asset Works Inc Date: 1-4-11

In line with the Port Authority's efforts to promote products and practices which reduce our impact on the environment and human health, Proposers are encouraged to provide information regarding their environmentally preferable/sustainable business practices as they relate to this contract wherever possible. Proposers must complete this form and submit it with their response, if appropriate. Proposers must submit appropriate documentation to support the items for which the Proposer indicates a "Yes" and present this documentation in the proper sequence of this Attachment.

1. **Packaging** N/A
- Has the Proposer implemented any of the following environmental initiatives? (A checkmark indicates "Yes")
- Use of corrugated materials that exceed the EPA recommended post-consumer recycled content
 - Use of other packaging materials that contain recycled content and are recyclable in most local programs
 - Promotes waste prevention and source reduction by reducing the extent of the packaging and/or offering packaging take-back services, or shipping carton return
 - Reduces or eliminates materials which have been bleached with chlorine or chlorine derivatives
 - Eliminates any packaging that may contain polyvinyl chloride (PVC), or polystyrene or heavy metals

If yes, a description of the practices being followed must be included with the submission.

2. **Business Practices / Operations / Manufacturing**
- Does the Proposer engage in practices that serve to reduce or minimize an impact to the environment, including, but not necessarily limited to, the following items? (A checkmark indicates "Yes")
- Recycles materials in the warehouse or other operations
 - Use of alternative fuel vehicles or vehicles equipped with diesel emission control devices for delivery or transportation purposes
 - Use of energy efficient office equipment or signage or the incorporation of green building design elements
 - Use of recycled paper (that meets federal specifications) in their marketing and/or resource materials
 - Other sustainable initiative

If yes, a description of the practices being followed must be included with the submission.

3. **Training and Education**
- Does the Proposer conduct/offer a program to train or inform customers and employees of the environmental benefits of the products to be offered under this contract, and/or does the Proposer conduct environmental training of its own staff?

Yes No If yes, Proposer must attach a description of the training offered and the specific criteria targeted by the training.

4. **Certifications**
- Has the Proposer or any of its manufacturers and/or subcontractors obtained any of the following product / industry certifications? (A checkmark indicates "Yes")
- ISO 14000 or adopted some other equivalent environmental management system
 - Other industry environmental standards (where applicable), such as the CERES principles, LEED Certification, C2C Protocol, Responsible Care Codes of Practice or other similar standards
 - Third Party product certifications such as Green Seal, Scientific Certification Systems, Smartwood, etc.

If yes, Proposers must attach copies of the certificates obtained.

5. **Other Environmental Criteria**
- Proposers are encouraged to respond to criteria specifically indicated in this RFP as "Management Approach" (and attach the appropriate documentation) to receive consideration in the evaluation.

I hereby certify, under penalty of the law that the above statements are true and correct.
[Signature] Name 1-4-11 Date

MBE/WBE Subcontracting Provisions

AssetWorks is serious about MBE/WBE goals. AssetWorks is pleased to partner with Stellar Services on this proposal. Stellar Services is a certified S/M/DBE Information Technology consulting firm with extensive experience in the transit industry. Stellar Services' track record proves that they have the ability to finish every project to the satisfaction of their clients. Stellar Services offers more than 16 years of experience providing a comprehensive range of innovative and effective IT consulting, procurement and professional services for government agencies at the federal, state and local levels. They have achieved success on many projects to date and distinguished themselves in project management, software development, engineering and construction document management, document management system consulting and systems integration, hardware/software procurement, asset management, and quality control process. Stellar has been growing steadily and currently has one-hundred highly educated and experienced IT professionals, whose broad range of specialties make developing elegant and effective solutions for our clients possible.

Stellar Services is a Capability Maturity Model® Integration certified firm and have provided premiere consulting and advisory services to transportation and aviation clients such as the Port Authority of New York and New Jersey, Metropolitan Transportation Authority, New Jersey Transit, Metropolitan Washington Airports Authority, Department of Aviation City of Atlanta, to name a few.

Stellar Services core is its team of highly educated and experienced IT professionals, whose broad range of specialties make developing elegant and effective solutions for our varied client base possible. Over 85% of our employees possess advanced Master or Post-Baccalaureate degrees as well as solid experience in IT consulting. Our dedicated competent team of professionals is comprised of project managers, system and network engineers, programmers, content management specialists, business process analysts and subject matter specialists fully equipped with superior technical and interpersonal skills.

Based on currently defined project plan roles, AssetWorks expects Stellar Services to account for approximately 15-18% of the professional services to be delivered during any awarded contract.

**PROCUREMENT
M/WBE PARTICIPATION PLAN**

**THE PORT AUTHORITY OF NY & NJ
Office of Business and Job Opportunity**

NOTE: The Proposer/Bidder shall submit to the Manager, Line/Facility Dept. Form PA 3749 C MODIFIED PLAN for any changes to the original plan: i.e.; subcontractor, dollar amount or work performed. If more than 1 page is used, complete totals on last page.

Purchase Order #: _____
Proposer/Bidder Name: _____

AssetWorks Inc.

Mailing Address: 998 Old Eagle School Rd, Ste 1215, Wayne, PA 19087

Telephone Number: 610-687-9202

Contract Description: Implementation of FASuite

Contract Amount: _____

Contract Goals: _____ MBE _____ WBE _____

Name, Address, Phone Number of PA Certified M/WBE subcontractor (including name of contact person)	Indicate MBE or WBE	Description of Work, Services to be provided. Where applicable, specify, "supply" or "install" or both "supply" and "install."	Anticipated date work will start and finish	Approximate \$ amount of M/WBE Subcontract	M/WBE % of Total Contract Amount
Stellar Services 57 West 38th Street, 11th Floor • New York, NY 10018 office (212) 432-2848 • direct (646) 214-6510 • fax (212) 432-2846 Rozaliya Kiperman, PMP, CSM Program Manager	MBE	Stellar Services will provide IT consulting and professional services in support of the implementation of the AssetWorks FASuite product as defined in our Statement of Work and project plan	3/1/2011 - 12/31/2012	\$800,000.00	14.8%
TOTAL:				\$800,000.00	14.8%

Signature of Contractor: _____



Print Name: John H. Hines, III

Title: President, AssetWorks Inc.

Date: 01-04-11

FOR OBJO USE ONLY

Contract Goals: Approved Waived Rejected
Reviewed by: _____

Print Name: _____ Date: _____
OBJO Business Development Representative

Contractor Identity Check/ Background Screening Plan

AssetWorks will comply with PATH's security / background screening requirements, however we do not disclose any personal information about our employees.

Adaptability (Applications & References)

The FASuite product has been designed from the ground up with transportation fleet management requirements as the primary focus. FASuite includes product features which allow clients to manage a broad range of asset types and, as you would expect with a focus on transportation fleet management, our clients consist of public transit, government and other large fleet clients working in industries that include agriculture, farming, mining, petroleum drilling, telecommunications, power production and distribution, car rental and others. The product has been expanded over time (natively within the application, not through acquisition and integration of related products) to support additional asset types.

FASuite supports additional asset types in a very cohesive manner. All individual asset records reside in one primary table and the records are classified with a record type that distinguishes the highest level of asset type. In some cases related data, such as linear offset data is stored in a separate table. At this highest level of asset categorization, the application recognizes the asset type and in certain cases the screens dynamically adapt to the asset type to display relevant information. For example, both linear and non-linear asset work order records are visible on the same screen, however the screen dynamically changes based on the asset type to display the appropriate types of information. In the case of a linear work order, offsets and linear segment information must be noted and the screen will make this information available to the user.

An additional level of asset categorization is available within the application based on a feature we refer to as Asset Category. Asset Categories are user defined which allows each organization the flexibility to determine how to define the asset hierarchies within our product. Asset Categories also allow for many code sets to be segregated by Asset Category so that the application can be tailored to specific asset types for data entry purposes.

Further segmentation of assets is provided by offering separate screens for entry of relevant asset types. For example, there are separate screens for Rail Vehicles, Automotive Fleet Vehicles, Stationary Assets (i.e. Facilities), Linear Assets and Component Asset Records.

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In many cases, our clients use FASuite for managing both fleet assets as well as non fleet assets (or non-Rail Transit assets in this case). Specific examples include:

Customer	Asset Types
Alternate Concepts / Tren Urbano	Rail Vehicles; Facilities; Fare Collection; Track; Signals, Tunnel Equipment; Automobiles; Shop Tools
State of New York DOT	Automobiles; Trucks; Radio Communications Equipment; Other Fixed Assets; Shop Tools
MARTA	Rail Vehicles; Buses; Fare Collection; Automobiles; Track; Signals; Tunnels; Bridges;
Denver RTD	Rail Vehicles; Buses; Automobiles; Track; Signals; Catenary;
Paramount Farming	Vehicles; Agriculture Equipment
Port of Houston Authority	Wharf Cranes; Generators; Yard Trucks; Automobiles; Matrial Handling; Mobile Automated Fueling

License Agreements

Please see the Appendix for AssetWorks standard agreements.

Acknowledgement of Addenda

Acceptance of Standard Contract Terms & Conditions

THE PORT AUTHORITY OF NY & NJ

PROCUREMENT DEPARTMENT
ONE MADISON AVENUE, 7TH FLOOR
NEW YORK, NY 10010

12/15/2010

ADDENDUM #1

To prospective proposers on RFP # 23090 for a Vehicle Maintenance Management System:

- Proposals due back on January 6, 2011 no later than 2:00 PM.
- Proposals originally due back on December 22, 2010, no later than 2:00 PM

The following change is hereby made in the documents:

- 1. The Proposal due date has been changed to January 6, 2011, no later than 2:00 PM.**

This communication should be initialed by you and annexed to your proposal upon submission. In case any proposer fails to conform to these instructions, its proposal will nevertheless be construed as though this communication had been so physically annexed and initialed.

THE PORT AUTHORITY OF NY & NJ

LARRY WAXMAN, MANAGER
TECHNOLOGY AND OPERATIONAL
PROCUREMENT SERVICES DIVISION

PROPOSER'S FIRM NAME:

Asset Works Inc

INITIALED:

J&V (Lynn Sims, Proposal Mgr.)

DATE:

12-15-10

QUESTIONS CONCERNING THIS ADDENDUM MAY BE ADDRESSED TO JAMES SUMMERVILLE, WHO CAN BE REACHED AT JSUMMERVILLE@PANYNJ.GOV OR (212) 435-3954

THE PORT AUTHORITY OF NY & NJ

LARRY WAXMAN
TECHNOLOGY AND OPERATIONAL
PROCUREMENT SERVICES DIVISION

PROPOSER'S FIRM NAME: Asset Works Inc
INITIALED: JSL (Lynn Sans, Proposal Mgr)
DATE: 1-4-11

QUESTIONS CONCERNING THIS ADDENDUM MAY BE ADDRESSED TO JAMES SUMMerville, WHO CAN BE REACHED AT JSUMMerville@PANYNJ.GOV OR (212) 435-3954

Appendix

- NYS Department of State Registration
- Certificate of Resolution
- Stellar Services Certification
- Attachment H- Product Compatibility Matrix
- *Primary* Statement of Work and Project Plan
- *Alternate* Statement of Work and Project Plan
- AssetWorks Resumes
 - Rob Hallett
 - Pamela Chow
 - Heidi Davis
 - Gary Frost
 - Ellen Hurst
 - Susie Wade
 - Gary Warlick
 - Paul Ernsdorff
- Stellar Services Resumes
 - Anna Hu
 - Rozaliya Kiperman
 - Marcia Shapiro
- FASuite Technical Recommendations
- AssetWorks Case Studies
- AssetWorks Customer Lists**
- AssetWorks Standard Agreements**
- Sample Change Management Control Request Form
- Sample Training Manual**
- Constellation Software Inc Annual Report**

In order to conserve paper, only one (1) hard copy of these documents has been printed and can be found in the ORIGINAL version. These documents are also available on the electronic version (CD) of the response.





**NYS Department of State
Division of Corporations
Entity Information**

The information contained in this database is current through January 3, 2011.

Selected Entity Name: ASSETWORKS INC.

Selected Entity Status Information

Current Entity Name: ASSETWORKS INC.

Initial DOS Filing Date: DECEMBER 02, 2008

County: NEW YORK

Jurisdiction: DELAWARE

Entity Type: FOREIGN BUSINESS CORPORATION

Current Entity Status: ACTIVE

Selected Entity Address Information

DOS Process (Address to which DOS will mail process if accepted on behalf of the entity)

C O CORPORATION SERVICE COMPANY

90 STATE STREET

ALBANY, NEW YORK, 12207-2543

Registered Agent

CORPORATION SERVICE COMPANY

90 STATE STREET

ALBANY, NEW YORK, 12207-2543



AssetWORKS

CERTIFICATE OF AUTHORITY

I do hereby certify that by authority of the Directors of AssetWorks Inc. that John H. Hines, III, President of AssetWorks, is authorized and empowered to make, enter into, sign, seal and deliver on behalf of AssetWorks Inc. contracts for the sale and license of AssetWorks products and services.

I do hereby further certify that said authority has not been amended or repealed and is in full force and effect as of this date and that John H. Hines, III is duly elected President of AssetWorks Inc.

Attest:



Brian Beattie
Secretary of AssetWorks Inc

Dec 2, 2010

Date Signed



Anthony R. Coscia
Chairman


THE PORT AUTHORITY OF NY & NJ

Kenneth J. Ringler, Jr.
Executive Director

Certified

by

Small Business Programs

**4 H Services, Inc. d/b/a
Stellar Services**

Certificate PA-20128

This certificate acknowledges that the above named firm is certified as a **Minority-owned Business Enterprise**. This company has met the criteria for ownership and control as established by the Port Authority Policy for Revised Minority, Woman and Small Business Enterprise (M/W/SBE) Programs, dated June 10, 1993.

This certification will remain in effect for five years from the date of notice and may be extended only upon submission by you, and acceptance by the Port Authority of a recertification application attesting that the ownership and control of the business, on which this certificate is granted, has not changed. This office must be notified within 30 days of any material changes in the business which affect ownership and control. Failure to do so may result in the revocation of this certification and/or imposition of other sanctions.


Lash Green
General Manager

Certified: August 4, 2006


Rosemary Jenkins-Mabela
Manager, Certification

Scheduled Re-evaluation: August 3, 2011







AssetWorks

SOW Item Description	Standard Product Offering (no product changes)	Standard Product Offering (requires config. work)	Cost of Config.	Standard Product Offering (product changes required)	Cost of Change	Custom Code	Cost of Customization
			\$		\$		\$
Vehicle Maintenance Subsystem (VMS)							
VMS Functional Requirements							
Work Orders	Yes	No		No		No	
Periodic Inspections (P.I.'s)	Yes	No		No		No	
Running Repairs	Yes	No		No		No	
Intermediate and Heavy Repair	Yes	No		No		No	
Planned Long Term Heavy Maintenance	Yes	No		No		No	
Component Repair or Rebuild	Yes	No		No		No	
Component Tracking	Yes	No		No		No	
Maintenance History	Yes	No		No		No	
Fleet Status Tracking	Yes	Yes	Included in SOW	No		No	
Incident Reporting	Yes	No		No		No	
Primary Information Managed	Yes	No		No		No	
On-Line Work Orders	Yes	No		No		No	
Automatic Work Order Generation	Yes	No		No		No	
Work Order Process Flow	Yes	No		No		No	
Work Order Tracking	Yes	No		No		No	
Unlimited Work Order Types	Yes	No		No		No	
Work Order Aggregation	Yes	No		No		No	
Encoding Capabilities	Yes	No		No		No	
Discrete Processing of Work Orders	Yes	No		No		No	
Symptom, Defect & Repair Coding	Yes	No		No		No	
Code Utilization	Yes	No		No		No	
Persistence of Codes	Yes	No		No		No	
Display of Codes	Yes	No		No		No	
Work Order Job Steps	Yes	No		No		No	

*Pls see 8.6.3h for explanation details
RFP#23090

AssetWORKS

Job Level Parts & Labor Requirements	Yes	No	No	No
Unlimited Job Descriptions & Steps	Yes	No	No	No
Standards & Procedures Database	Yes	No	No	No
Codes Used to ID Subject Components	Yes	No	No	No
Display of Text Associated with Codes	Yes	No	No	No
Enforced Entry of Codes	Yes	No	No	No
Job Labor Hours Entry	Yes	No	No	No
Labor Cost Computation	Yes	No	No	No
Parts & Material Handling	Yes	Yes	Included in SOW	No
Special Tool Specification	Yes	No	No	No
Standard Jobs	Yes	No	No	No
Parts & Material Requests	Yes	No	No	No
Work Order Out-of-Stock	Yes	No	No	No
Categorize by Stock Status	Yes	No	No	No
Search for Parts	Yes	No	No	No
Work Order Categories	Yes	No	No	No
Periodic Inspections	Yes	No	No	No
Running Orders	Yes	No	No	No
Group Work Orders by Project	Yes	No	No	No
Component Rebuild Orders	Yes	No	No	No
P. I. Schedule Update	Yes	No	No	No
Work Order Searching	Yes	No	No	No
Component Rebuild Costing	Yes	No	No	No
Work Order Status	Yes	No	No	No
Work Order Scheduling & Assignment	Yes	No	No	No
Work Order Scheduling & Re-Assignment	Yes	No	No	No
Record of Crew Action on Work Order	No	No	Yes	\$7,200
Record Labor & Costing	Yes	No	No	No
Pre-Recording of Labor	Yes	No	No	No
Component Change-Out Records	Yes	No	No	No
Work Order Changes & Corrections	Yes	No	No	No
Automatic Update of Stock Metrics	Yes	No	No	No
Work Planning				

*Pls see 8.6.3h for explanation details #23090

AssetWorks

Bill of Materials	Yes	No	No	No
User-Friendly Traversing of Bill of Materials	Yes	No	No	No
On-Line Stock Status Access	Yes	No	No	No
Access to Employee Data	Yes	No	No	No
Shift Personnel Management	Yes	Yes	Included in SOW	No
Presentation of Estimated Effort by Craft	Yes	No	No	No
"What-if" Personnel Assignments	Yes	No	No	No
Periodic Inspection Due Date Tracking	Yes	No	No	No
On-Line P.I. Schedule Management	Yes	No	No	No
Re-Computation of P.I. Schedule	Yes	No	No	No
Automatic Update of P.I.'s by Work Orders	Yes	No	No	No
Closed Work Order Removal from P.I.	Yes	No	No	No
In-Train Running Repair Schedules, P.I. Schedules and In-Service Defects	Yes	Yes	Included in SOW	No
Repair Location Assignment	Yes	No	No	No
Component Tracking				
Serialized Component Data	Yes	No	No	No
Automatic Update of Component Mileage	Yes	No	No	No
Fleet Status				
Car Status	Yes	No	No	No
Car Searches	Yes	No	No	No
Car Status Update	Yes	No	No	No
Car Exclusion from P.I. Scheduling	Yes	No	No	No
Incident Data	Yes	No	No	No
Car Mileage Data & Calculations	No	Yes	\$3,200	No
Materials Management Subsystem (MMS)				
Stores Control				
Recorded Data	Yes	No	No	No
Stock Number Searching	Yes	No	No	No
Manufacturer's Part Numbers	Yes	No	No	No
Manufacturer's Part Numbers Searching	Yes	No	No	No
Commodity Codes	Yes	No	Yes	\$4,800
Bill of Materials	Yes	No	No	No

*Pls see 8.6.3h for explanation details
RFP#23090

AssetWorks Response

Vehicle Maint Mgmt System

AssetWORKS

BOM Identification Numbers	No	No	Yes	\$16,000	No
Unlimited BOM Identification Numbers	No	No	Yes	Included in above	No
BOM Identification Numbers Searching	No	No	Yes	Included in above	No
Storeroom Support	Yes	No*	No*	TBD	No
Supplying Storeroom Prioritization	No	No*	No*	TBD	No
Bin Locations	Yes	No*	No*		No
Primary and Multiple Secondary Bin	Yes	No*	No*		No
Bin Labels	Yes	No*	No*		No
Stock/Location Cross Reference					
Cross Reference Display	Yes	No	No		No
Multiple Locations Flag	Yes	No	No		No
Stock Counts					
Cycle Count Date	Yes	No*	No*		No
Manual Stock Count Adjustment	Yes	No*	No*		No
On-Hand Quantity Interface	Yes	No	No		No
Year-to-Date & Prior Year Stock Counts	Yes	No	No		No
Automatic Stock Pick List	Yes	No*	No*		No
Pick List Printing	Yes	No*	No*		No
Emergency Pick Lists	Yes	No	No		No
Stock Issues for Active Work Orders	Yes	No	No		No
Printing Stock Requests	Yes	No*	No*		No
Stock Request Cancellation	Yes	No	No		No
Stock Request Data	Yes	No	Yes	\$8,000	No
Printing Pick Lists	Yes	No*	No*		No
Stock Item Search by Receipt Date	Yes	No*	No*		No
Remote Terminal Pick Ticket Generation	Yes	No*	No*		No
Pick Ticket Printer Selection	Yes	No*	No*		No
Batch Printing of Pick Tickets	Yes	No*	No*		No
Reserving Stock	Yes	No	No		No
Pick Ticket Status Tracking	Yes	No*	No*		No
Stock Reserved for Specific Work Orders	Yes	No	No		No
Stock Issuances	Yes	No*	No*		No

*Pls see 8.6.3h for explanation details 23090

AssetWORKS Response

Vehicle Maint Mgmt System

AssetWorks

Manual Stock Issuance	Yes	No*	No*	No
Stock Substitution on Pick Lists	Yes	No*	No*	No
Stock Count Interfacing	Yes	No*	No*	No
Work Order Interface with Stock Issue Transaction:				
Work Order Issues & Return Costing	Yes	No	No	No
Issues & Return Costing Summary	Yes	No	No	No
Stock Count Integrity	Yes	No*	No*	No
Stock Transfers				
Transfer Request Data	Yes	No*	No*	No
Two-Step Transfer Process	Yes	No*	No*	No
Transfer Quantity Updates	Yes	No*	No*	No
Transfer Tickets	Yes	No*	No*	No
Stock Counts	Yes	No*	No*	No
Transfer Review	Yes	No*	No*	No
Secondary Storeroom Automatic Transfer	Yes	No*	No*	No
Stock Transfer of Emergency Items	Yes	No*	No*	No
Stock Transfer Requisition Status Tracking	Yes	No*	No*	No
Interface of Transferred Stock Quantities	Yes	No*	No*	No
Receipt of PO's less than \$500				
Bin Location on Receiving Report	Yes	No*	No*	No
Stock Item Bin Location Lookup	Yes	No*	No*	No
Automatic Update of On-Hand Qty on	Yes	No*	No*	No
Automatic Computation of Average Unit	Yes	No*	No*	No
Manual Change of Order Prices	Yes	No*	No*	No
Interface of Receiving Transactions	Yes	No*	No*	No
P.O. Sequence of Stock Receipts	Yes	No*	No*	No
Move Ticket Printing	Yes	No*	No*	No
Manual Input of Invoiced P.O. Line Cost	Yes	No*	No*	No
Two-Step Receiving & Inspection	No	No	Yes	No
				\$24,000
Received, Not Inspected Flag	No	No	Yes	Included in above
Multiple Inspection Procedures	No	No	Yes	Included in above

*Pls see 8.6.3h for explanation details
RFP#23090

AssetWORKS

Viewing & Printing Inspection Procedures	Yes	No	No	No
Receipt of Backordered Items	Yes	No*	No*	No
P.O. Status Updates with Receipts	Yes	No*	No*	No
Partially-Full Receiving Report Status	Yes	No*	No*	No
Receipts Interface to Accounts Payable	No*	Yes*	\$14,400	No
P.O. Receiving History	Yes	No*	No*	No
Backordered Stock				
Reserved Stock on Work Orders	Yes	No*	No*	No
Backorders Work Order Stock Report	Yes	No*	No*	No
Backordered Stock Access	Yes	No*	No*	No
Stock Status Display on Transfer Request	Yes	No*	No*	No
Transfer Request Searches	Yes	No*	No*	No
Stock Counts Display	Yes	No*	No*	No
Automatic Pick Ticket Generation for De-Committed Stock	Yes	No*	No*	No
Manual B.O. Processing	Yes	No*	No*	No
Stock Item Status Review	Yes	No*	No*	No
Stock Activity Reporting				
Stock Activity Reporting Interface	Yes	No*	No*	No
Interface Control Reporting	Yes	No*	No*	No
Stock Surplus Reporting	Yes	No*	No*	No
Inactive Stock Reporting	Yes	No*	No*	No
Stock ABC Analysis	Yes	No*	No*	No
Inventory Management				
Stock Reordering				
Work Order Suggested Quantity Calculation	Yes	No*	No*	No
Stock Issues Suggested Quantity Calculation	Yes	No*	No*	No
Economic Reorder Quantity Check	Yes	No*	No*	No
Request Only Stock Re-order	Yes	No*	No*	No
Inventory Activity File				
Inventory Activity File Accessibility	Yes	No*	No*	No
Average Monthly Item Usage	Yes	No*	No*	No
Vendor Lead Time	Yes	No*	No*	No
Item Re-Order Point	Yes	No*	No*	No

*Pls see 8.6.3h for explanation details
#23090

AssetWORKS Response

Vehicle Maint Mgmt System

AssetWorks

Lead Time Information	Yes	No*	No
Automatic P.O. Generation at Re-Order	Yes	No*	No
Automatic Inter-Storeroom Transfers	Yes	No*	No
Demand & Usage History			
Parameterized Demand Usage History Purge	Yes	No*	No
Demand Usage History Inquiry	Yes	No*	No
Requisitions & Purchases Inquiry	Yes	No*	No
Non-Recurring & Recurring Stock Item Requests			
Non-Recurring & Recurring Stock Item	Yes	No*	No
Requests Differentiation	Yes	No*	No
Stock Item Request Data	Yes	No*	No
Automatic Update of Request Origin/Type	Yes	No*	No
Purchasing			
Vendor Data	Yes	No*	No
Vendor Data Searching	Yes	No*	No
Vendor Name Codes	Yes	No*	No
Inactive Vendor Reports	Yes	No*	No
Automatic Vendor Summary Updates	Yes	No*	No
Vendor Performance Data	Yes	No*	No
Vendor Volume Data	Yes	No*	No
Stock & Non-Stock Requisitions	Yes	No*	No
Requisition Creation, Re-Order Quantities & CxIs	Yes	No*	No
Reflect Requisitions on Stock Item	Yes	No*	No
Agency Level Requisition Number	Yes	No*	No
Purchase Requisition Printing			
Unplaced Open Purchase Requisition Sort &	Yes	No*	No
Need Date Purchase Requisition Sort & Print	Yes	No*	No
Open Requisition Searching	Yes	No*	No
Automatic Creation of P.O.'s from	Yes	No*	No
Automatic Posting of Inventory & Vendor	Yes	No*	No
Information with P.O. Data	Yes	No*	No
Emergency Orders	Yes	No*	No

*Pls see 8.6.3h for explanation details

RFP#23090

AssetWorks Response

Vehicle Maint Mgmt System

AssetWORKS

Requisitions against Blanket Purchase orders	Yes	No*	No
P.O. Status & Searching	Yes	No*	No
Value-Based P.O. Management	Yes	No*	No
Batch & On-Line P.O. Creation	Yes	No*	No
P.O. Updating			
Automatic Update of Inventory & Stock	Yes	No*	No
P.O. Audit Trail	Yes	No*	No
P.O. Paper Trail	Yes	No*	No
Backordered P.O. Items	Yes	No*	No
P.O. On-Line Printing	Yes	No*	No
Stock Availability Reviewing	Yes	No*	No
Rebuild Components			
Multiple Inventory States	Yes	No	No
State-Based Segregation	Yes	No	No
Rebuild Parts & Materials Tracking			
Use Rebuild vs. Acquire New	Yes	No	No
Unusable Stock	Yes	No	No
Rebuild Stock Reference	Yes	No	No
Rebuild/Repaired Stock Transaction Interface	Yes	No	No
State-Based Parts Issuance Constraints	Yes	No	No
Repair/Rebuild W.O. Tracking	Yes	No	No
Rebuild Work Orders	Yes	No	No
Rebuild Parts Value	Yes	No	No
Rebuild Parts Cost	Yes	No	No
Storing of Rebuild/Repaired Parts	Yes	No	No
Purchase Orders for Rebuild Parts &	Yes	No	No
Receiving Rebuild Parts & Materials into	Yes	No	No
Retirement of Non-Repairable Items Sent to	Yes	No	No
3rd Parties	Yes	No	No
Interface of Rebuild P.O.'s	Yes	Yes	No
		Included in	
		SOW	

*Pls see 8.6.3h for explanation details #23090







STATEMENT OF WORK

(PRIMARY)

Port Authority Trans Hudson Corporation

FASuite Asset and Maintenance Management Applications

January 6, 2011



Contents

Contents	2
Introduction	6
Work Plan – Project Management Services	7
WBS A.1.0 <i>Project Start- up</i>	7
WBS A.2.0 Project Management Services.....	8
WBS A.3.0 Change Management.....	9
Work Plan – Planning Stage	10
WBS B.1.0 Project Team Orientation.....	10
WBS B.2.0 Feature and Function Description.....	11
WBS B.3.0 Hardware Plan.....	12
Hardware Discovery and Planning.....	12
Hardware Plan Document.....	12
Technical Approach.....	13
Deliverables.....	16
WBS B.4.0 Implementation Plan.....	17
WBS B.5.0 Conversion Plan.....	18
WBS B.6.0 Functional Test Plan.....	19
WBS B.7.0 Operational Acceptance Test Plan.....	20
WBS B.8.0 System Support Plan.....	21
WBS B.9.0 Training Plan.....	22
WBS B.10.0 Parallel Test Plan.....	23
Work Plan – Implementation Stage for Phase I	24
WBS C.1.0 Phase I – New Cars.....	24
WBS C.1.1 Hardware Acquisition.....	24
WBS C.1.2 Hardware Installation.....	27



WBS C.1.3	Software Installation	28
	Installation Services.....	28
	System Testing.....	28
WBS C.1.4	Business Process Assessment	30
	Conduct Interview Sessions.....	30
WBS C.1.5	Application Configuration.....	33
WBS C.1.6	Systems Integration Development	34
	Interface Development Preparation	34
	Configure and Tailor Materials Management Interface.....	34
WBS C.1.7	Data Conversion Services	36
	Data Conversion Preparation	36
	Data Conversion Procedures and Assumptions	36
WBS C.1.8	Testing Services	39
	User Testing.....	39
WBS C.1.9	Training Planning Services	41
	Develop Training Outline.....	41
	Develop Training Materials	42
	Deliver Training Session “Dry Run” for End User Training	42
WBS C.1.10	Training Delivery Services.....	43
	Training Administration.....	43
	Training Delivery.....	43
WBS C.1.11	Operational Acceptance Test	46
	Implementation Services.....	46
	Customer Support Services	46
	Work Plan – Implementation Stage for Phase II	47
WBS C.2.0	Phase II Current Operations	47



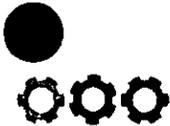
WBS C.2.1	Systems Integration Development	47
	Interface Development Preparation	47
	Configure and Tailor SAP/FASuite Interfaces	48
	DMRDS Interface to FASuite	53
	IETM Link from within FASuite	53
WBS C.2.2	Data Conversion Services	55
	Data Conversion Preparation	55
	Data Conversion Procedures and Assumptions	55
	Catalog Scanning and Hot-Spotting	56
	Current Maintenance Systems Data	57
WBS C.2.3	Report Development Services	58
WBS C.2.4	Testing Services	59
	Unit Testing	59
	Integrated Testing	59
	User Testing	59
WBS C.2.5	Training Delivery Services	61
	Training Administration	61
	Training Delivery	61
WBS C.2.6	Operational Acceptance Test	64
	Implementation Services	64
	Customer Support Services	64
Work Plan – Support Stage		65
WBS D.1.0	Project Management Services	65
WBS D.2.0	Capacity Management And Performance Monitoring	66
WBS D.3.0	Change Management Administration	67
WBS D.4.0	Coaching and User Assistance	68



WBS D.5.0 Business Resumption Planning 69

Preliminary Timeline 70

Assumptions 71



Introduction

AssetWorks is pleased to partner with Port Authority Trans Hudson Corporation (PATH) for a successful implementation of the FASuite asset and maintenance management applications. This Statement of Work identifies the tasks required for the implementation of the FASuite solution and is based on AssetWorks' current understanding of the requirements and AssetWorks' previous experience with similar engagements.

AssetWorks recommends PATH use AssetWorks' expertise and consulting resources to ensure a timely and cost effective implementation. AssetWorks offers a variety of services ranging from workflow re-engineering to general business and technical consulting.

To best facilitate the implementation, AssetWorks urges PATH to formally identify a focal point for each of the critical business groups who will participate in or be affected by the project implementation. This involvement must come from all parties. These focal points should be both technically qualified and knowledgeable of their groups' business practices. These individuals will be responsible for spearheading the system configuration, data mapping, and workflow tasks to ensure a feasible and effective production roll-out.

AssetWorks will work in tandem with its subcontractors to successfully complete this project. This team will provide PATH with niche expertise in industry consulting, technical consulting for integration and data conversion, effective training for a wide variety of roles and functions, and project management and documentation to ensure the highest quality implementation.

Circumstances may necessitate changes to the tasks and/or time estimates, at which time AssetWorks and PATH will discuss these changes in good faith at their earliest opportunity.





Work Plan – Project Management Services

WBS A.1.0 Project Start- up

AssetWorks will facilitate a project kick-off conference and planning sessions. AssetWorks will facilitate a review of the project approach and timing with the PATH staff.

AssetWorks recommends PATH appoint a core project team for the implementation stage with representatives from all functional or operational areas of PATH's business. This core group must have the authority and charter to make appropriate decisions regarding the implementation. The core group representatives should have complete knowledge and familiarity with PATH's operations and objectives, and will form the majority of the roll-out team later in the project. The PATH project team will define their roles and responsibilities and establish project standards and controls.

PATH will appoint a full-time, dedicated Project Manager, a Maintenance Project Lead, and supporting personnel from the designated PATH functional and operational areas. The PATH Project Manager will lead the overall PATH project team and be responsible for the PATH personnel and resources on the project. The Maintenance Project Lead will be responsible for the configuration and implementation of FASuite and for facilitating decisions among the core maintenance group.



Deliverable for Project Startup

- Facilitate a project kick-off meeting.

PATH is responsible for all deliverables not specifically included above.



WBS A.2.0 Project Management Services

AssetWorks will provide project management and oversight services to execute the project plan. The AssetWorks project manager will coordinate all AssetWorks project activities. AssetWorks will provide the following project management services:

- Coordination of project resources and work so that milestones are met in an efficient manner; tasks will be designed so as to minimize implementation time and cost while taking into consideration resource and time constraints such as PATH staff availability
- Serve as the main point of contact for the PATH project manager
- Manage any AssetWorks subcontractors
- Provide updates every two weeks to the work plan and project budget, or as requested by the PATH project manager

AssetWorks will ensure sufficient resources are available to support the project requirements. AssetWorks will assign a senior-level program manager to provide additional subject matter expertise, monitor the project resources and budget, and ensure quality delivery of services. This manager is PATH's first escalation point for any issues arising during the project.

The AssetWorks Project Manager will ensure that sufficient resources are available to implement the system in accordance with the project requirements. The AssetWorks Project Manager will monitor the project resources to ensure quality delivery of services and that the Deliverables are completed on time and in accordance with the project requirements.

Deliverable for Project Management Services

- Relevant status reports and meetings regarding FASuite.

PATH is responsible for all deliverables not specifically included above.





WBS A.3.0 Change Management

AssetWorks strongly urges PATH to embark on an aggressive Organizational Change Management initiative to help prepare the cultural environment for this significant engagement. AssetWorks will work with PATH to help plan and identify the PATH resources who can lead this effort.

Under the current scope, AssetWorks will not provide any services or deliverables for this task. However, AssetWorks is willing to provide a proposal for Organizational Change Management services if PATH so desires.

Deliverable for Change Management

- None.

Work Plan – Planning Stage

WBS B.1.0 Project Team Orientation

AssetWorks will provide a two-day orientation and training overview session for PATH's project team. This session will address:

- The project methodology and objectives
- An overview of the products being implemented
- Any questions about the plan or project

PATH will assist in facilitating this session. AssetWorks will provide up to ten hard copies of the orientation materials, which will include presentation materials outlining the project objectives, schedule, roles, and responsibilities.

Deliverable for Project Team Implementation Orientation

- FASuite Project Team Orientation Plan (approximately 2-3 pages in length).
- FASuite Project Team Orientation materials (presentation materials approximately 10-20 pages in length).

PATH is responsible for all deliverables not specifically included above.



WBS B.2.0 Feature and Function Description

Prior to preparing the Feature and Function Description document (FFD), AssetWorks will present its plan for developing the FFD and the method that will be followed. PATH will have the opportunity to suggest modifications to the planned approach.

AssetWorks will facilitate a series of working sessions with PATH staff to prepare the FFD, which will be a listing of the features and system capabilities in FASuite. This FFD will include the disposition or status of each feature, including whether and/or how it will be used at PATH. AssetWorks and PATH will jointly review this document to ensure all features have been discussed and acknowledged.

No system customizations or enhancements are included in the baseline proposal. For any features that are not currently in FASuite, but are desired, AssetWorks will prepare a cost estimate for the effort required to design, build, and test those enhancements. Upon approval and a formal Notice to Proceed from PATH, AssetWorks will undertake steps to present a Change Order to PATH for these additional items (including additional costs).

During this task, AssetWorks and PATH will address the SAP interfaces that are proposed to seamlessly integrate FASuite into the inventory management and financial systems within PATH. The Interface Development tasks described in the Implementation Stage section of this document illustrate the suggested designs for interfaces between FASuite and SAP. AssetWorks acknowledges that SAP will continue to be the enterprise repository for inventory valuation.

The FFD will list

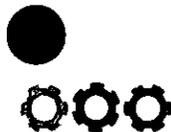
- FASuite features that are available to PATH as standard capabilities
- PATH-requested enhancements (i.e., gaps) to FASuite, including the estimated cost for each
- Proposed interface touch points between FASuite and SAP
- Proposed interface touch points between FASuite and other external systems

The FFD will be approximately 20-30 pages in length. AssetWorks will provide one printed final report and a master electronic version in Microsoft Word.

Deliverable for Feature and Function Description

- FASuite FFD document.

PATH is responsible for all deliverables not specifically included above.



WBS B.3.0 Hardware Plan

Prior to preparing the Hardware Plan document (HPD), AssetWorks will present its plan for developing the HPD and the method that will be followed. PATH will have the opportunity to suggest modifications to the planned approach.

Hardware Discovery and Planning

The hardware discovery and planning methodology provides PATH an analysis of the underlying infrastructure and its ability to satisfy current or future hardware requirements.

The components of discovery and planning are (a) review and validation of the AssetWorks system hardware requirements (b) analysis of the current hardware architecture (c) identification of the targeted hardware architecture direction, and (d) summary observations and recommendations.

The hardware discovery and planning approach provides expert analysis, at the right level of detail, in a fixed timeframe by evaluating key artifacts and benchmarking them to industry best practices.

With the proposed rapid approach and established best practices, information gained through hardware discovery and planning can be analyzed and synthesized to produce actionable recommendations quickly. The results include:

- Focused hardware integration efforts that deliver real value.
- Validated hardware architecture designs that match application functional requirements.
- Validated tools deployment and hardware architecture scalability.
- Projection of organizational hardware infrastructure and required skill sets.
- Defined next steps that address key gaps and issues in the hardware integration strategy and approach.
- Right- sized solutions that are prioritized to deliver short and long term incremental business value.

Hardware Plan Document

The focus of the hardware discovery and planning will be on defining the hardware infrastructure of systems supporting the AssetWorks system's functional requirements.

Detailed description ("Hardware Plan") of the platform required for support of the application including the equipment and software that compose the platform, for PATH approval. All hardware, operating systems, communications components, and third-party software will be described, and there will be a clear indication of what components are to be supplied by AssetWorks, and which PATH must acquire from other sources. The proposed platform will be adequate for support of AssetWorks environment at system inception and capable of supporting that environment without further investment in the platform for a period of five (5) years after system implementation.

AssetWorks will recommend in writing the infrastructure that will best achieve PATH's objective for a balance of ease of operation, operating performance, fit within current infrastructure and cost-effectiveness in operation. The recommendation will include hardware, operating system, security, server, and database elements. PATH will install the recommended and approved additional infrastructure components at its facilities in accordance with the Project Plan.



AssetWorks recommended infrastructure will accommodate the support of the concurrent operation of both the existing and the new rail car environments. The recommendations will include appropriately configured servers, workstations, printers, networking requirements, network and data security, and all other equipment and software required for supporting the two rail car environments.

AssetWorks will deliver a formal report in which the AssetWorks environment is described and analyzed with respect to hardware and software demands, both present and projected into the future. The report will be based on the platform recommended by AssetWorks, and will recommend equipment and software appropriate for support of the application over a five-year period. It will consider all aspects of the implementation of such a recommended hardware/software platform in PATH's environment, including security, reliability and availability, physical plant environmental requirements, networking and communications, pricing, acquisition, delivery timetables, licensing, installation and on-going support. Equipment, software and licenses will be described in terms of manufacturer, make, model, version and pricing, so that such descriptions are suitable for use in acquiring such components.

The hardware discovery and planning tasks do not include:

- Business Process Reengineering.
- Evaluation of PATH's current organization, technology, or departmental operating procedures.
- Efforts over beyond the phase estimated duration and the estimated team capacity.

Technical Approach

Initiation & Discovery

Define roles and responsibilities for all associated project tasks

- Identify stakeholder groups and participants
 - Identified Stakeholders (must have representation in workshops/interviews)
 - Additional Stakeholders
 - Operational requirements
 - Research requirements
- Identify key business processes to be supported within Stakeholder groups
- Identify key applications
- Perform interviews and workshops with all primary stakeholders and a representative sample of secondary stakeholders
 - Identify business initiatives, programs and projects that will have net new capacities and requirements
- Identify IT infrastructure to be included in detailed audit
 - storage devices (disk, tape, storage appliances, SAN fabric)
 - Relevant connected servers
- Gather disk storage asset information by having PATH provide storage array details:
 - Vendor, model, disk types and number, establish raw capacity
 - Useable disk capacities: RAID levels, usage and identify unused and unallocated capacity.
 - Number of connecting ports (F/C, iSCSI, etc.) and speed

- Value-added array-based software: snapshot/clone, replication and management
- Capacity of clones and snapshots used and for what applications and associated business processes
- Collect SAN switch and director asset details from PATH including:
 - Vendor, Make and Model numbers with number and type of total ports
 - Number of connections: servers, storage, ISL and free ports
 - Storage topology if possible
 - Associated SAN management software: version and capacity license
- Gather backup and tape storage asset information by having PATH provide component details:
 - Tape libraries: vendor, model, tape drive types and quantities
 - Data de-duplication devices: vendor, model, raw capacity
 - Number of useable library tape slots and tape media type
 - Tape capacities: native and compressed – average utilized capacity per cartridge.
 - Number of tape cartridges in total by location including onsite and offsite
 - Number of connecting ports (F/C, iSCSI etc.) and speed
 - Associated backup and recovery software
 - Backup policies and schedules
 - Backup server(s) configuration
- Financial details of storage devices listed above are to be provided by PATH staff
 - Capital costs and remaining book value (or lease cost and end date)
 - Warranty expiry date and maintenance cost per month or year
 - Costs of value-added software and monthly or yearly maintenance and capacity-based licensing.
- Gather server asset information by having PATH provide details:
 - Server manufacturer, model and hardware configuration
 - Operating system version and patch level
 - Environment type – production, development, test and any others
 - Total storage allocated, actual used and available
 - Number of paths and multi-pathing software for SAN-attach systems
 - Workload types
 - D/R plans and policies including offsite cycles, RTO and RPO per application grouping
- Gather server performance trending data using approved instrumentation to include:
 - Thirty days of CPU, memory, NIC and HBA usage
 - Server configuration and main application/business process use
 - Capacity of disk allocated and used (DAS and SAN)
- Validate all above data collected for completeness and readiness for analysis



Analysis, Planning & Design

- Create category summaries of all collected data
- Establish or determine growth rates based on a 5 year growth trend
- Financial data analysis including the following:
 - Establishing a cost of raw GB/month based on original, book value and maintenance amounts
 - Identify cost trends over 5 years based on the above and using the growth trends
- Establish storage tier definitions based on service requirements of analyzed hosts and applications as well as current storage use to provide PATH with a framework on where to place future workloads.
- Provide a tiered strategy to reduce cost while increasing capacities with an ideal state from the analyzed data including:
 - Online disk tiers
 - Backup tiers
 - Recovery tiers
 - Archive tiers
- Provide a visual scoring of existing environment to the ideal state to demonstrate gaps in consolidation, re alignment and cost savings possibilities
- Provide a roadmap to achieve cost effective tiering to increase online capacities including planned and provided projects while reducing per GB costs.
- Provide a summary of Risk and Other Considerations as identified by data collection, analysis, discussions and as listed by PATH.
- Hold discussion and strategy sessions with PATH storage architect(s) and stakeholder representatives to ensure road map and strategy alignment to business needs
- Develop strategy for proposed Central File Service
- Develop strategy for proposed Central Backup and Recovery Service
- Develop proposed future shared storage infrastructure architecture
- Develop strategy for migration of current environment to proposed architecture

Documentation & Presentation

- Initial presentation review to a small team with the focus on findings and revision for management.
- Create initial draft document from – PATH to provide feedback before completion.
- Provide industry trends and analysts statements that support PATH's Storage Strategy and Roadmap recommendations
- Present summary of results to PATH with specific details around roadmap recommendations and alignment to future identified project plans.

Transition & Close

- Finalize document. Update documentation revisions from review and presentation feedback
- Hand-off of both the presentation and documentation in Microsoft Office PowerPoint and Word formats.
- Close out meeting and feedback with next steps

The following information lists the resources required for a successful hardware discovery and planning process, and the associated responsibilities.



PATH Responsibilities

Role	Project Responsibilities
Sponsor	○ Provides focus for the effort and ensures that all documentation is made available to the AssetWorks team and the appropriate resources participate in the Discovery and Planning session. Approves and executes the appropriate AssetWorks recommendations.
Discovery Session Experts	○ Provide detailed information regarding the enterprise, business drivers, architecture, processes, and other data pertaining to the focus of the effort.
Coordinator	○ Works with the AssetWorks team to collect requisite documentation and coordinate Discovery session logistics (e.g., meeting rooms, schedules, notifications).

Deliverables

As a result of the Hardware Discovery and Planning, AssetWorks will present to PATH an overview and discussion of key observations and provide documentation containing the following information. This compilation of information will comprise the HPD.

The HPD will be approximately 30-50 pages in length. AssetWorks will provide one printed final report and a master electronic version in Microsoft Word.

Deliverable for Hardware Plan

- Baseline Project Plan – A sub-project plan, approved by both PATH and AssetWorks, that details the work to be performed, the schedule, and resource utilization for the project.
- Environment Analysis – A document that details current environment architecture.
- Hardware Plan – A document that details the hardware architecture and plan.
- Observations made and validated during inquiry, review, and synthesis
- Recommended next steps

PATH is responsible for all deliverables not specifically included above.



WBS B.4.0 Implementation Plan

AssetWorks will facilitate a series of working sessions with PATH staff to refine the implementation plan (the baseline will be based on the project plan included in this proposal).

The implementation plan will include

- An approved timeline, with specific start and end dates
- A list of staff and responsibilities
- A communication plan
- A list of policies and procedures to help manage project logistics and administrative needs
- Tasks for a two-phase approach including training tasks
- Acceptance criteria for deliverables in the next stage
- "Checkpoints" (embedded in the project plan) and quantifiable performance measurements that PATH can use to gauge progress
- Methods for creating and maintaining documentation throughout the project

The implementation plan will be approximately 10-20 pages in length. AssetWorks will provide one printed final report and a master electronic version in Microsoft Word.

Deliverable for Feature and Function Description

- FASuite implementation plan document.

PATH is responsible for all deliverables not specifically included above.

WBS B.5.0 Conversion Plan

AssetWorks will facilitate a series of working sessions with PATH staff to develop the conversion plan. The purpose of this task is to define the overall conversion process for new rail cars and the data from legacy systems for the current rail cars.

The conversion plan will include

- A list of the objectives and goals of the data conversion effort
- A definition of the methods, techniques, and approach to be taken
- A list of deliverables from the Data Conversion task in the Implementation Stage
- A definition of the scope (which vehicles, how many work orders, etc.) of conversion from each source system
- The expected Extraction and Transformation steps that PATH will undertake
- Data validation procedures and processes
- An expected timeline for conversion
- Suggested sources and methods for PATH to gather and enter required data that is not in the current systems

The conversion plan will be approximately 10-20 pages in length. AssetWorks will provide one printed final report and a master electronic version in Microsoft Word.

Deliverable for Feature and Function Description

- FASuite conversion plan document.

PATH is responsible for all deliverables not specifically included above.





WBS B.6.0 Functional Test Plan

AssetWorks will facilitate a series of working sessions with PATH staff to develop the functional test plan.

The test plan will include

- A list of the objectives and goals of the testing effort
- A description of the tests that will be performed
- A list of roles and responsibilities for testing
- The planned testing environment and data requirements
- Testing procedures
- A description of the PATH testing facilities
- Sample test plans and documentation of results

The functional test plan will be approximately 20-30 pages in length. AssetWorks will provide one printed final report and a master electronic version in Microsoft Word.

Deliverable for Feature and Function Description

- FASuite test plan document.



PATH is responsible for all deliverables not specifically included above.



WBS B.7.0 Operational Acceptance Test Plan

AssetWorks will facilitate a series of working sessions with PATH staff to develop the Operational Acceptance Test (OAT) plan. The OAT will be conducted over a three-month period after go-live. This SOW includes two OAT periods, one for each Phase. However, AssetWorks recommends some discussion during this planning period to consider a single OAT period for all users, which would reduce the cost of the overall project and still provide sufficient validation and testing opportunities for PATH.

The OAT plan will include

- A list of the objectives and goals of the testing effort
- A description of the tests that will be performed
- A list of roles and responsibilities for testing
- The planned testing environment and data requirements
- Testing and observation procedures for the OAT period
- A description of the PATH testing facilities
- Sample test plans and documentation of results

The OAT plan will be approximately 10-20 pages in length. AssetWorks will provide one printed final report and a master electronic version in Microsoft Word.

Deliverable for Feature and Function Description

- FASuite OAT plan document.

PATH is responsible for all deliverables not specifically included above.



WBS B.8.0 System Support Plan

AssetWorks will facilitate a series of working sessions with PATH staff to develop the System Support Plan (SSP). This plan will govern the support strategy during the System Support stage for the six month period following go-live. This SOW includes a single Support Stage (SSP period) for both implementation phases.

The SSP will include

- A list of the objectives and goals of the Support Stage
- The duties, obligations, and responsibilities of all parties during the Support Stage
- Descriptions of troubleshooting techniques for each AssetWorks application
- Procedures for PATH support staff to follow in terms of interacting with AssetWorks Customer Support in the longer term
- A description of how AssetWorks will provide application updates, enhancements, and fixes
- A description of how AssetWorks will implement major releases or modifications that may occur during the PATH project
- A description of a process by which PATH can report, track, and escalate application issues or problems encountered during the duration of the SSP Stage (and thereafter)

The SSP will be approximately 10-15 pages in length. AssetWorks will provide one printed final report and a master electronic version in Microsoft Word.

Deliverable for Feature and Function Description

- FASuite SSP document.

PATH is responsible for all deliverables not specifically included above.

WBS B.9.0 Training Plan

AssetWorks will facilitate a series of working sessions with PATH staff to develop the Training plan. This plan will outline the training services that AssetWorks and PATH will provide throughout the project.

The Training plan will include

- A list of the objectives and goals of the training
- A recommended plan for Supervisors
- A recommended plan for System Administrators
- A recommended plan for Maintenance Technicians
- Recommended procedures and logistics for training delivery
- Sample training materials and exercises

The Training plan will be approximately 20-30 pages in length. AssetWorks will provide one printed final report and a master electronic version in Microsoft Word.

Deliverable for Feature and Function Description

- FASuite Training plan document.

PATH is responsible for all deliverables not specifically included above.





WBS B.10.0 Parallel Test Plan

AssetWorks will facilitate a series of working sessions with PATH staff to develop the Parallel Test plan (PTP). The PTP will be conducted prior to go-live for each phase of implementation.

The PTP will include

- A list of the objectives and goals of the testing effort
- A description of the tests that will be performed
- A list of roles and responsibilities for testing
- The planned testing environment and scope
- The planned data entry requirements for PATH staff
- Testing and observation procedures for the parallel period
- A description of the PATH testing facilities
- Sample test plans and documentation of results

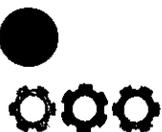
The PTP will be approximately 10-20 pages in length. AssetWorks will provide one printed final report and a master electronic version in Microsoft Word.



Deliverable for Feature and Function Description

- FASuite PTP document.

PATH is responsible for all deliverables not specifically included above.



Work Plan – Implementation Stage for Phase I

WBS C.1.0 Phase I – New Cars

WBS C.1.1 Hardware Acquisition

AssetWorks preliminarily (subject to the Hardware Plan) recommends the following hardware configuration and specifications for PATH's FASuite implementation. For optimal performance, AssetWorks recommends PATH take advantage of FASuite's n-tiered architecture. FASuite runs in the following tiers:

- InfoCenter: the zero-client browser user interface
- GUI: the presentation layer (*graphical user interface*) for System Admins
- APP: the application
- Database: the database

For this implementation AssetWorks recommends Oracle as the Relational Database Management System (RDBMS). AssetWorks recommends the following specifications for the production environment, based on assumptions of fewer than 1,000 equipment units and 200 or fewer concurrent users. For this implementation, based on current information, AssetWorks recommends a Windows-based operating system on the application and web servers, as follows, for the production environment.

Database Server

The requirements for a database server depend primarily on the size of the FASuite database and the maximum number of concurrent users. Memory on the database server is a major factor affecting FASuite performance; AssetWorks recommends always allowing for future expandability. For a database server dedicated to FASuite, AssetWorks recommends:

Processors:	4
Processor Speed:	2.0+ GHz
Hard Drives:	4 (RAID-5)
Size:	36.2 GB each
RAM:	4 GB

Application and Web Server (x4)

The requirements for the application server(s) depend primarily on the maximum number of concurrent FASuite users. AssetWorks recommends machines that meet the following specifications:

Processors:	2
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Processor Speed:	2.0+ GHz
Hard Drives:	2 (RAID-1)
Size:	36.2 GB each
RAM:	4 GB

Reporting Server

The requirements for a web and reporting server depend primarily on the maximum number of concurrent FASuite users. AssetWorks recommends machines that meet the following specifications:

Processors:	2
Processor Speed:	2.0+ GHz
Hard Drives:	2 (RAID-1)
Size:	36.2 GB each
RAM:	4 GB



Interface Server

The requirements for a server depend primarily on the interface processing load. AssetWorks recommends machines that meet the following specifications:

Processors:	2
Processor Speed:	2.0+ GHz
Hard Drives:	2 (RAID-1)
Size:	36.2 GB each
RAM:	4 GB

Workstation Specifications

For all configurations, client workstations should be at least 200 MHz Pentium-based computers running Windows XP. We recommend at least 128 MB of RAM. The GUI and InfoCenter require a minimum display resolution of 1024 x 768 for proper viewing. AssetWorks recommends a machine that meets the following specifications:

256MB RAM

10GB HDD



Mouse and Keyboard

17" Monitor (19" Monitors recommended)

Windows 2000/XP

10/100 Ethernet NIC

Additional Requirements For Any Configuration

In addition to the above, AssetWorks also recommends PATH procure the following:

- An appropriate number of printers
- A standby power supply to protect the servers from power problems
- Modems and Remote Management software to support remote diagnostic communications with AssetWorks
- AssetWorks recommends 19" monitors in order to take better advantage of the FASuite screen and window capabilities
- Provision for disaster recovery

AssetWorks will not be responsible for any site preparation or construction or communications or cabling infrastructure. AssetWorks will not install any servers at any site. AssetWorks will not provide any operating system or Relational Database Management System (RDBMS) software for the servers.

AssetWorks will not provide any services or deliverables for this task.

Deliverable for Hardware Acquisition

- None.





WBS C.1.2 Hardware Installation

AssetWorks will not provide any services or deliverables for this task.

Deliverable for Hardware Installation

- None.

WBS C.1.3 Software Installation

Installation Services

Hosted Environment for Project Quick Start

As time is of the essence for this implementation, AssetWorks will provide a hosted instance of the application in order to execute project configuration and setup consulting tasks while PATH acquires hardware for its data center. Once PATH has the requisite hardware, operating system and RDBMS installed and connected to the network, AssetWorks will proceed with the software installation tasks described below. After installation of the software, AssetWorks will import the initial configurations into the PATH instances in the PATH data center.

PATH to prepare for the installation

PATH will install operating system and RDBMS software on the database, web, and application servers. AssetWorks assumes PATH will install the servers and resolve network configuration issues that arise as a result of the server operating system installation (in order to connect to the PATH wide area network).

PATH will provide the required RDBMS, web server (Microsoft IIS), and other operating software (including licenses, media, and documentation) for this installation task. AssetWorks will not be responsible for any construction or communications infrastructure. AssetWorks will not install any servers or other hardware.

AssetWorks will work with PATH to correctly size the FASuite database and ensure the PATH network environment is ready for the new system.

Create FASuite database and install applications

AssetWorks will create four distinct environments: Production, Training, Development, and Test. AssetWorks recommends the use of web-conferencing services to support AssetWorks' troubleshooting efforts throughout the project.

PATH will procure and install a web server. PATH will ensure the web server is ready for the installation. The web server must use Microsoft IIS. AssetWorks and PATH will install FASuite on PATH's web server device. PATH is responsible for connectivity over the Internet and Intranet, as desired. PATH will provide technical support related to the web server for the installation.

AssetWorks will work with PATH to install InfoCenter and MobileFocus on the server and at the first user site. PATH is responsible for installing and configuring client-side software after the first site.

PATH will devise a procedure to upgrade FASuite when AssetWorks makes new releases available. It is recommended that PATH document the procedure for making new versions of the system and documentation available to all locations.

System Testing

For each of the four FASuite environments, AssetWorks will conduct a high-level System Test with PATH staff, and will validate the FASuite system is installed and functional. The System Test Plan will consist of functional tests, defined as:

- Verify the ADMIN user can connect to the database



- Verify the screens are accessible from up to three workstations on the PATH network
- Verify data can be entered on several screens
- Verify a sampling of the standard reports can be executed

Deliverable for Software Installation

- Testing results certifying complete and satisfactory testing.

PATH is responsible for all deliverables not specifically included above.

WBS C.1.4 Business Process Assessment

AssetWorks will perform a Business Process Assessment (BPA) of PATH maintenance activities prior to proceeding with the implementation. The BPA will provide an evaluation of the PATH's existing vehicle maintenance operation in order to determine where improvements can be made prior to the implementation.

The BPA will identify practices and procedures that can be changed to provide for a more efficient vehicle maintenance operation and a smoother implementation and operation of FASuite. AssetWorks will perform the following tasks as part of the BPA:

Conduct Interview Sessions

AssetWorks will provide questionnaires for certain PATH personnel. The initial interview sessions will provide the AssetWorks project team with the opportunity to assess the current PATH business practices. The AssetWorks project team will observe efficiencies and redundancies in the system, and propose new processes. The interviews and sessions will provide AssetWorks with the following:

- Awareness of how the PATH works and processes data
- Ability to define information processes, functions, and functional areas
- Assessment of the likely adoption of TO BE processes and recommendations

AssetWorks will conduct interview sessions for the following PATH functional areas.

- Planning and Scheduling, such as PM scheduling, PM programs, and the development of PM checklist items
- Work Management, which will address topics including opening work orders, work assignment, labor hour tracking, indirect time, reviewing work orders, and requesting parts
- Inventory Management, which will address topics including inventory management, charging our materials, creating purchase requests, handling parts warranties, dealing with serialized parts, and other inventory management functions
- Rebuild Facilities, including how to stock and rebuild components and track the multi-stage aspects of heavy repair
- Warranty Activities, which will address claims and other warranty tracking, primarily for the new rail cars



The following image is representative of the proven tools AssetWorks will bring to the project.

ASSETWORKS

Functional Configuration Questionnaire
Maintenance Planning and Scheduling

Distribution

To: Project Manager @Customer.com
Cc: [Customer] Core Implementation Team

Maintenance Planning & Scheduling	
Required Participants:	
Optional Participants:	
Date/Time/Location of Meeting:	
AssetWorks:	
Goal	
Goal:	<ol style="list-style-type: none"> 1. Understand how [Customer] plans and schedules all maintenance activities in their garage. 2. Understand how [Customer] manages timekeeping and labor capture. 3. Collect documentation (i.e. reports, forms, screen shots, etc.) 4. Create a graphical representation of current workflow.
Attachment(s):	
Discussion Points	
Discussion Points:	<ol style="list-style-type: none"> 1. How does [Customer] currently plan and schedule maintenance activities? 2. How is work prioritized? 3. What systems and/or reports do you use to support scheduling? 4. How is refueling accomplished? 5. How does [Customer] capture labor currently? 6. Is labor at the garage level used to compute payroll? How? 7. Are there any day differentials? How do they work? 8. Are there any new initiatives [Customer] is planning to implement with regard to timekeeping, or labor capture, or day differential?
Attachment(s):	

Understanding the "As-Is"

Question:	Answer:	Answer provided by:	Action Item for:
When a mechanic/technician comes into work, how do they know what to do?			

After completing the interview sessions, AssetWorks will compile the results of the interview and document the recommended TO BE processes and workflows. AssetWorks will present these recommendations to PATH in a two-day "conference room pilot" format to review the document and gather final feedback from PATH.



AssetWorks will revise the TO BE functional report and submit the final version to PATH. This report will be a document of approximately 30-50 pages.

Deliverable for Business Process Assessment

Deliverable materials will include the following:

- Functional TO BE Report.

PATH is responsible for all deliverables not specifically included above.



WBS C.1.5 Application Configuration

AssetWorks will assist the PATH team to configure FASuite based on the results and decisions from the BPA. This initial configuration will include data elements like location IDs, user groups, and department IDs. This “set-up” will also be the foundation for the implementation; very few, if any, changes will be made to this initial configuration since all groups (current and new) will share one database. Decisions made during this phase of the project will have a *direct effect* on the work flow in the roll-out of FASuite.

This group must have the authority and charter to make appropriate decisions regarding the FASuite implementation. The group representatives should have complete knowledge and familiarity with the operation, including parts inventory and procurement.

PATH will finalize the definition of all relevant data elements and work processes, including maintenance, parts management, procurement, and other job functions. PATH’s deliverable for this task is complete documentation of PATH’s definitions for all applicable data elements. This deliverable is a critical prerequisite to the development of the training material for the rollout.

AssetWorks will prepare an Application Configuration document as a deliverable to assist PATH in the ongoing management of the system. This high-level document will include the settings and defaults determined by the functional TO BE document. This document will be approximately 10-20 pages.

No system customizations are included in the baseline cost proposal.

Deliverable for Application Configuration

AssetWorks will provide the following deliverables:

- Application Configuration Document.

PATH is responsible for all deliverables not specifically included above.

WBS C.1.6 Systems Integration Development

Interface Development Preparation

AssetWorks standard procedures for developing an interface include the following tasks:

- Create a preliminary specification/interface design plan
- PATH project team reviews the preliminary specification/interface design plan
- AssetWorks reworks the specification/interface design plan as required
- PATH project team provides final approval of the specification/interface design plan
- AssetWorks builds interface and incorporates into the development environment
- AssetWorks tests interface
- AssetWorks provides documentation
- PATH evaluates and gives acceptance

AssetWorks will provide interface planning services to develop a roadmap for the integration between FASuite and PATH's legacy systems, as described below. The project team will discuss and specify the data elements required, the time of the exchange, and the method of data exchange.

AssetWorks and the project team will develop a mutually acceptable plan and schedule for the work to be completed and identify the resources and timeframe required for the efforts. AssetWorks assumes PATH will involve the appropriate staff to reach consensus and decisions on all interface specifications during the discussion and according to the proposed timeline.

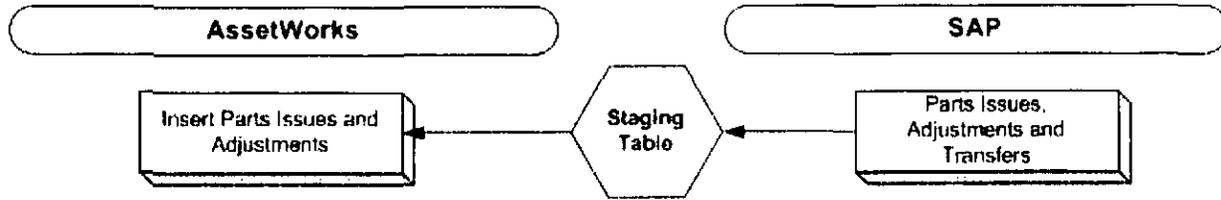
For each of the following scenarios, AssetWorks has provided the proposed work flow or interface. These recommendations are based on our experience and on best practices for maintenance and system integration. AssetWorks assumes that the proposed interfaces in this section will rely on existing functionality and not require enhancements to the base application.

AssetWorks is willing to discuss alternative, more extensive integration options and designs with PATH to ensure the optimum design. However, for the basis of this proposal, the following assumptions and designs have been incorporated as the basis for the quotes provided. The project team will define a detailed specification for each interface before any work begins.

Configure and Tailor Materials Management Interface

AssetWorks will work with PATH to configure and build the interfaces required, per the documented specifications, between FASuite and SAP to provide a best-of-breed solution for PATH. SAP will be the system of record for materials management. This one-way synchronization will be limited to inventory transactions posted to work orders or adjusting balances and unit prices.





PATH will provide the services to have SAP send inserts of relevant transactions to the Staging Table. PATH will define the "relevant transactions" and use some differentiator within SAP to identify which records will be passed to FASuite through this interface. The intention here is that "relevant transactions" are those transactions that will affect work orders or quantity/value on hand data used by Maintenance.

AssetWorks will provide the services to process these transactions from the Staging Table and post the information in FASuite.

PATH will be responsible for making this information available in the Staging Table in the AssetWorks-specified standard format. The interface will not connect or communicate directly with SAP. PATH will be responsible for re-processing errors from this interface.

WBS C.1.7 Data Conversion Services

Data Conversion Preparation

AssetWorks standard procedures for executing Data Conversions include the following:

- Create a specification/data conversion plan
- PATH project team approves the specification/data conversion plan
- AssetWorks reworks the specification/data conversion plan as required
- PATH project team provides final approval of the specification/data conversion plan
- AssetWorks converts data in accordance with the specification
- AssetWorks and PATH review converted data
- AssetWorks provides documentation and a schedule and date ranges for conversions
- PATH gives final acceptance

The objective of these data conversion services is to process extracted data from the applicable PATH legacy systems and map the extracted data into FASuite. PATH will provide a sample of the legacy data as soon as possible. Using this sample, the team will define exactly what data will be converted from the current system and define a mapping of data into FASuite. AssetWorks will help PATH finalize the data mapping and identify the specific sources for each data element. AssetWorks and PATH will define which information will be loaded into FASuite.

Data Conversion Procedures and Assumptions

AssetWorks will determine the necessary data required to make the system operational (e.g., asset data, current inventory levels, etc.) and then identify, in conjunction with PATH staff, what data will be available from current systems, and what data PATH may have to develop or enter. Once the data conversion specifications are completed, PATH will extract the data from its current systems. AssetWorks will be responsible for populating FASuite with approved and “clean” PATH data. In the standard Extraction, Transformation, and Load (ETL) process, PATH will be responsible for the Extraction and Transformation, while AssetWorks will be responsible for the Load.

Format of Converted Data

AssetWorks assumes that all PATH data files are formatted to facilitate uniform electronic conversion. AssetWorks requires that PATH supply all conversion data in text documents (flat file ASCII format) with necessary documentation.

AssetWorks will provide Microsoft Excel templates to assist in loading data into FASuite. AssetWorks will convert only the data that maps into FASuite. Data that does not map into FASuite will not be converted. Further, only data elements that can be entered on an FASuite screen are part of this conversion.

PATH will provide the data in the properly formatted spreadsheets (per AssetWorks' specification) for loading into FASuite. AssetWorks makes the following assumptions about the data from the legacy PATH system(s):



- The data files for the asset master records for new cars will be text-based flat files with one row of data per asset
- The data files for the part master records for new cars will be text-based flat files with one row of data per part
- AssetWorks will use default values for any data element that FASuite requires that is not in the data file.
- PATH will provide each test data file and each production data file in exactly the same format.
- AssetWorks will not be responsible for “scrubbing” or “cleansing” legacy PATH data.
- AssetWorks will not source or manually enter any data.

PATH will provide one ASCII file from each legacy application. AssetWorks will not be responsible for converting hard copy data records.

Conversion of Specific Data

AssetWorks and PATH will jointly resolve any issue arising out of the conversion of historical repair and maintenance data, including codes (if any) to be changed. AssetWorks will help PATH finalize the data mapping for equipment and part master records and identify the specific sources for each data element. AssetWorks and PATH will identify cost information that will be loaded into FASuite.

Data Conversion Testing

After AssetWorks and PATH have jointly documented the data mapping and data load process, AssetWorks will test the results from PATH’s data extractions. These tests will validate the data migration strategy that the team defined in earlier stages. This process will require involvement from the PATH Information Technology personnel supporting the existing systems. Upon completion, AssetWorks will provide all testing results to PATH for acceptance.

PATH Validation of Data Conversion

AssetWorks will convert samples of the data for review and validation purposes. AssetWorks will assist the PATH Project Manager in the validation process. AssetWorks will convert the data based on the rules defined earlier in the project. Data will be converted into the development environment and validated by PATH before being converted into the production environment.

Data Conversion Documentation

Prior to conversion into the development environment, AssetWorks will provide to PATH a document explaining the conversion process and mapping the converted data into FASuite. Upon completion of conversion to the development environment, AssetWorks will test the conversion process by working with the PATH project team to move the data (dry run) into the FASuite database. Data validation will occur, followed by live conversion of data into the production environment. AssetWorks will use FASuite’s batch processing feature to load the data on these screens.

AssetWorks will provide one complete, successful conversion based on the conversion specifications into Test/Development, and then one complete, successful conversion based on the conversion specifications into Production.

Deliverable for Data Conversion Services

AssetWorks will provide the following deliverables:

- Data Element Mapping Document for data conversion.
- Data Conversion Technical Specifications for maintenance data conversion.
- Data Conversion Schedule for maintenance data conversion.
- Converted data.

PATH is responsible for all deliverables not specifically included above.



WBS C.1.8 Testing Services

AssetWorks will prepare plans, similar in scope, for Unit Tests, Integrated Tests, and User Tests, per the project plan.

User Testing

Review User Test Plan

AssetWorks will review the User Test Plan with PATH staff to ensure the functions of each system component are ready for live operations. The User Test Plan will consist of the following functional tests:

- Verify the security and access control functions for several User Groups
- Add and modify equipment primary information
- Add and modify parts primary information
- Open a repair order and a PM order for an equipment unit
- Charge labor to the work orders and verify the charges/credits of hours and costs
- Charge inventory parts to the work orders and verify the charges/credits of quantity and cost as well as proper inventory relief
- Charge commercial charges to the work orders and verify the charges of labor and parts
- Close the repair and PM orders
- Verify work order charges
- Adjust parts inventory both upward and downward
- Generate a sampling of standard reports
- Verify a sample of asset master records
- Verify a sample of vehicle maintenance history
- Verify a sample of part master records
- Generate a sampling of standard reports

Execute User Test

AssetWorks will use sample PATH data (where possible) to demonstrate the features of FASuite in the test environment, according to the above test plan.

Document and provide test results

AssetWorks will provide test scripts and document the results of all testing, including a passed/failed indication and any modifications made to the procedures during the test.

Deliverable for User Testing Services

AssetWorks will provide the following deliverables:



- Written User Test Plans.
- Test scripts for FASuite user testing.
- Test results for FASuite user testing.

PATH is responsible for all deliverables not specifically included above.



WBS C.1.9 Training Planning Services

The AssetWorks project team will develop and deliver a comprehensive training program to provide FASuite training for various types of PATH users. The training will be role-based and will differ for trainees from the various organizational and functional areas. Each PATH trainee will have the basic skills in the overall use of FASuite and strong knowledge of how to use the application in his or her specific job function or area of expertise. The deliverables will not include remedial training for computer skills or any computer-based training.

PATH will provide all subsequent user training required in connection with new members entering the user community and on an ongoing basis. Consequently, AssetWorks is proposing a Train-the-Trainer element to the overall training program. Any training materials, including presentation materials, delivered to PATH will be delivered as electronic media in Microsoft Word or Microsoft PowerPoint format.

AssetWorks will create and maintain the training database (on the PATH infrastructure) to be used during the training program. For each training course, AssetWorks will furnish written certifications for each person it trains to certify that he or she has completed the course.

Develop Training Outline

AssetWorks will develop a training plan that describes training that will be delivered. AssetWorks will develop a plan that addresses the following topics:

- Assessment of required levels of training for PATH's current Operations user roles and Trainer roles (see below)
- Samples of training media for each type of role described below (e.g., handouts, practice exercises, and screenshots with step-by-step instructions).

AssetWorks will develop training materials for each of the identified user groups, or roles, as follows.

- System Operation Administrator (Phase I only)
- System Internals Administrator (Application Admin)
- Storekeeper
- Vehicle Maintenance Personnel (Technicians)
- Car Configuration Administrator
- Warranty Administrator (Phase II only)
- Maintenance Planner
- Maintenance Supervisor

AssetWorks and/or PATH will train each of these groups separately for those functions they will need to fulfill their roles in the vehicle maintenance and material management processes. AssetWorks will develop the training courses and materials, organize the classes, and conduct the training program on PATH premises. PATH is responsible for providing and preparing the training facility.



Develop Training Materials

Once PATH approves the Training Outline, the AssetWorks project team will complete the training materials and begin scheduling and coordinating the training. AssetWorks training materials assume all users are familiar with a Windows environment; the AssetWorks training will not include any Windows or remedial computer training.

The training will cover work order functions; parts and labor posting functions; and other common features and transactions. The topics and work flows included in the training will be those finalized by the PATH team during the system setup and follow-up tasks. Any deviations in the defined and agreed upon work flow will cause delays and added costs to the training.

With PATH's assistance, AssetWorks will facilitate two workshops, per the project plan, to test the training materials and gauge the clarity and completeness of the draft curriculum. Selected courses will be addressed in each workshop.

AssetWorks will provide a master electronic version for the PATH Project Manager. AssetWorks will produce and provide one copy of the relevant training materials for each trainee (i.e., one copy for each person who formally attends a course). PATH will be authorized to use any training materials for ongoing training within PATH.

Deliver Training Session "Dry Run" for End User Training

The AssetWorks project team will provide abbreviated "dry run" training sessions for the PATH project team, and selected key users, to get feedback on the end user training program. This opportunity for feedback will allow the PATH project team to ensure that the training approach meets the needs of the end users.

All courses will consist of a combination of classroom and hands-on instruction. Training will include classroom and hands-on instruction through the use of the actual application. PATH may choose to record the training sessions (by video, audio, or both) and will have all rights to these recordings.

Deliverable for Training Planning

AssetWorks will provide the following deliverables:

- Training Outlines for trainers and end users.
- Training materials for trainers and end users.
- End user and Trainer "exercise kits" for end users and trainers.

PATH is responsible for all deliverables not specifically included above.



WBS C.1.10 Training Delivery Services

AssetWorks will provide on-site training to PATH (as outlined above) in a classroom environment suitable for training. PATH will be responsible for providing and preparing the training facility.

The program will be conducted at the PATH facilities in Harrison, NJ.

Training Administration

AssetWorks will maintain class registration in PATH's PeopleSoft Human Resources system. PATH will provide AssetWorks with sufficient PeopleSoft Registration & Scheduling training for up to four AssetWorks team members and provide the necessary training documentation.

AssetWorks will:

- Work with PATH Departmental Training coordinators (PATH will identify Training Coordinators) to coordinate and schedule all identified users in FASuite training classes. This effort would include any participant cancellations as well as re-scheduling. PATH will identify the complete list of users in advance.
- Prepare class schedules and notification to end-users and training coordinators.
- Schedule all training classes.
- Provide weekly status reports regarding participant enrollments and completions.
- Ensure that all training materials, class rosters, and course evaluations are in all scheduled classes prior to training date.
- Maintain the class attendance roster and provide notification of no-shows and/or cancellations to the PATH Training Manager.

PATH will ensure all training rooms are fully equipped with working projectors, computers, and other equipment for each training class.

Training Delivery

AssetWorks will deliver the following training.

Information Technology Team Training (System Operation Administrator)

AssetWorks will provide up to two days of IT training for up to twelve users (assuming PATH's training facility has a sufficient number of workstations for this training). These trainees will be responsible for supporting the FASuite application from a technical or "back office" perspective. The training will cover the following areas of FASuite:

System Operation Administrator	
Application logging and troubleshooting	Mobile device hardware and software
InfoCenter installation and upgrades	Interface troubleshooting

PATH Trainer Training

AssetWorks will provide Trainer training to designated PATH "trainers" for the roll-out of FASuite. AssetWorks will provide up to three days of Trainer training for up to twenty-four users in two classes of ten each (assuming PATH's training facility has a sufficient number of workstations for these concurrent training sessions). These

trainees will be responsible for training all PATH end users in the use of FASuite for the roll-out and on an ongoing basis. The training will cover the following areas of FASuite:

Trainers	
FASuite overview and orientation	Work order management functions
Labor and time entry	Materials and parts request functions for technicians
Use of selected standard reports	Basic troubleshooting and administrative functions

The topics and work flows included in the training will be those finalized by the PATH team during the BPA, system setup, and follow-up tasks. Any deviations in the defined and agreed upon work flow may cause delays and added costs to the training.

End User Training

PATH will provide Operational training to the following end users. The topics and work flows included in the training will be those finalized by the PATH team during the system setup and follow-up tasks. PATH should remain especially sensitive to necessary last-minute procedural changes or clarifications based on end user feedback.

System Internals Administrator (Application Admin)	
System login	Users and User Groups
Set-up Options	Table Management
Use of selected standard reports	Application and Interface troubleshooting
Ad Hoc Reporting	Notifications/Dashboard Configuration

Storekeeper	
System login	Part Requests
Part Primary Records and cross-references	Enterprise Purchasing
Use of selected standard reports	Other parts features

Maintenance (Technicians)	
System login	Work order look-up functions
Labor and time entry	Materials and parts request functions for technicians
Use of selected standard reports	Basic troubleshooting

Maintenance Planner	
System login	Work order management functions
Multi-Unit Projects and Campaigns	Class/Task information and PM planning
Use of selected standard reports	Basic troubleshooting



Maintenance Supervisor

System login	Work order management functions
Labor and time entry and management	Materials and parts request functions for managers
Use of selected standard reports	Basic troubleshooting

Car Configuration Administrator

System login	Work order management functions
Multi-Unit Projects and Campaigns	Class/Task information and PM planning
Subsystems/Properties	Equipment primary information management
Use of selected standard and Ad Hoc reports	Basic troubleshooting

PATH will identify at least one "key user" at each location to closely support the cutover, particularly after the training concludes. This individual will be responsible for answering initial end user questions and, most importantly, implementing subsequent changes or alterations to the documented procedures. AssetWorks recommends that these "key users" be those that attended the core team training sessions described above.

Deliverable for Training Delivery Services

AssetWorks will provide the following deliverables, as described in the RFP:

- Trainer and End User training classes.
- Rosters and class evaluations for each class.

PATH is responsible for all deliverables not specifically included above.



WBS C.1.11 Operational Acceptance Test

Implementation Services

AssetWorks will provide remote and on-site post-implementation support for a period of three months commencing with PATH's go-live on the new system, per the project plan.

When PATH commences live operations using FASuite, AssetWorks will be on-site, rotating between locations, to provide "go live" assistance for the PATH fleet management operation. This step is critical to success.

The AssetWorks and PATH team will provide refresher training and help on the shop floors and offices to make sure the transition is as smooth as possible. This time includes verification of proper use of equipment and system performance, adherence to defined processes, auditing of inventory processes for accuracy, and tracking and resolving system issues that arise. In addition, AssetWorks will

- Support PATH in the identification and resolution of application issues
- Monitor the operation and usage of FASuite to identify possible application and workflow improvements

AssetWorks has provided for decreasing levels of remote and on-site post-implementation support. In total, AssetWorks will deliver 648 hours of remote and on-site support to PATH's maintenance and IT staff for Phase I.

During the post-implementation period, AssetWorks will provide some support to all shifts (however, this level of effort does not include full-time coverage for all shifts). AssetWorks will generally provide support during any one shift per day (day, swing, or night). When possible and agreed, AssetWorks will provide support to multiple shifts on a given day (e.g., by covering the last four hours of one shift and the first four hours of a second shift).

This work plan does not guarantee full-time support during any one shift or during all portions of the post-implementation period, but rather a mutually agreed-upon distribution of the provided number of support hours throughout the post-implementation support period.

Customer Support Services

In addition to the above, AssetWorks Customer Support is available to PATH's primary points of contact (up to three persons) for assistance with any standard application issue. Please see the Software Maintenance Agreement for more information about these services.

Deliverable for Operational Acceptance Test Services

- Post-implementation support.
- Bi-weekly status reports to PATH detailing the observations and FASuite support effort.

PATH is responsible for all deliverables not specifically included above.



Work Plan – Implementation Stage for Phase II

WBS C.2.0 Phase II Current Operations

Certain Phase I tasks, such as Software Installation and Business Process Assessment, apply completely to Phase II. AssetWorks will use these Phase I tasks to support Phase II. Consequently, this section of the Statement of Work includes only those tasks that are different from or occur at different times than corresponding Phase I tasks.

WBS C.2.1 Systems Integration Development

Interface Development Preparation

AssetWorks standard procedures for developing an interface include the following tasks:

- Create a preliminary specification/interface design plan
- PATH project team reviews the preliminary specification/interface design plan
- AssetWorks reworks the specification/interface design plan as required
- PATH project team provides final approval of the specification/interface design plan
- AssetWorks builds interface and incorporates into the development environment
- AssetWorks tests interface
- AssetWorks provides documentation
- PATH evaluates and gives acceptance

AssetWorks will provide interface planning services to develop a roadmap for the integration between FASuite and PATH's legacy systems, as described below. The project team will discuss and specify the data elements required, the time of the exchange, and the method of data exchange.

AssetWorks and the project team will develop a mutually acceptable plan and schedule for the work to be completed and identify the resources and timeframe required for the efforts. AssetWorks assumes PATH will involve the appropriate staff to reach consensus and decisions on all interface specifications during the discussion and according to the proposed timeline.

For each of the following scenarios, AssetWorks has provided the proposed work flow or interface. These recommendations are based on our experience and on best practices for maintenance and system integration. AssetWorks assumes that the proposed interfaces in this section will rely on existing functionality and not require enhancements to the base application.

AssetWorks is willing to discuss alternative, more extensive integration options and designs with PATH to ensure the optimum design. However, for the basis of this proposal, the following assumptions and designs have been incorporated as the basis for the quotes provided. The project team will define a detailed specification for each interface before any work begins.

Configure and Tailor SAP/FASuite Interfaces

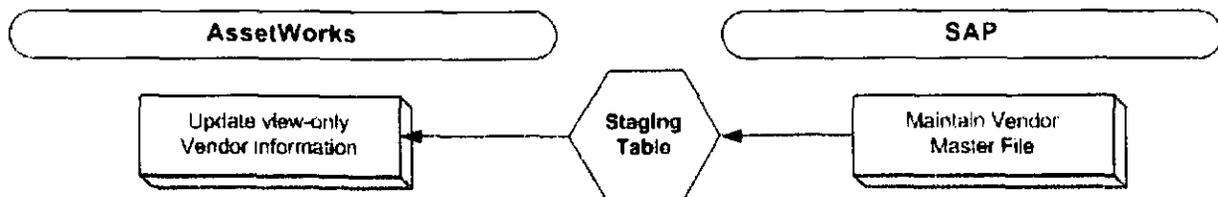
AssetWorks will work with PATH to configure and build the interfaces required, per the documented specifications, between FASuite and SAP to provide a best-of-breed solution for PATH. AssetWorks will provide the following SAP/FASuite interfaces (subject to the descriptions below).

	SAP / FASuite interface	Interface Function
1	SAP to FASuite Vendor Master Interface	Add/update vendor info in FASuite
2	SAP to FASuite Account Master Interface	Add/update Account codes in FASuite
3	FASuite to SAP Create Requisition Interface	Send purchase requests to SAP
4	SAP to FASuite Approved POs Interface	Update purchase request info in FASuite
5	SAP to FASuite Receipts Interface	Send parts receipts to FASuite
6	FASuite to SAP Part Requests Interface	Send parts requests to SAP Inventory
7	SAP to FASuite Parts Issues	Send parts issues to FASuite
8	FASuite to SAP work order costs to GL	Send work order costs to SAP GL
9	SAP parts adjustments/transfers to FASuite	Send part adjustments to FASuite

The following sections provide an overview of the tasks required to develop and configure the interfaces between FASuite and SAP. AssetWorks has described certain tasks as being performed by the Technical Services Provider (TSP). PATH will be responsible for performing those tasks and services (or for outsourcing those tasks and services to a third party).

Vendor Master (#1)

SAP will be the system of record for vendor information. This one-way synchronization will be limited to information in the vendor master files.



TSP will provide the services to have SAP send insert, update, and delete transactions for relevant vendor records to the Staging Table. PATH will define the "relevant vendor records" and use some differentiator within SAP to identify which vendor record changes will be passed to FASuite through this interface. The intention here is that "relevant vendor records" are those vendors that are used by Maintenance.

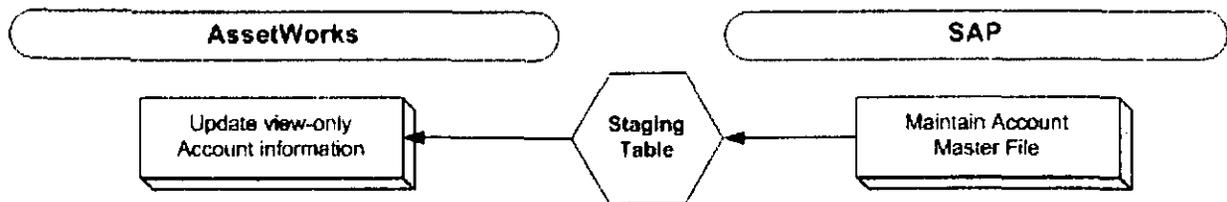


AssetWorks will provide the services to process these transactions from the Staging Table and update the Vendor Master information in FASuite.

TSP will be responsible for making this information available in the Staging Table in the AssetWorks-specified standard format. The interface will not connect or communicate directly with SAP. PATH will be responsible for re-processing errors from this interface.

Account Master (#2)

SAP will be the system of record for account information (e.g., GL codes). This one-way synchronization will be limited to information in the Account Master files.



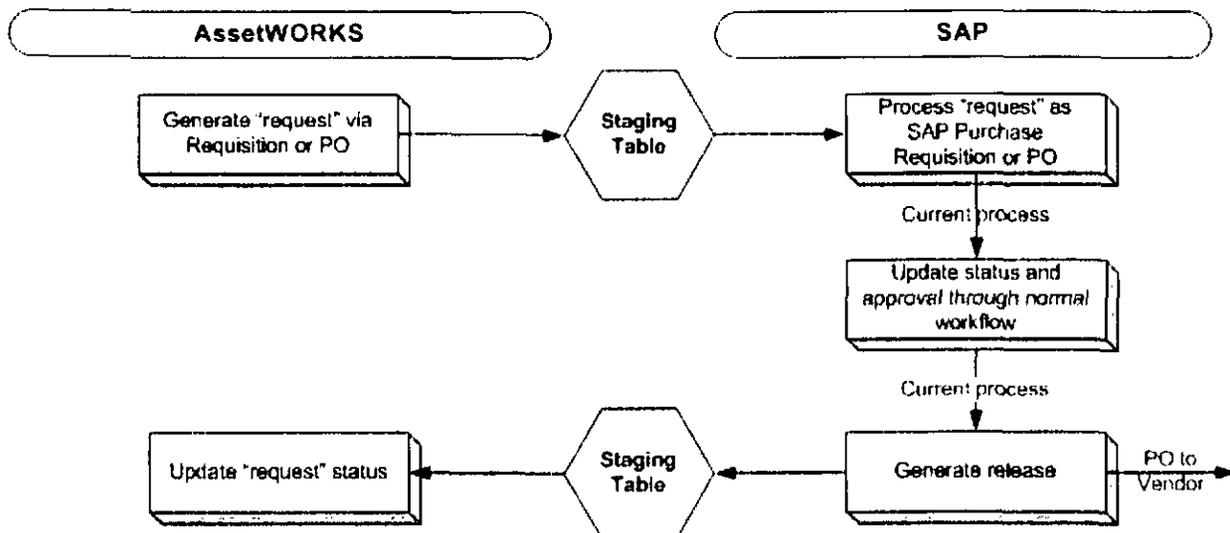
TSP will provide the services to have SAP send insert, update, and delete transactions for relevant account to the Staging Table. AssetWorks will provide the services to process these transactions from the Staging Table and update the Account Master information in FASuite.

TSP will be responsible for making this information available in the Staging Table in the AssetWorks-specified standard format. The interface will not connect or communicate directly with SAP. PATH will be responsible for re-processing errors from this interface.

FASuite will not maintain or store any budget information.

Parts Orders to Create Requisitions (#3 and #4)

This section includes both the interface to create requisitions in SAP and the interface to update the status of those "requests" in FASuite.



Users will enter a request to purchase a new "maintenance" item in FASuite using the Parts Requests, Purchase Order, Quick Orders, or Reorders screen. A "maintenance" item is defined as any item routinely purchased by and for the maintenance department, such as belts, filters, hoses, engines and alternators. PATH will segregate these items from other PATH stock keeping units (SKUs) using one or more commodity or classification codes in SAP.

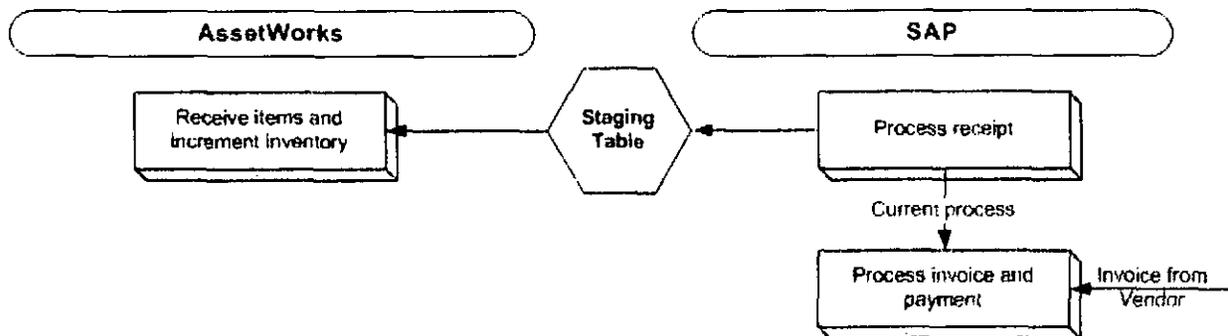
FASuite will not provide the workflow (edits, data entry rules, checks, etc.) that might exist in the SAP Purchase Requisition and Purchase Order Processes. Once the transaction is successfully processed, FASuite will send this request to the Staging Table.

TSP will provide the services to have SAP process this request from the Staging Table into SAP Purchasing. If the requested item does not yet exist in SAP, TSP will create the item in the item master table in SAP, if required. (In each transaction sent to the Staging Table, AssetWorks will include data elements required by SAP to create a new item master record, if one must be created.)

TSP will provide services to send a "Release" transaction to the Staging Table when PATH sends the Purchase Order to the vendor. AssetWorks will provide the services to process this update from the Staging Table and update the request in FASuite.

TSP will be responsible for making this information available in the Staging Table in the AssetWorks-specified standard format. The interface will not connect or communicate directly with SAP. PATH will be responsible for re-processing errors from this interface.

Receipt of Parts (#5)



Users will take delivery of ordered maintenance items in SAP. Once the transaction is successfully processed, TSP will provide services to send this receipt transaction to the Staging Table.

AssetWorks will provide the services to process this transaction from the Staging Table into FASuite.

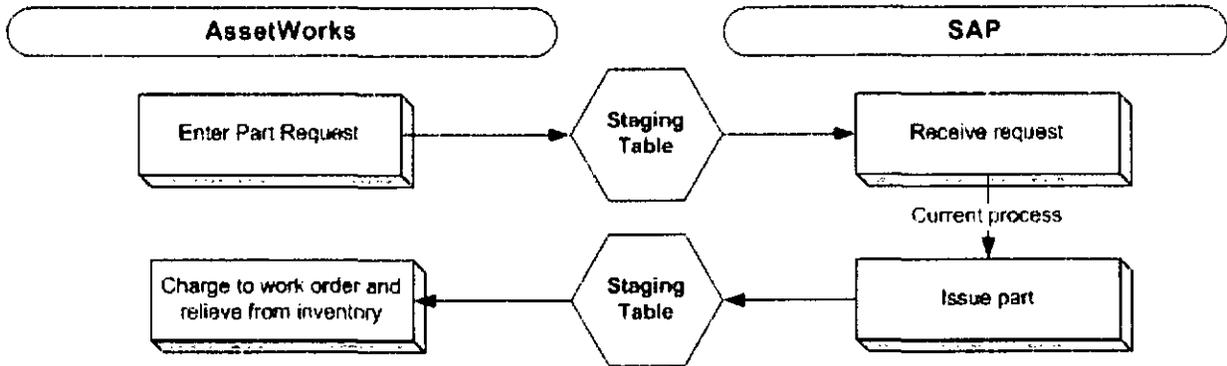
Once the receipt has been processed in SAP, it will follow the current business process through invoice matching, payment, etc. PATH will enter all invoice information directly in SAP. FASuite will have no role in the actual match or payment process. Correction for all invoicing and payment discrepancies will be handled manually.



TSP will be responsible for making this information available in the Staging Table in the AssetWorks-specified standard format. The interface will not connect or communicate directly with SAP. PATH will be responsible for re-processing errors from this interface.

Parts Requests to SAP Stockroom (#6 and #7)

This section includes both the interface to pass a parts request (demand) from FASuite to SAP, and to fill that demand through a parts issue transaction in SAP.



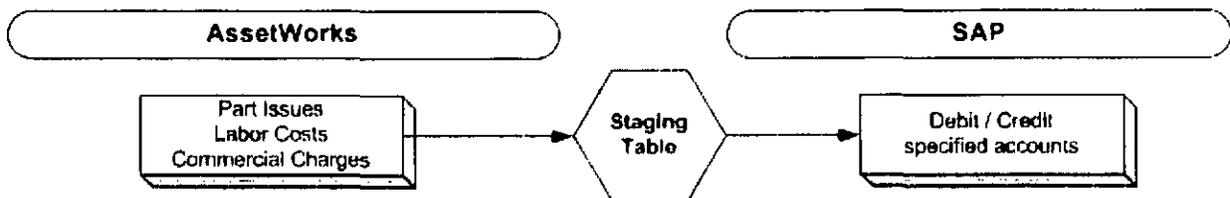
Users will enter a part request for a work order in FASuite. Once the transaction is successfully processed, FASuite will send this request to the Staging Table.

TSP will provide the services to have SAP process this request from the Staging Table into SAP, including the unique task, work order, and request information from FASuite. An SAP user will fulfill the order with on-hand items and issue it in SAP (and hand it physically to the Technician).

TSP will provide services to send this transaction to the Staging Table. AssetWorks will provide the services to process this part issue transaction from the Staging Table and update the work order charges.

TSP will be responsible for making this information available in the Staging Table in the AssetWorks-specified standard format. The interface will not connect or communicate directly with SAP. PATH will be responsible for re-processing errors from this interface.

Work Order Costs to GL (#8)



AssetWorks will provide an interface to provide work order costing information to SAP.



PATH will use one of the rate structures within FASuite's hierarchy of labor rates to calculate labor costs. PATH will review these rate options, as well as various markup and overhead capabilities, during the implementation. In any case, the labor rate in effect for a given task will be used to calculate the labor cost for that task; AssetWorks will use this cost for a subsequent Journal Voucher (JV) entry. All parts, labor, and commercial costs will include any of the FASuite mark-ups implemented by PATH.

AssetWorks will provide the data for a JV entry for parts, labor, and commercial repair transactions on these work orders. The JV transactions will use the account ID specified in an "interface definition file" for Maintenance and the vehicle's account ID (based on current assignment or FASuite account ID entry (e.g., for damage on a pool vehicle) at the time of the transaction).

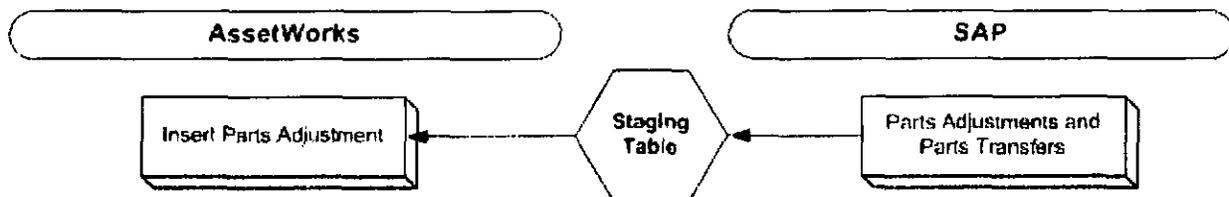
AssetWorks will provide the data for a JV transaction for each direct charge transaction or for some roll-up or summary of posting transactions (e.g., all costs for each vehicle, all costs for each department, all costs for a month for each account ID, etc.) to reduce the number of JV transactions. PATH and AssetWorks will determine an appropriate "roll-up level" during the project.

According to the mutually agreed upon schedule, FASuite will send this JV transaction to the Staging Table. TSP will provide the services to have SAP process this JV transaction from the Staging Table into SAP. Once the JV transaction has been processed in SAP, it will follow the currently-defined business process.

AssetWorks assumes the PATH timekeeping system (i.e., the time clocks) drive payroll, and so an interface from AssetWorks to Payroll is not necessary. Further, this interface might not be required for detailed labor either. This interface is included mainly for detailed GL information that is driven by work order details and information that is not maintained in the timekeeping system or in SAP. AssetWorks recognizes that detailed parts costs and commercial costs might not be required since issues and purchase orders are already being recorded in SAP. However, if more detailed GL information is needed, AssetWorks can provide it through these parts and commercial transactions.

Parts Adjustments and Transfers (#9)

SAP will be the system of record for enterprise inventory information. This one-way synchronization will be used to pass adjustment and transfer transactions from SAP to FASuite to keep inventory on-hand information up to date in real time.



TSP will provide the services to have SAP send adjustment and one-step transfer transactions for part items to the Staging Table. AssetWorks will provide the services to process these transactions from the Staging Table and insert parts adjustment transactions in FASuite.

TSP will be responsible for making this information available in the Staging Table in the AssetWorks-specified standard format. The interface will not connect or communicate directly with SAP. PATH will be responsible for re-processing errors from this interface.

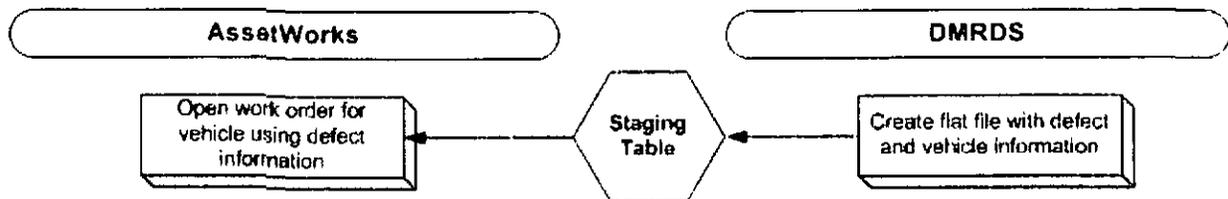


Interface Assumptions

- AssetWorks, TSP, and PATH will mutually agree on the data elements and formats of the transactions.
- TSP will provide for storing FASuite unique identifiers in SAP where necessary. For example, TSP will provide fields for the FASuite request ID and line item number on purchase requests.
- Once any transaction has been processed into SAP, the work flow will follow the current business process. This Statement of Work does not include any effort to re-define, tailor, adjust, or configure SAP business processes downstream from the entry into SAP. FASuite will “feed” the SAP process already defined and implemented at PATH.
- There are no HR or Fixed Asset interfaces included in this Statement of Work, nor are there any interfaces included that are not specifically described above.
- PATH will monitor, review, and re-process all interface errors.

DMRDS Interface to FASuite

AssetWorks will provide a method for creating work orders in FASuite from a DMRDS flat file that includes vehicle and defect information.



AssetWorks will provide a mechanism that polls for and processes a flat file placed on an accessible network drive by DMRDS. This file will contain all required vehicle and defect information, which FASuite will use to open work orders.

AssetWorks will provide a mechanism that processes this data file, which PATH will provide in real time. The file will contain, at a minimum, the following data elements: valid FASuite equipment ID (e.g., Car No.), timestamp, valid FASuite symptom ID (or cross-reference), and other data elements that may be agreed on during the specification process (e.g., meter reading). AssetWorks will provide these standard formats for PATH’s review at the appropriate time.

PATH will be responsible for making this information available in the Staging Table in the AssetWorks-specified format. The interface will not connect or communicate directly with DMRDS. This effort does not include (presently) a transfer of equipment information to or from FASuite, although such an interface is certainly possible.

AssetWorks recommends further discussion regarding this interface so that a more practical, and possibly more effective, interface can be developed.

IETM Link from within FASuite

AssetWorks will provide, on the InfoCenter Home page, a link to the IETM application. This link will execute the IETM executable (assuming IETM is loaded on the workstation and can be executed from the workstation), or the



link will be a URL to IETM (depending on the architecture of IETM at the time. This link will not pass any parameters from InfoCenter, but will simply start the IETM application or connect to the IETM home page (depending on the IETM architecture at the time).

The interface will not connect or communicate directly with IETM. This effort does not include (presently) a transfer of data or information to or from FASuite, although such an interface is certainly possible.

AssetWorks recommends further discussion regarding this interface so that a more practical, and possibly more effective, interface can be developed.

Deliverable for Systems Integration Development

- Documented interface plan and functional specification for each of the interfaces described above.
- Working interfaces as described above.
- Interface test plans and test results.



WBS C.2.2 Data Conversion Services

Data Conversion Preparation

AssetWorks standard procedures for executing Data Conversions include the following:

- Create a specification/data conversion plan
- PATH project team approves the specification/data conversion plan
- AssetWorks reworks the specification/data conversion plan as required
- PATH project team provides final approval of the specification/data conversion plan
- AssetWorks converts data in accordance with the specification
- AssetWorks and PATH review converted data
- AssetWorks provides documentation and a schedule and date ranges for conversions
- PATH gives final acceptance

The objective of these data conversion services is to load asset records for the new rail cars into FASuite. PATH will provide a sample of the legacy data as soon as possible. Using this sample, the team will define exactly what data will be loaded and define a mapping of data into FASuite. AssetWorks will help PATH finalize the data mapping and identify the specific sources for each data element.

Data Conversion Procedures and Assumptions

AssetWorks will determine the necessary asset data required and then identify, in conjunction with PATH staff, what data will be available from KRC and what data PATH may have to develop or enter. Once the data conversion specifications are completed, PATH will provide the asset records. AssetWorks will be responsible for populating FASuite with approved and "clean" PATH data.

Format of Converted Data

AssetWorks assumes that all PATH data files are formatted to facilitate uniform electronic conversion. AssetWorks requires that PATH supply all conversion data in text documents (flat file ASCII format) with necessary documentation.

AssetWorks will provide Microsoft Excel templates to assist in loading data into FASuite. AssetWorks will convert only the data that maps into FASuite. Data that does not map into FASuite will not be converted. Further, only data elements that can be entered on an FASuite screen are part of this conversion.

PATH will provide the data in the properly formatted spreadsheets (per AssetWorks' specification) for loading into FASuite. AssetWorks makes the following assumptions about the data from the legacy PATH system(s):

- The data files for the asset master records will be text-based flat files with one row of data per asset
- The data files for the part master records will be text-based flat files with one row of data per part
- The data files for work order history will be text-based flat files with one row of data per labor or part transaction, including accurate work order and task references
- AssetWorks will use default values for any data element that FASuite requires that is not in the data file.
- PATH will provide each test data file and each production data file in exactly the same format.



- AssetWorks will not be responsible for “scrubbing” or “cleansing” legacy PATH data.
- AssetWorks will not source or manually enter any data.

PATH will provide one flat file record for each new rail car. AssetWorks will not be responsible for converting hard copy data records.

Conversion of Specific Data

AssetWorks will help PATH finalize the asset master data mapping for equipment and part master records and identify the specific sources for each data element. There will be no repair cost information loaded into FASuite for these assets.

Data Conversion Testing

After AssetWorks and PATH have jointly documented the data mapping and data load process, AssetWorks will test the results from PATH’s data extractions. These tests will validate the data migration strategy that the team defined in earlier stages. This process will require involvement from the PATH Information Technology personnel supporting the existing systems. Upon completion, AssetWorks will provide all testing results to PATH for acceptance.

PATH Validation of Data Conversion

AssetWorks will convert samples of the data for review and validation purposes. AssetWorks will assist the PATH Project Manager in the validation process. AssetWorks will convert the data based on the rules defined earlier in the project. Data will be converted into the development environment and validated by PATH before being converted into the production environment.

Data Conversion Documentation

Prior to conversion into the development environment, AssetWorks will provide to PATH a document explaining the conversion process and mapping the converted data into FASuite. Upon completion of conversion to the development environment, AssetWorks will test the conversion process by working with the PATH project team to move the data (dry run) into the FASuite database. Data validation will occur, followed by live conversion of data into the production environment. AssetWorks will use FASuite’s batch processing feature to load the data on these screens.

AssetWorks will provide one complete, successful conversion based on the conversion specifications into Test/Development, and then one complete, successful conversion based on the conversion specifications into Production.

Catalog Scanning and Hot-Spotting

AssetWorks will provide the scanning and hot-spotting services for the Illustrated Parts Catalog with the following assumptions.

- PATH will send the documents via delivery or electronically and an off-site location
- AssetWorks will scan and hot-spot up to 2,000 pages
- Pages will be standard 8 ½ x 11 with one drawing or parts list per page



- Pages that are 8 ½ x 11 with drawing and parts list on same page, or 11 x 17, or Engineering diagrams, or A4 size pages, or any fold-out hydraulic or electric schematics are NOT included

AssetWorks recommends reviewing the lists of documents with PATH prior to agreeing to a final scope of work. Many factors, including the age of the document and the relevance of the document given the future fleet configuration, can significantly affect the level of effort required. AssetWorks recommends further discussion regarding this conversion requirement before any work begins.

Moreover, if PATH prefers, AssetWorks will provide data conversion services for selected documents and train PATH staff to convert the remainder (some or all, and on an as-needed basis). AssetWorks suggests working with PATH to find the most cost-effective way to convert these documents.

Current Maintenance Systems Data

AssetWorks will convert asset master record information and maintenance history for up to 400 active rail cars (facilities and MOW assets and maintenance history are not included). AssetWorks will develop a data conversion process for the following data items.

- Vehicle Master (New Rail Cars)
- Parts Master (from SAP)
- Work Order
 - Header
 - Labor hours
 - Parts issues

Only data from the online database will be converted to FASuite. Data from archived tapes are not included. The conversion process will not include any other data.

Deliverable for Data Conversion Services

AssetWorks will provide the following deliverables:

- Data Element Mapping Document for new asset data load.
- Technical Specifications for new asset data load.
- Schedule for asset data load.
- Loaded asset data.

PATH is responsible for all deliverables not specifically included above.

WBS C.2.3 Report Development Services

AssetWorks will install the standard reports, which are used by other AssetWorks FASuite customers, including other public transportation agencies. In the early stages of the engagement, AssetWorks will work with the PATH Project Manager to develop a list of other required reports and order each report by priority.

This proposal includes up to 208 hours of report development services, to be specified and used during the engagement. AssetWorks estimates this level of effort would be sufficient to create and test approximately five to ten low- to medium-complexity reports. AssetWorks will develop the agreed-upon custom reports in the Reporting environment, using Crystal Reports XI OEM Embedded Edition. PATH and AssetWorks will agree on a written specification and an estimate for the level of effort required to complete each custom report before any development work begins.

AssetWorks will provide high-level instructions to the PATH staff regarding how to create other custom reports (e.g., what tables to use for certain data). PATH staff can then create an unlimited number of custom reports or enhance the standard reports.

Deliverable for Reports Development

AssetWorks will provide the following deliverables:

- Report development and testing services.
- Accurate, production-ready reports.

PATH is responsible for all deliverables not specifically included above.



WBS C.2.4 Testing Services

AssetWorks will use the plans for Unit Tests, Integrated Tests, and User Tests from Phase I.

Unit Testing

Validate Unit Test Plan from Phase I

AssetWorks and PATH will validate the Phase I plan to ensure it still applies. AssetWorks assumes no changes will be required.

Execute Unit Test Plan

AssetWorks will use sample PATH data (where possible) to demonstrate the FASuite system features and to display the converted data in the test environment, according to the above test plans. The test plan will be executed according to the schedule in the project plan.

Document and provide test results

AssetWorks will provide documented test results that include the test criteria and note the outcome of each test. The document will be delivered in Microsoft Word and will be approximately 10-20 pages in length.

Integrated Testing

Validate Integrated Test Plan from Phase I

AssetWorks and PATH will validate the Phase I plan to ensure it still applies. AssetWorks assumes no changes will be required.

Execute Integrated Test Plan

AssetWorks will use sample PATH data (where possible) to demonstrate the FASuite integration and to display the converted data in the test environment, according to the above test plan.

Document and provide test results

AssetWorks will provide documented test results that define the test criteria and note outcome of each test.

User Testing

Validate User Test Plan from Phase I

AssetWorks and PATH will validate the Phase I plan to ensure it still applies. AssetWorks assumes no changes will be required.

Execute User Test

AssetWorks will use sample PATH data (where possible) to demonstrate the features of FASuite in the test environment, according to the above test plan.



Document and provide test results

AssetWorks will provide test scripts and document the results of all testing, including a passed/failed indication and any modifications made to the procedures during the test.

Deliverable for System Testing Services

AssetWorks will provide the following deliverables:

- Test results for FASuite unit, integration, and user testing.

PATH is responsible for all deliverables not specifically included above.



WBS C.2.5 Training Delivery Services

AssetWorks will use the training materials and procedures from Phase I training tasks. AssetWorks assumes no changes will be required.

AssetWorks will provide on-site training to PATH (as outlined above) in a classroom environment suitable for training. PATH will be responsible for providing and preparing the training facility.

The program will be conducted at the PATH facilities in Harrison, NJ.

Training Administration

AssetWorks will maintain class registration in PATH's PeopleSoft Human Resources system. PATH will provide AssetWorks with sufficient PeopleSoft Registration & Scheduling training for up to four AssetWorks team members and provide the necessary training documentation.

AssetWorks will:

- Work with PATH Departmental Training coordinators (PATH will identify Training Coordinators) to coordinate and schedule all identified users in FASuite training classes. This effort would include any participant cancellations as well as re-scheduling. PATH will identify the complete list of users in advance.
- Prepare class schedules and notification to end-users and training coordinators.
- Schedule all training classes.
- Provide weekly status reports regarding participant enrollments and completions.
- Ensure that all training materials, class rosters, and course evaluations are in all scheduled classes prior to training date.
- Maintain the class attendance roster and provide notification of no-shows and/or cancellations to the PATH Training Manager.

PATH will ensure all training rooms are fully equipped with working projectors, computers, and other equipment for each training class.

Training Delivery

AssetWorks will deliver the following training.

PATH Trainer Training

AssetWorks will provide Trainer training to designated PATH "trainers" for the roll-out of FASuite. AssetWorks will provide up to three days of Trainer training for up to twenty-four users in two classes of ten each (assuming PATH's training facility has a sufficient number of workstations for these concurrent training sessions). These trainees will be responsible for training all PATH end users in the use of FASuite for the roll-out and on an ongoing basis. The training will cover the following areas of FASuite:

Trainers

FASuite overview and orientation

Labor and time entry

Use of selected standard reports

Work order management functions

Materials and parts request functions for technicians

Basic troubleshooting and administrative functions



The topics and work flows included in the training will be those finalized by the PATH team during the BPA, system setup, and follow-up tasks. Any deviations in the defined and agreed upon work flow may cause delays and added costs to the training.

End User Training

PATH will provide Operational training to the following end users. The topics and work flows included in the training will be those finalized by the PATH team during the system setup and follow-up tasks. PATH should remain especially sensitive to necessary last-minute procedural changes or clarifications based on end user feedback.

System Internals Administrator (Application Admin)

System login	Users and User Groups
Set-up Options	Table Management
Use of selected standard reports	Basic troubleshooting

Storekeeper

System login	Part Requests
Part Primary Records and cross-references	Ordering
Use of selected standard reports	Other parts features

Maintenance (Technicians)

System login	Work order look-up functions
Labor and time entry	Materials and parts request functions for technicians
Use of selected standard reports	Basic troubleshooting

Warranty Administrator

System login	Work order management functions
Multi-Unit Projects and Campaigns	Warranty Claims
Use of selected standard reports	Parts Warranty and Vehicle Warranty Set-up

Maintenance Planner

System login	Work order management functions
Multi-Unit Projects and Campaigns	Class/Task information and PM planning
Use of selected standard reports	Basic troubleshooting



Maintenance Supervisor

System login	Work order management functions
Labor and time entry and management	Materials and parts request functions for managers
Use of selected standard reports	Basic troubleshooting

Car Configuration Administrator

System login	Work order management functions
Multi-Unit Projects and Campaigns	Class/Task information and PM planning
Use of selected standard reports	Basic troubleshooting

PATH will identify at least one "key user" at each location to closely support the cutover, particularly after the training concludes. This individual will be responsible for answering initial end user questions and, most importantly, implementing subsequent changes or alterations to the documented procedures. AssetWorks recommends that these "key users" be those that attended the core team training sessions described above.

Deliverable for Training Delivery Services

AssetWorks will provide the following deliverables, as described in the RFP:

- Trainer and End User training classes.
- Rosters and class evaluations for each class.

PATH is responsible for all deliverables not specifically included above.



WBS C.2.6 Operational Acceptance Test

AssetWorks recommends further discussion about the implementation of the OAT for Phase II. It is very likely that the two OAT periods could be combined to provide much better support at a lower cost to PATH. However, in the event the schedules cannot coincide, AssetWorks has included a full OAT for Phase II.

Implementation Services

AssetWorks will provide remote and on-site post-implementation support for a period of three months commencing with PATH's go-live on the new system, per the project plan.

When PATH commences live operations using FASuite, AssetWorks will be on-site, rotating between locations, to provide "go live" assistance for the PATH fleet management operation. This step is critical to success.

The AssetWorks and PATH team will provide refresher training and help on the shop floors and offices to make sure the transition is as smooth as possible. This time includes verification of proper use of equipment and system performance, adherence to defined processes, auditing of inventory processes for accuracy, and tracking and resolving system issues that arise. In addition, AssetWorks will

- Support PATH in the identification and resolution of application issues
- Monitor the operation and usage of FASuite to identify possible application and workflow improvements

AssetWorks has provided for decreasing levels of remote and on-site post-implementation support over the three-month period. In total, AssetWorks will deliver 480 hours of remote and on-site support to PATH's maintenance and IT staff for Phase II.

During the post-implementation period, AssetWorks will provide some support to all shifts (however, this level of effort does not include full-time coverage for all shifts). AssetWorks will generally provide support during any one shift per day (day, swing, or night). When possible and agreed, AssetWorks will provide support to multiple shifts on a given day (e.g., by covering the last four hours of one shift and the first four hours of a second shift).

This work plan does not guarantee full-time support during any one shift or during all portions of the post-implementation period, but rather a mutually agreed-upon distribution of the provided number of support hours throughout the post-implementation support period.

Customer Support Services

In addition to the above, AssetWorks Customer Support is available to PATH's primary points of contact (up to three persons) for assistance with any standard application issue. Please see the Software Maintenance Agreement for more information about these services.

Deliverable for Operational Acceptance Test Services

- Post-implementation support.
- Bi-weekly status reports to PATH detailing the observations and FASuite support effort.

PATH is responsible for all deliverables not specifically included above.



Work Plan – Support Stage

AssetWorks has proposed a single Support Stage for this engagement, scheduled to begin after the Phase II OAT. This approach will allow the Phase I project to wrap up and burn in, while the team completes the Phase II OAT (since no new applications can be installed during the Phase II OAT anyway).

If the six week gap in the extended support is not desirable, or the gap is larger because of a delay in the completion of Phase II (such as the rail cars not being delivered as represented here), AssetWorks will revise this plan and add a second Support Stage.

AssetWorks will provide support services, through its Customer Support department as outlined in the AssetWorks Software Maintenance Agreement, which include, for AssetWorks software:

- software error corrections
- software updates and new releases to the application software
- support for user questions from designated points of contact
- support for emergency recovery situations

WBS D.1.0 Project Management Services

AssetWorks will provide project management and oversight services to execute the project plan. The AssetWorks project manager will coordinate all AssetWorks project activities. AssetWorks will provide the following project management services:

- Coordination of project resources
- Serve as the main point of contact for the PATH project manager
- Manage any AssetWorks subcontractors
- Provide updates every two weeks to the work plan and project budget, or as requested by the PATH project manager

AssetWorks will ensure sufficient resources are available to support the project requirements. AssetWorks will assign a senior-level program manager to provide additional subject matter expertise, monitor the project resources and budget, and ensure quality delivery of services. This manager is PATH's first escalation point for any issues arising during the project.

The AssetWorks Project Manager will monitor the project resources to ensure quality delivery of services and that the Deliverables are completed on time and in accordance with the project requirements.

Deliverable for Project Management Services

- Relevant status reports and meetings regarding FASuite.

PATH is responsible for all deliverables not specifically included above.



WBS D.2.0 Capacity Management And Performance Monitoring

AssetWorks will provide a staff member, through a combination of on-site and off-site services, to support PATH in this "turnover" stage for the AssetWorks applications. Efforts will be limited to observations and recommendations, and do not include any hardware or software procurement or installation.

Per the project plan, AssetWorks will

- monitor the system performance
- recommend corrective actions to correct capacity and performance inadequacies, using best judgment
- maintain records on application performance and resource usage and sampled user response time to recommend future server expansion needs
- maintain communication with the PATH's Application Manager and user community in regard to plans for application expansion or modification, which would impact System capacity or performance.
- track such items as database/file sizes, and concurrent users
- take reasonable preventative action to minimize application failure due to insufficient resource levels
- monitor CPU and memory usage on application and database servers
- investigate system problems that result in unsatisfactory performance and take reasonable steps to remedy the problem

AssetWorks has included up to 1,152 hours of services by a technical, experienced resource in the proposal for this task.

Deliverable for Capacity Management And Performance Monitoring

- Relevant status reports.
- Observation reports and recommendations.

PATH is responsible for all deliverables not specifically included above.



WBS D.3.0 Change Management Administration

AssetWorks will provide a staff member, through a combination of on-site and off-site services, to support PATH in this "turnover" stage for the AssetWorks applications. Efforts will be limited to observations and recommendations, and do not include any hardware or software procurement or installation.

Although all changes and upgrades will be the sole responsibility of PATH, AssetWorks will advise PATH so that all changes to the application are made in a controlled manner. PATH will ensure that all application changes are properly authorized, tested and documented prior to implementation in the production environment, in accordance with a structured maintenance methodology. AssetWorks will maintain a general awareness of changes to PATH's information infrastructure, and have appropriate back-out/reversal recommendations available as necessary.

Per the project plan, AssetWorks will

- Inform PATH management of new software options for AssetWorks-provided software
- Maintain contact with the PATH System Administrator to keep him/her aware of AssetWorks software upgrades and fixes and hot packs

PATH will

- establish a segregated test and quality assurance environment for all testing and upgrade tasks
- *maintain segregated test and quality assurance environment(s) insulated from the production environment for testing of all changes to software prior to introduction to the production environment*
- assume control of the training environment AssetWorks established for the training in the Implementation Stage
- establish and enforce procedures to ensure that only approved changes are implemented

However, since PATH will be one of many AssetWorks customers using an out-of-the-box application, AssetWorks' internal QA and Customer Support functions will simplify many of these efforts for PATH.

AssetWorks has included up to 288 hours of services by a technical, experienced resource in the proposal for this task.

Deliverable for Change Management Administration

- Support in upgrade planning.

PATH is responsible for all deliverables not specifically included above.

WBS D.4.0 Coaching and User Assistance

AssetWorks will provide a staff member, through a combination of on-site and off-site services, to support PATH as requested for assistance with the AssetWorks applications.

AssetWorks will

- provide technical and second level end-user training to the system users
- provide technical support to user department staff at internal/external meetings
- conduct ongoing and refresher training for the trainers when requested
- serve as a resource for PATH staff as related to application functionality

AssetWorks has included up to 360 hours of training in the proposal for this task.

Deliverable for Change Management Administration

- Training and support services.

PATH is responsible for all deliverables not specifically included above.



WBS D.5.0 Business Resumption Planning

AssetWorks work with the PATH Applications Manager and the user departments to participate in activities associated with the PATH's Business Resumption Plan. AssetWorks will be primarily responsible for the portion of the plan concerned with providing continuing application management services for the application.

AssetWorks has included up to 288 hours of on-site and off-site services in the proposal for this task.

As an optional follow-on task, and as part of a mutually agreed Change Order, AssetWorks will participate in tests of the Business Resumption Plan scheduled by PATH, typically quarterly.

Deliverable for Change Management Administration

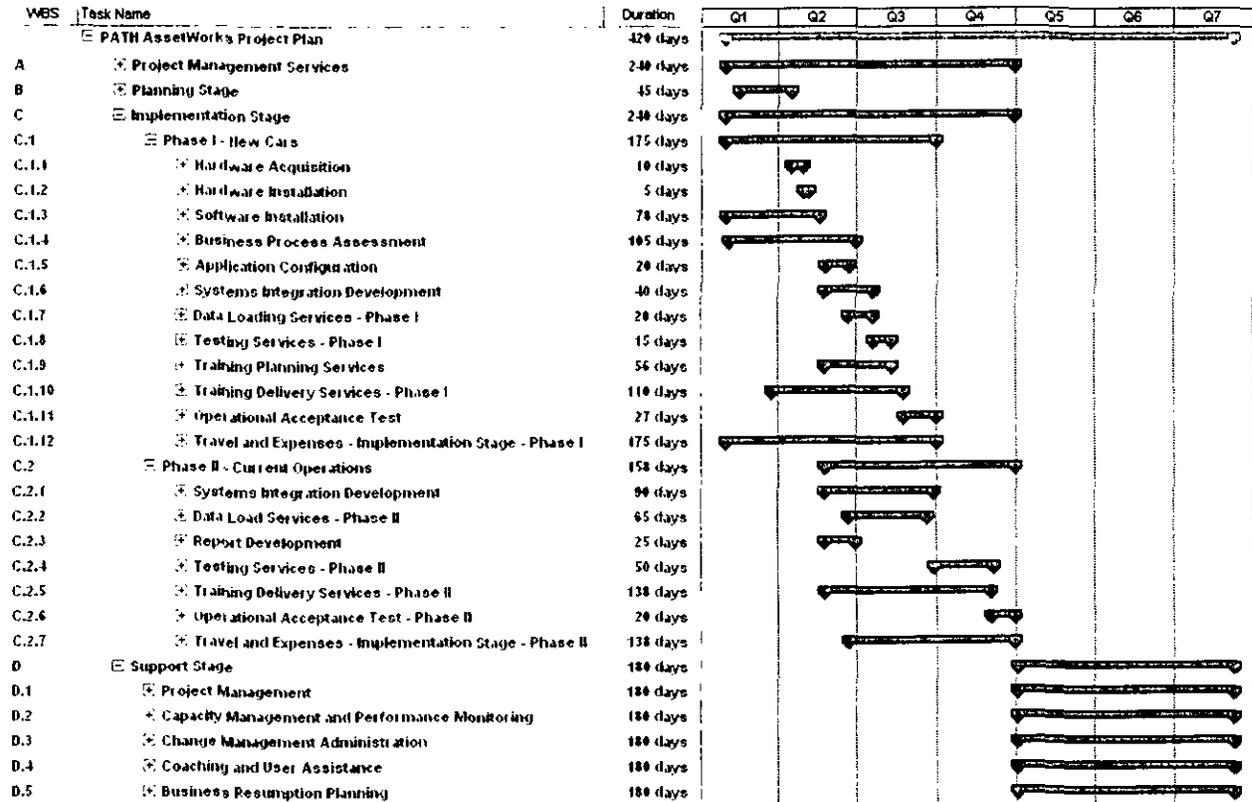
- BRP consulting services.

PATH is responsible for all deliverables not specifically included above.

Preliminary Timeline

The following graph depicts the proposed timeline for this project. Please see the complete Microsoft Project document for a complete project plan, including a Gantt chart.

All tasks described herein assume the durations and timelines represented below. A change to the schedule may result in a change to the implementation costs.



Assumptions

The following general assumptions apply to this proposal:

General

1. This is a fixed-fee effort. Under no circumstances will AssetWorks expend more hours than the number of hours indicated in the project plan.
2. This scope of work relates only to out-of-the-box features and functions for AssetWorks software. No tailoring, customizations, or enhancements are included.
3. AssetWorks' consulting estimates do not include installation and/or configuration of any computer hardware and peripheral equipment. PATH will be responsible for installing and configuring computer hardware and peripheral equipment such as printers and bar code equipment (if applicable).
4. PATH will have all of the necessary and appropriate personnel at all of the meetings for the purpose of defining the requirements of the system.
5. PATH will appoint a single point of contact for the duration of the project. This person should have project management responsibilities and decision-making authority. This person will be the focal point of contact for AssetWorks' Customer Support department.
6. All training sessions will be based on standard application training materials.
7. PATH will implement this solution such that all assets will be in a single production FASuite database.
8. AssetWorks will provide on-site training to PATH (as outlined above) in a classroom environment suitable for training. PATH will be responsible for providing and preparing the training facility.
9. This proposal includes only the interfaces stated in this Statement of Work. AssetWorks will provide estimates for other interfaces as may be required on an as-needed basis.
10. PATH will receive all standard, out-of-the-box reports at no extra cost.
11. This Statement of Work does not include any costs associated with 3rd party vendors or software that may be needed to complete the implementation.
12. PATH commits to training appropriate functional and technical resources as required.
13. PATH is responsible for all manual data entry.

Project Management and Risk Factors

14. The PATH project manager will be responsible for obtaining any required authorizations, approvals and/or signoffs by PATH related to project deliverables and project progression in a timeframe in alignment with the project work plan. Delays to this process as well as any PATH tasks not completed within the work plan timeframe will be subject to the Change Order Management process, delayed deadlines, and increased services fees.
15. This Statement of Work does not include the expenses associated with PATH or PATH resources assigned to the project.
16. PATH remains responsible for all integration effort not described in this Statement of Work.
17. The project schedule is contingent upon the timely attainment of external milestones that are outside of AssetWorks control. Examples include but are not limited to the acquisition of the requisite software licenses and hardware and the approval of requisite capital appropriation requests as required.



18. PATH will have five days to review each deliverable. After five days, the deliverable will be deemed accepted. If changes are requested before the five days, AssetWorks will make the requested revisions, subject to scope, and then submit the final deliverable. There will not be multiple review cycles, unless otherwise mutually agreed.
19. Circumstances may necessitate changes to the tasks and/or time estimates, at which time AssetWorks and PATH will discuss these changes in good faith at their earliest opportunity.

Infrastructure

20. PATH will provide a project work area and infrastructure at the centralized implementation location appropriate for the size of the combined PATH/AssetWorks project team. This infrastructure should include desks, chairs, telephones, and workstations with network access to printers and to the applications and implementation databases.
21. System, server, and workstation backups are the responsibility of PATH. This includes the development and execution of the system backups and recovery programs.
22. PATH personnel assume the responsibility for applying software patches.
23. Acquisition, installation, testing, support, and tuning of any additional required application software, hardware, RDBMS, other software, peripherals and communications infrastructure will be the responsibility of PATH.
24. PATH will be responsible for deploying access to the FASuite system and for providing all supporting software, hardware, and connectivity for the servers. The Web server must use Microsoft IIS.
25. The following information technology services are not included in this Statement of Work: network connections; telecommunications network(s); operating system, network and database administration; disaster recovery planning; the acquisition, installation, testing and tuning of any required hardware, operating software, peripherals and communications infrastructure.

PATH Resources

26. Assumes all PATH project team resources will be committed to the project as of the project start date.
27. Assumes PATH will provide the following resources to insure a successful implementation.
 - Executive Steering Committee – Without proper vision and guidance from a company's executives, many projects fail to reach their desired goals and objectives. The role of the Executive Steering Committee will be to participate in setting the goals and scope of the project and to participate in periodic status meetings with the project team.
 - Project Manager - A Project Manager will be assigned with appropriate decision-making authority.
 - Subject Matter Experts - These resources will be considered part of the core project team and will participate in tasks including Project Team training. Often these experts consist of Functional Leads in their respective areas of expertise (e.g., Maintenance), as well as other supporting personnel from the various departments. The resources designated for these roles should have a good working knowledge of how PATH processes are performed and understand the reasons for the current processes.
 - Technical Experts – A team of Technical Experts will be involved in the technical duties that come with a AssetWorks implementation. Examples include a Technical Lead for system administration, database administration, web administration, printer administration, software patches, etc.



Implementation Plan

ID	WBS	Task Name	Duration	Q-1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
0		PATH AssetWorks Project Plan	420 days								
1	A	Project Management Services	10 days								
2	A.1	Project Start-up	0 days								
3	A.1.1	Notice to Award	0 days								
4	A.1.2	Complete contract negotiations	0 days								
5	A.1.3	Notice to Proceed	0 days								
6	A.1.4	<u>Project Kick-off and Planning</u>	10 days								
7	A.2	Project Management	230 days								
8	A.2.1	Provide project and program management and administration	230 days								
9	A.3	Change Management	230 days								
10	A.3.1	Execute the PATH Change Management Plan	230 days								
11	B	Planning Stage	45 days								
12	B.1	Project Team Orientation	5 days								
13	B.1.1	Prepare orientation materials	3 days								
14	B.1.2	Deliver orientation to project team	2 days								
15	B.2	Feature and Function Description	35 days								
16	B.2.1	FFD Planning	5 days								
17	B.2.1.1	PATH Resources Identified - FFD Advisory Group	5 days								
18	B.2.1.2	Develop and Document FFD Plan	5 days								
19	B.2.1.3	<u>Checkpoint - Review and acceptance of FFD Plan</u>	0 days								
20	B.2.1.4	<u>Checkpoint - Adjust project plan as necessary</u>	0 days								
21	B.2.2	FFD Development	30 days								
22	B.2.2.1	Conduct working sessions to review requirements	5 days								
23	B.2.2.2	Create preliminary document	5 days								
24	B.2.2.3	Review preliminary document	5 days								
25	B.2.2.4	Modify document as required	5 days								
26	B.2.2.5	<u>Checkpoint - Review and acceptance of document</u>	0 days								
27	B.2.2.6	Identify desired enhancements/gaps	5 days								
28	B.2.2.7	Complete document, including cost estimates for selected enhancements	5 days								
29	B.2.2.8	<u>Checkpoint - Review and acceptance of document with costs</u>	0 days								
30	B.2.2.9	<u>Checkpoint - Adjust project plan as necessary</u>	0 days								
31	B.3	Hardware Plan	40 days								
32	B.3.1	Hardware Planning	5 days								
33	B.3.1.1	PATH Resources Identified - Advisory Group	0 days								
34	B.3.1.2	Develop and Document Plan	5 days								
35	B.3.1.3	<u>Checkpoint - Review and acceptance of Hardware Plan</u>	0 days								
36	B.3.1.4	<u>Checkpoint - Adjust project plan as necessary</u>	0 days								
37	B.3.2	Plan Development	35 days								
38	B.3.2.1	Conduct working sessions	5 days								
39	B.3.2.2	Complete discovery	10 days								
40	B.3.2.3	Create preliminary document	10 days								
41	B.3.2.4	Review preliminary document	5 days								
42	B.3.2.5	Modify document as required	5 days								
43	B.3.2.6	<u>Checkpoint - Review and acceptance of document</u>	0 days								
44	B.3.2.7	<u>Checkpoint - Adjust project plan as necessary</u>	0 days								
45	B.4	Implementation Plan	20 days								
46	B.4.1	Planning	0 days								
47	B.4.1.1	PATH Resources Identified - Advisory Group	0 days								
48	B.4.2	Plan Development	20 days								
49	B.4.2.1	Conduct working sessions	5 days								
50	B.4.2.2	Create preliminary document	5 days								
51	B.4.2.3	Review preliminary document	5 days								
52	B.4.2.4	Modify document as required	5 days								
53	B.4.2.5	<u>Checkpoint - Review and acceptance of document</u>	0 days								
54	B.4.2.6	<u>Checkpoint - Adjust project plan as necessary</u>	0 days								
55	B.5	Conversion Plan	25 days								
56	B.5.1	Planning	0 days								
57	B.5.1.1	PATH Resources Identified - Advisory Group	0 days								
58	B.5.2	Plan Development	25 days								
59	B.5.2.1	Conduct working sessions	10 days								
60	B.5.2.2	Create preliminary document	5 days								
61	B.5.2.3	Review preliminary document	5 days								
62	B.5.2.4	Modify document as required	5 days								
63	B.5.2.5	<u>Checkpoint - Review and acceptance of document</u>	0 days								

Implementation Plan

ID	WBS	Task Name	Duration	Q-1	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
64	B.5.2.6	<u>Checkpoint - Adjust project plan as necessary</u>	0 days									
65	B.6	Functional Test Plan	20 days									
66	B.6.1	Planning	0 days									
67	B.6.1.1	PATH Resources Identified - Advisory Group	0 days									
68	B.6.2	Plan Development	20 days									
69	B.6.2.1	Conduct working sessions	5 days									
70	B.6.2.2	Create preliminary document	5 days									
71	B.6.2.3	Review preliminary document	5 days									
72	B.6.2.4	Modify document as required	5 days									
73	B.6.2.5	<u>Checkpoint - Review and acceptance of document</u>	0 days									
74	B.6.2.6	<u>Checkpoint - Adjust project plan as necessary</u>	0 days									
75	B.7	Operational Acceptance Test Plan	20 days									
76	B.7.1	Planning	0 days									
77	B.7.1.1	PATH Resources Identified - Advisory Group	0 days									
78	B.7.2	Plan Development	20 days									
79	B.7.2.1	Conduct working sessions	5 days									
80	B.7.2.2	Create preliminary document	5 days									
81	B.7.2.3	Review preliminary document	5 days									
82	B.7.2.4	Modify document as required	5 days									
83	B.7.2.5	<u>Checkpoint - Review and acceptance of document</u>	0 days									
84	B.7.2.6	<u>Checkpoint - Adjust project plan as necessary</u>	0 days									
85	B.8	System Support Plan	20 days									
86	B.8.1	Planning	0 days									
87	B.8.1.1	PATH Resources Identified - Advisory Group	0 days									
88	B.8.2	Plan Development	20 days									
89	B.8.2.1	Conduct working sessions	5 days									
90	B.8.2.2	Create preliminary document	5 days									
91	B.8.2.3	Review preliminary document	5 days									
92	B.8.2.4	Modify document as required	5 days									
93	B.8.2.5	<u>Checkpoint - Review and acceptance of document</u>	0 days									
94	B.8.2.6	<u>Checkpoint - Adjust project plan as necessary</u>	0 days									
95	B.9	Training Plan	25 days									
96	B.9.1	Planning	0 days									
97	B.9.1.1	PATH Resources Identified - Advisory Group	0 days									
98	B.9.2	Plan Development	25 days									
99	B.9.2.1	Conduct working sessions	10 days									
100	B.9.2.2	Create preliminary document	5 days									
101	B.9.2.3	Review preliminary document	5 days									
102	B.9.2.4	Modify document as required	5 days									
103	B.9.2.5	<u>Checkpoint - Review and acceptance of document</u>	0 days									
104	B.9.2.6	<u>Checkpoint - Adjust project plan as necessary</u>	0 days									
105	B.10	Parallel Testing Plan	20 days									
106	B.10.1	Planning	0 days									
107	B.10.1.1	PATH Resources Identified - Advisory Group	0 days									
108	B.10.2	Plan Development	20 days									
109	B.10.2.1	Conduct working sessions	5 days									
110	B.10.2.2	Create preliminary document	5 days									
111	B.10.2.3	Review preliminary document	5 days									
112	B.10.2.4	Modify document as required	5 days									
113	B.10.2.5	<u>Checkpoint - Review and acceptance of document</u>	0 days									
114	B.10.2.6	<u>Checkpoint - Adjust project plan as necessary</u>	0 days									
115	B.11	Travel and Expenses - Planning Stage	45 days									
116	B.11.1	Travel Costs	45 days									
117	B.11.2	Expenses	45 days									
118	C	Implementation Stage	175 days									
119	C.1	Phase I - New Cars	10 days									
120	C.1.1	Hardware Acquisition	10 days									
121	C.1.1.1	Acquire hardware for servers, network, and workstations	5 days									
122	C.1.2	Hardware Installation	5 days									
123	C.1.2.1	Install and configure all hardware	5 days									
124	C.1.3	Software Installation	76 days									
125	C.1.3.1	Installation Services	74 days									
126	C.1.3.1.1	Install Software in hosted environment	2 days									
127	C.1.3.1.2	Install Software in Test environment	1 day									

Implementation Plan

ID	WBS	Task Name	Duration	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
128	C.1.3.1.3	Install Software in QA/Training environment	1 day								
129	C.1.3.1.4	Install Software in Prod environment	2 days								
130	C.1.3.2	System Testing Services	76 days								
131	C.1.3.2.1	Conduct System Test in Development environment	2 days								
132	C.1.3.2.2	Conduct System Test in Test environment	2 days								
133	C.1.3.2.3	Conduct System Test in QA/Training environment	2 days								
134	C.1.3.2.4	Conduct System Test in Prod environment	2 days								
135	C.1.4	Business Process Assessment	105 days								
136	C.1.4.1	Operations - Current Processes	25 days								
137	C.1.4.1.1	Planning & Scheduling Activities	5 days								
138	C.1.4.1.1.1	Interview - Planning & Scheduling	2 days								
139	C.1.4.1.1.2	Field Observations - Planning & Scheduling	2 days								
140	C.1.4.1.1.3	Documentation - Planning & Scheduling	1 day								
141	C.1.4.1.2	Work Management	5 days								
142	C.1.4.1.2.1	Interview - Work Management	2 days								
143	C.1.4.1.2.2	Field Observations - Work Management	2 days								
144	C.1.4.1.2.3	Documentation - Work Management	1 day								
145	C.1.4.1.3	Materials/Purchasing Interviews	5 days								
146	C.1.4.1.3.1	Interview - Materials/Purchasing	2 days								
147	C.1.4.1.3.2	Field Observations - Materials/Purchasing	2 days								
148	C.1.4.1.3.3	Documentation - Materials/Purchasing	1 day								
149	C.1.4.1.4	Backshops	5 days								
150	C.1.4.1.4.1	Interview - Backshop Overview	2 days								
151	C.1.4.1.4.2	Field observations - Backshop, all functions	1 day								
152	C.1.4.1.4.3	Documentation - Backshop, all functions	2 days								
153	C.1.4.1.5	Review All Activities	5 days								
154	C.1.4.1.5.1	Checkpoint - PATH Core Team Review of Notes	5 days								
155	C.1.4.1.5.2	Identify potential process changes	5 days								
156	C.1.4.1.5.3	Prepare for Future Process discussions	5 days								
157	C.1.4.2	Operations - Future Processes	55 days								
158	C.1.4.2.1	Planning & Scheduling Activities	10 days								
159	C.1.4.2.1.1	Workshop - Planning & Scheduling	2 days								
160	C.1.4.2.1.2	Documentation - Planning & Scheduling	2 days								
161	C.1.4.2.1.3	PATH Review and Feedback - Planning & Scheduling	3 days								
162	C.1.4.2.1.4	AssetWorks Revisions - Planning & Scheduling	6 days								
163	C.1.4.2.2	Work Management	10 days								
164	C.1.4.2.2.1	Workshop - Work Management	2 days								
165	C.1.4.2.2.2	Documentation - Work Management	2 days								
166	C.1.4.2.2.3	PATH Review and Feedback - Work Management	3 days								
167	C.1.4.2.2.4	AssetWorks Revisions - Work Management	6 days								
168	C.1.4.2.3	Warranty Activities	10 days								
169	C.1.4.2.3.1	Workshop - Warranty Activities	2 days								
170	C.1.4.2.3.2	Documentation - Warranty Activities	2 days								
171	C.1.4.2.3.3	PATH Review and Feedback - Warranty Activities	3 days								
172	C.1.4.2.3.4	AssetWorks Revisions - Warranty	6 days								
173	C.1.4.2.4	Materials/Purchasing Interviews	15 days								
174	C.1.4.2.4.1	Workshop - Materials/Purchasing	5 days								
175	C.1.4.2.4.2	Documentation - Materials/Purchasing	5 days								
176	C.1.4.2.4.3	PATH Review and Feedback - Materials/Purchasing	3 days								
177	C.1.4.2.4.4	AssetWorks Revisions - Materials/Purchasing	5 days								
178	C.1.4.2.5	Backshops	10 days								
179	C.1.4.2.5.1	Workshop - Backshop Overview	2 days								
180	C.1.4.2.5.2	Documentation - all functions	2 days								
181	C.1.4.2.5.3	PATH Review and Feedback - Backshop, all functions	3 days								
182	C.1.4.2.5.4	AssetWorks Revisions - Backshop, all functions	3 days								
183	C.1.4.3	Complete BPA report	25 days								
184	C.1.4.3.1	Checkpoint - Make sure all interviews are complete	0 days								
185	C.1.4.3.2	Consolidate Findings	2 days								
186	C.1.4.3.3	Prepare and submit preliminary report	8 days								
187	C.1.4.3.4	Checkpoint - PATH Core Team Review of Preliminary report	5 days								
188	C.1.4.3.5	Joint Review of Proposed TO BE Solution (CRP)	10 days								
189	C.1.4.3.6	Complete and submit final report	5 days								
190	C.1.4.3.7	Checkpoint - PATH Core Team acceptance of report	0 days								
191	C.1.4.3.8	Checkpoint - Adjust project plan as necessary	0 days								

Implementation Plan

ID	WBS	Task Name	Duration	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
192	C.1.5	Application Configuration	20 days								
193	C.1.5.1	Configure FASuite (security, org structure, etc.)	20 days								
194	C.1.5.2	Document system configuration	20 days								
195	C.1.5	Systems Integration Development	40 days								
196	C.1.5.1	SAP Interface - Phase I	40 days								
197	C.1.5.1.1	Create preliminary interface specifications	5 days								
198	C.1.5.1.2	<u>Review preliminary specifications</u>	0 days								
199	C.1.5.1.3	Modify specifications as agreed	5 days								
200	C.1.5.1.4	<u>Checkpoint - Approve interface specifications</u>	0 days								
201	C.1.5.1.5	Develop interfaces	10 days								
202	C.1.5.1.6	Test and validate interfaces	5 days								
203	C.1.5.1.7	Prepare interfaces documentation	5 days								
204	C.1.7	Data Loading Services - Phase I	20 days								
205	C.1.7.1	New Car Data	20 days								
206	C.1.7.1.1	Create preliminary conversion spec	5 days								
207	C.1.7.1.2	<u>Checkpoint - Approve conversion specification</u>	0 days								
208	C.1.7.1.3	Build and execute conversion	10 days								
209	C.1.7.1.4	<u>Checkpoint - Review conversion progress</u>	0 days								
210	C.1.7.1.5	Complete conversion	10 days								
211	C.1.7.1.6	Test and validate conversion	5 days								
212	C.1.7.1.7	<u>Checkpoint - Review and accept conversion</u>	0 days								
213	C.1.8	Testing Services - Phase I	15 days								
214	C.1.8.1	Testing Preparation	0 days								
215	C.1.8.1.1	PATH Resources Identified - Testing Advisory Group	0 days								
216	C.1.8.2	Execute Test Plans	15 days								
217	C.1.8.2.1	User Acceptance Test	15 days								
218	C.1.8.2.1.1	Prepare for Test	5 days								
219	C.1.8.2.1.2	Execute Test Plan	5 days								
220	C.1.8.2.1.3	Document Test Results and Correct	5 days								
221	C.1.8.2.1.4	<u>Checkpoint - Review and acceptance of Test Results</u>	0 days								
222	C.1.8.2.1.5	<u>Checkpoint - Adjust project plan as necessary</u>	0 days								
223	C.1.9	Training Planning Services	56 days								
224	C.1.9.1	Training Preparation	20 days								
225	C.1.9.1.1	PATH Resources Identified - Training Advisory Group	0 days								
226	C.1.9.1.2	<u>Checkpoint - Validation of Training Plan</u>	0 days								
227	C.1.9.1.3	<u>Checkpoint - Adjust project plan as necessary</u>	0 days								
228	C.1.9.1.4	Prepare Training support systems and processes	20 days								
229	C.1.9.2	Develop Training Outline	5 days								
230	C.1.9.2.1	Prepare Training Outline	4 days								
231	C.1.9.2.2	Present Training Outline	1 day								
232	C.1.9.2.3	<u>Checkpoint - Review of Training Outline</u>	0 days								
233	C.1.9.3	Develop Training Materials	10 days								
234	C.1.9.3.1	Develop draft training materials for each role	10 days								
235	C.1.9.3.2	<u>Checkpoint - Review and acceptance of training materials</u>	0 days								
236	C.1.9.4	Deliver Training Session "Dry Run" for End User Training	9 days								
237	C.1.9.4.1	Prepare for training session "Dry Run"	5 days								
238	C.1.9.4.2	Supervisor training "Dry Run"	2 days								
239	C.1.9.4.3	Technician training "Dry Run"	2 days								
240	C.1.9.4.4	<u>Checkpoint - Review and accept Training Program</u>	0 days								
241	C.1.9.5	Deliver Final Training Materials	0 days								
242	C.1.9.5.1	Deliver final training materials	110 days								
243	C.1.10	Training Delivery Services - Phase I	100 days								
244	C.1.10.1	Training Administration	100 days								
245	C.1.10.1.1	Training scheduling and registration	5 days								
246	C.1.10.2	Information Technology Team Training	5 days								
247	C.1.10.2.1	Provide training to IT staff	5 days								
248	C.1.10.3	PATH Trainer Training	5 days								
249	C.1.10.3.1	Provide training to Trainers	5 days								
250	C.1.10.4	End User Training	10 days								
251	C.1.10.4.1	Provide training for end users	10 days								
252	C.1.10.5	Training Completion	0 days								
253	C.1.10.5.1	Verify and accept training completion	0 days								
254	C.1.10.5.2	<u>Checkpoint - Proceed to Training and Production Roll-out</u>	0 days								
255	C.1.11	Operational Acceptance Test	27 days								

Implementation Plan

ID	WBS	Task Name	Duration	Q-1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
256	C.1.1.1.1	Checkpoint - Verify system readiness and commence live operations	0 days								
257	C.1.1.1.2	Commence Live Operations	0 days								
258	C.1.1.1.3	Provide remote and on-site production support	27 days								
259	C.1.1.2	Travel and Expenses - Implementation Stage - Phase I	175 days								
260	C.1.1.2.1	Travel Costs - Implementation Stage - Phase I	175 days								
261	C.1.1.2.2	Documentation	175 days								
262	C.2	Phase II - Current Operations	158 days								
263	C.2.1	Systems Integration Development	90 days								
264	C.2.1.1	Interface Development Preparation	5 days								
265	C.2.1.1.1	PATH Resources Identified - Integration Advisory Group	0 days								
266	C.2.1.1.2	Document Integration Plan	5 days								
267	C.2.1.1.3	Checkpoint - Review and acceptance of Integration Plan	0 days								
268	C.2.1.1.4	Checkpoint - Adjust project plan as necessary	0 days								
269	C.2.1.2	SAP Interfaces - Phase II	85 days								
270	C.2.1.2.1	Create preliminary interface specifications	20 days								
271	C.2.1.2.2	Review preliminary specifications	20 days								
272	C.2.1.2.3	Modify specifications as agreed	20 days								
273	C.2.1.2.4	Checkpoint - Approve interface specifications	0 days								
274	C.2.1.2.5	Develop interfaces	40 days								
275	C.2.1.2.6	Test and validate interfaces	40 days								
276	C.2.1.2.7	Prepare interface documentation	40 days								
277	C.2.1.3	DMRDS Interface - Phase II	30 days								
278	C.2.1.3.1	Create preliminary interface specification	5 days								
279	C.2.1.3.2	Review preliminary specification	5 days								
280	C.2.1.3.3	Modify specification as required	5 days								
281	C.2.1.3.4	Checkpoint - Approve interface specification	0 days								
282	C.2.1.3.5	Develop interface	10 days								
283	C.2.1.3.6	Test and validate interface	10 days								
284	C.2.1.3.7	Prepare interface documentation	5 days								
285	C.2.1.4	IETM Interface - Phase II	25 days								
286	C.2.1.4.1	Create preliminary interface specification	5 days								
287	C.2.1.4.2	Review preliminary specification	5 days								
288	C.2.1.4.3	Modify specification as required	5 days								
289	C.2.1.4.4	Checkpoint - Approve interface specification	0 days								
290	C.2.1.4.5	Develop interface	5 days								
291	C.2.1.4.6	Test and validate interface	5 days								
292	C.2.1.4.7	Prepare interface documentation	5 days								
293	C.2.2	Data Load Services - Phase II	65 days								
294	C.2.2.1	Data Load Preparation	10 days								
295	C.2.2.1.1	PATH Resources Identified - Data Conversion Advisory Group	0 days								
296	C.2.2.1.2	Review Data Conversion Plan	10 days								
297	C.2.2.1.3	Checkpoint - Validation of Data Conversion Plan	0 days								
298	C.2.2.1.4	Checkpoint - Adjust project plan as necessary	0 days								
299	C.2.2.2	Current Asset Data	50 days								
300	C.2.2.2.1	Create preliminary conversion spec	10 days								
301	C.2.2.2.2	Approve preliminary specification	5 days								
302	C.2.2.2.3	Modify specification as required	5 days								
303	C.2.2.2.4	Checkpoint - Approve conversion specification	0 days								
304	C.2.2.2.5	Build and Execute conversion	15 days								
305	C.2.2.2.6	Checkpoint - Review conversion progress	0 days								
306	C.2.2.2.7	Complete conversion	15 days								
307	C.2.2.2.8	Test and validate conversion	10 days								
308	C.2.2.2.9	Prepare conversion procedure docs	10 days								
309	C.2.2.2.10	Checkpoint - Review and accept conversion	0 days								
310	C.2.2.3	Online Paris Catalog Data Conversion Services	35 days								
311	C.2.2.3.1	Checkpoint - Validate conversion methodology	0 days								
312	C.2.2.3.2	Complete conversion	30 days								
313	C.2.2.3.3	Test and validate conversion	10 days								
314	C.2.2.3.4	Checkpoint - Review and accept conversion	0 days								
315	C.2.3	Report Development	25 days								
316	C.2.3.1	PATH Resources Identified - Reports Advisory Group	0 days								
317	C.2.3.2	Specify additional reports and prioritize	5 days								
318	C.2.3.3	Develop custom reports	20 days								
319	C.2.3.4	PATH Staff to develop additional reports	20 days								

Implementation Plan

ID	WBS	Task Name	Duration	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
320	C.2.4	Testing Services - Phase II	50 days								
321	C.2.4.1	Testing Preparation	0 days								
322	C.2.4.1.1	PATH Resources Identified - Testing Advisory Group	0 days								
323	C.2.4.2	Develop Test Plans	15 days								
324	C.2.4.2.1	Unit Test	5 days								
325	C.2.4.2.1.1	Prepare Test Plan	0 days								
326	C.2.4.2.1.2	Checkpoint - Review and acceptance of Test Plan	5 days								
327	C.2.4.2.2	Integrated Test	5 days								
328	C.2.4.2.2.1	Prepare Test Plan	0 days								
329	C.2.4.2.2.2	Checkpoint - Review and acceptance of Test Plan	5 days								
330	C.2.4.2.3	User Acceptance Test	5 days								
331	C.2.4.2.3.1	Prepare Test Plan	0 days								
332	C.2.4.2.3.2	Checkpoint - Review and acceptance of Test Plan	45 days								
333	C.2.4.3	Execute Test Plans	15 days								
334	C.2.4.3.1	Unit Test	5 days								
335	C.2.4.3.1.1	Prepare for Test	0 days								
336	C.2.4.3.1.2	Execute Test Plan	10 days								
337	C.2.4.3.1.3	Document Test Results and Correct	10 days								
338	C.2.4.3.1.4	Checkpoint - Review and acceptance of Test Results	0 days								
339	C.2.4.3.1.5	Checkpoint - Adjust project plan as necessary	0 days								
340	C.2.4.3.2	Integrated Test	15 days								
341	C.2.4.3.2.1	Prepare for Test	5 days								
342	C.2.4.3.2.2	Execute Test Plan	10 days								
343	C.2.4.3.2.3	Document Test Results and Correct	5 days								
344	C.2.4.3.2.4	Checkpoint - Review and acceptance of Test Results	0 days								
345	C.2.4.3.2.5	Checkpoint - Adjust project plan as necessary	0 days								
346	C.2.4.3.3	User Acceptance Test	15 days								
347	C.2.4.3.3.1	Prepare for Test	5 days								
348	C.2.4.3.3.2	Execute Test Plan	5 days								
349	C.2.4.3.3.3	Document Test Results and Correct	5 days								
350	C.2.4.3.3.4	Checkpoint - Review and acceptance of Test Results	0 days								
351	C.2.4.3.3.5	Checkpoint - Adjust project plan as necessary	0 days								
352	C.2.5	Training Delivery Services - Phase II	138 days								
353	C.2.5.1	Training Administration	60 days								
354	C.2.5.1.1	Training scheduling and registration	60 days								
355	C.2.5.2	PATH Trainer Training	5 days								
356	C.2.5.2.1	Provide training to Trainers	5 days								
357	C.2.5.3	End User Training	10 days								
358	C.2.5.3.1	Provide training for end users	10 days								
359	C.2.5.4	Training Completion	0 days								
360	C.2.5.4.1	Operational Acceptance Test - Phase II	20 days								
361	C.2.5.4.1	Checkpoint - Proceed to Production Roll-out	0 days								
362	C.2.6	Commence Live Operations	0 days								
363	C.2.6.2	Provide remote and on-site production support	20 days								
364	C.2.6.3	Travel and Expenses - Implementation Stage - Phase II	138 days								
365	C.2.7	Travel Costs - Implementation Stage - Phase II	138 days								
366	C.2.7.1	Documentation	138 days								
367	C.2.7.2	Documentation	180 days								
368	D	Support Stage	180 days								
369	D.1	Project Management	180 days								
370	D.1.1	Provide project and program management and administration	180 days								
371	D.2	Capacity Management and Performance Monitoring	180 days								
372	D.2.1	Provide monitoring of AssetWorks software	180 days								
373	D.3	Change Management Administration	180 days								
374	D.3.1	Provide change management assistance (for software installations)	180 days								
375	D.4	Coaching and User Assistance	180 days								
376	D.4.1	Provide Ongoing Training	180 days								
377	D.5	Business Resumption Planning	180 days								
378	D.5.1	Provide consulting to develop and BR plan	180 days								
379	D.6	Travel and Expenses - Support Stage	180 days								
380	D.6.1	Travel Costs - Support Stage	180 days								
381	D.6.2	Documentation	180 days								







STATEMENT OF WORK

(Alternate)

Port Authority Trans Hudson Corporation

FASuite Asset and Maintenance Management Applications
January 6, 2011



Contents

Contents.....	2
Introduction	5
Work Plan – Project Management Services	6
WBS A.1.0 Project Start- up.....	6
WBS A.2.0 Project Management Services	7
WBS A.3.0 Change Management	8
Work Plan – Planning Stage.....	9
WBS B.1.0 Project Team Orientation	9
WBS B.2.0 Feature and Function Description	10
WBS B.3.0 Hardware Plan	11
Hardware Discovery and Planning	11
Hardware Plan Document	11
Technical Approach	12
Deliverables	15
WBS B.4.0 Implementation Plan	16
WBS B.5.0 Conversion Plan	17
WBS B.6.0 Functional Test Plan	18
WBS B.7.0 Operational Acceptance Test Plan.....	19
WBS B.8.0 System Support Plan.....	20
WBS B.9.0 Training Plan	21
WBS B.10.0 Parallel Test Plan	22
Work Plan – Implementation Stage for Phase I	23
WBS C.1.0 Phase I – New Cars	23
WBS C.1.1 Hardware Acquisition	23
WBS C.1.2 Hardware Installation	26



WBS C.1.3	Software Installation	27
	Installation Services	27
	System Testing	27
WBS C.1.4	Business Process Assessment	29
	Conduct Interview Sessions	29
WBS C.1.5	Application Configuration	32
WBS C.1.6	Systems Integration Development	33
	Interface Development Preparation	33
	Configure and Tailor SAP/FASuite Interfaces	33
	DMRDS Interface to FASuite	39
	IETM Link from within FASuite	39
WBS C.1.7	Report Development Services	41
WBS C.1.8	Data Conversion Services	42
	Data Conversion Preparation	42
	Data Conversion Procedures and Assumptions	42
WBS C.1.9	Testing Services	45
	User Testing	45
WBS C.1.10	Training Planning Services	47
	Develop Training Outline	47
	Develop Training Materials	48
	Deliver Training Session "Dry Run" for End User Training	48
WBS C.1.11	Training Delivery Services	49
	Training Administration	49
	Training Delivery	49
WBS C.1.12	Operational Acceptance Test	52
	Implementation Services	52



Customer Support Services	52
Work Plan – Implementation Stage for Phase II	53
WBS C.2.0 Phase II Current Operations	53
WBS C.2.1 Data Conversion Services	53
Data Conversion Preparation	53
Data Conversion Procedures and Assumptions	53
Catalog Scanning and Hot-Spotting.....	55
Current Maintenance Systems Data.....	55
WBS C.2.2 Testing Services	57
Unit Testing	57
Integrated Testing	57
User Testing.....	57
WBS C.2.3 Training Delivery Services.....	59
Training Administration.....	59
Training Delivery.....	59
WBS C.2.4 Operational Acceptance Test	62
Implementation Services.....	62
Customer Support Services	62
Work Plan – Support Stage.....	63
WBS D.1.0 Project Management Services.....	63
WBS D.2.0 Capacity Management And Performance Monitoring	64
WBS D.3.0 Change Management Administration	65
WBS D.4.0 Coaching and User Assistance	66
WBS D.5.0 Business Resumption Planning	67
Preliminary Timeline	68
Assumptions	69





Introduction

AssetWorks is pleased to partner with Port Authority Trans Hudson Corporation (PATH) for a successful implementation of the FASuite asset and maintenance management applications. This Statement of Work identifies the tasks required for the implementation of the FASuite solution and is based on AssetWorks' current understanding of the requirements and AssetWorks' previous experience with similar engagements.

AssetWorks recommends PATH use AssetWorks' expertise and consulting resources to ensure a timely and cost effective implementation. AssetWorks offers a variety of services ranging from workflow re-engineering to general business and technical consulting.

To best facilitate the implementation, AssetWorks urges PATH to formally identify a focal point for each of the critical business groups who will participate in or be affected by the project implementation. This involvement must come from all parties. These focal points should be both technically qualified and knowledgeable of their groups' business practices. These individuals will be responsible for spearheading the system configuration, data mapping, and workflow tasks to ensure a feasible and effective production roll-out.

AssetWorks will work in tandem with its subcontractors to successfully complete this project. This team will provide PATH with niche expertise in industry consulting, technical consulting for integration and data conversion, effective training for a wide variety of roles and functions, and project management and documentation to ensure the highest quality implementation.



Circumstances may necessitate changes to the tasks and/or time estimates, at which time AssetWorks and PATH will discuss these changes in good faith at their earliest opportunity.

Work Plan – Project Management Services

WBS A.1.0 Project Start- up

AssetWorks will facilitate a project kick-off conference and planning sessions. AssetWorks will facilitate a review of the project approach and timing with the PATH staff.

AssetWorks recommends PATH appoint a core project team for the implementation stage with representatives from all functional or operational areas of PATH's business. This core group must have the authority and charter to make appropriate decisions regarding the implementation. The core group representatives should have complete knowledge and familiarity with PATH's operations and objectives, and will form the majority of the roll-out team later in the project. The PATH project team will define their roles and responsibilities and establish project standards and controls.

PATH will appoint a full-time, dedicated Project Manager, a Maintenance Project Lead, and supporting personnel from the designated PATH functional and operational areas. The PATH Project Manager will lead the overall PATH project team and be responsible for the PATH personnel and resources on the project. The Maintenance Project Lead will be responsible for the configuration and implementation of FASuite and for facilitating decisions among the core maintenance group.

Deliverable for Project Startup

- Facilitate a project kick-off meeting.

PATH is responsible for all deliverables not specifically included above.



WBS A.2.0 Project Management Services

AssetWorks will provide project management and oversight services to execute the project plan. The AssetWorks project manager will coordinate all AssetWorks project activities. AssetWorks will provide the following project management services:

- Coordination of project resources and work so that milestones are met in an efficient manner; tasks will be designed so as to minimize implementation time and cost while taking into consideration resource and time constraints such as PATH staff availability
- Serve as the main point of contact for the PATH project manager
- Manage any AssetWorks subcontractors
- Provide updates every two weeks to the work plan and project budget, or as requested by the PATH project manager

AssetWorks will ensure sufficient resources are available to support the project requirements. AssetWorks will assign a senior-level program manager to provide additional subject matter expertise, monitor the project resources and budget, and ensure quality delivery of services. This manager is PATH's first escalation point for any issues arising during the project.

The AssetWorks Project Manager will ensure that sufficient resources are available to implement the system in accordance with the project requirements. The AssetWorks Project Manager will monitor the project resources to ensure quality delivery of services and that the Deliverables are completed on time and in accordance with the project requirements.

Deliverable for Project Management Services

- Relevant status reports and meetings regarding FASuite.

PATH is responsible for all deliverables not specifically included above.



WBS A.3.0 Change Management

AssetWorks strongly urges PATH to embark on an aggressive Organizational Change Management initiative to help prepare the cultural environment for this significant engagement. AssetWorks will work with PATH to help plan and identify the PATH resources who can lead this effort.

Under the current scope, AssetWorks will not provide any services or deliverables for this task. However, AssetWorks is willing to provide a proposal for Organizational Change Management services if PATH so desires.

Deliverable for Change Management

- None.





Work Plan – Planning Stage

WBS B.1.0 Project Team Orientation

AssetWorks will provide a two-day orientation and training overview session for PATH's project team. This session will address:

- The project methodology and objectives
- An overview of the products being implemented
- Any questions about the plan or project

PATH will assist in facilitating this session. AssetWorks will provide up to ten hard copies of the orientation materials, which will include presentation materials outlining the project objectives, schedule, roles, and responsibilities.

Deliverable for Project Team Implementation Orientation

- 
- FASuite Project Team Orientation Plan (approximately 2-3 pages in length).
 - FASuite Project Team Orientation materials (presentation materials approximately 10-20 pages in length).

PATH is responsible for all deliverables not specifically included above.



WBS B.2.0 Feature and Function Description

Prior to preparing the Feature and Function Description document (FFD), AssetWorks will present its plan for developing the FFD and the method that will be followed. PATH will have the opportunity to suggest modifications to the planned approach.

AssetWorks will facilitate a series of working sessions with PATH staff to prepare the FFD, which will be a listing of the features and system capabilities in FASuite. This FFD will include the disposition or status of each feature, including whether and/or how it will be used at PATH. AssetWorks and PATH will jointly review this document to ensure all features have been discussed and acknowledged.

No system customizations or enhancements are included in the baseline proposal. For any features that are not currently in FASuite, but are desired, AssetWorks will prepare a cost estimate for the effort required to design, build, and test those enhancements. Upon approval and a formal Notice to Proceed from PATH, AssetWorks will undertake steps to present a Change Order to PATH for these additional items (including additional costs).

During this task, AssetWorks and PATH will address the SAP interfaces that are proposed to seamlessly integrate FASuite into the inventory management and financial systems within PATH. The Interface Development tasks described in the Implementation Stage section of this document illustrate the suggested designs for interfaces between FASuite and SAP. AssetWorks acknowledges that SAP will continue to be the enterprise repository for inventory valuation.

The FFD will list

- FASuite features that are available to PATH as standard capabilities
- PATH-requested enhancements (i.e., gaps) to FASuite, including the estimated cost for each
- Proposed interface touch points between FASuite and SAP
- Proposed interface touch points between FASuite and other external systems

The FFD will be approximately 20-30 pages in length. AssetWorks will provide one printed final report and a master electronic version in Microsoft Word.

Deliverable for Feature and Function Description

- FASuite FFD document.

PATH is responsible for all deliverables not specifically included above.



WBS B.3.0 Hardware Plan

Prior to preparing the Hardware Plan document (HPD), AssetWorks will present its plan for developing the HPD and the method that will be followed. PATH will have the opportunity to suggest modifications to the planned approach.

Hardware Discovery and Planning

The hardware discovery and planning methodology provides PATH an analysis of the underlying infrastructure and its ability to satisfy current or future hardware requirements.

The components of discovery and planning are (a) review and validation of the AssetWorks system hardware requirements (b) analysis of the current hardware architecture (c) identification of the targeted hardware architecture direction, and (d) summary observations and recommendations.

The hardware discovery and planning approach provides expert analysis, at the right level of detail, in a fixed timeframe by evaluating key artifacts and benchmarking them to industry best practices.

With the proposed rapid approach and established best practices, information gained through hardware discovery and planning can be analyzed and synthesized to produce actionable recommendations quickly. The results include:

- Focused hardware integration efforts that deliver real value.
- Validated hardware architecture designs that match application functional requirements.
- Validated tools deployment and hardware architecture scalability.
- Projection of organizational hardware infrastructure and required skill sets.
- Defined next steps that address key gaps and issues in the hardware integration strategy and approach.
- Right- sized solutions that are prioritized to deliver short and long term incremental business value.

Hardware Plan Document

The focus of the hardware discovery and planning will be on defining the hardware infrastructure of systems supporting the AssetWorks system's functional requirements.

Detailed description ("Hardware Plan") of the platform required for support of the application including the equipment and software that compose the platform, for PATH approval. All hardware, operating systems, communications components, and third-party software will be described, and there will be a clear indication of what components are to be supplied by AssetWorks, and which PATH must acquire from other sources. The proposed platform will be adequate for support of AssetWorks environment at system inception and capable of supporting that environment without further investment in the platform for a period of five (5) years after system implementation.

AssetWorks will recommend in writing the infrastructure that will best achieve PATH's objective for a balance of ease of operation, operating performance, fit within current infrastructure and cost-effectiveness in operation.

The recommendation will include hardware, operating system, security, server, and database elements. PATH will install the recommended and approved additional infrastructure components at its facilities in accordance with the Project Plan.



AssetWorks recommended infrastructure will accommodate the support of the concurrent operation of both the existing and the new rail car environments. The recommendations will include appropriately configured servers, workstations, printers, networking requirements, network and data security, and all other equipment and software required for supporting the two rail car environments.

AssetWorks will deliver a formal report in which the AssetWorks environment is described and analyzed with respect to hardware and software demands, both present and projected into the future. The report will be based on the platform recommended by AssetWorks, and will recommend equipment and software appropriate for support of the application over a five-year period. It will consider all aspects of the implementation of such a recommended hardware/software platform in PATH's environment, including security, reliability and availability, physical plant environmental requirements, networking and communications, pricing, acquisition, delivery timetables, licensing, installation and on-going support. Equipment, software and licenses will be described in terms of manufacturer, make, model, version and pricing, so that such descriptions are suitable for use in acquiring such components.

The hardware discovery and planning tasks do not include:

- Business Process Reengineering.
- Evaluation of PATH's current organization, technology, or departmental operating procedures.
- Efforts over beyond the phase estimated duration and the estimated team capacity.

Technical Approach

Initiation & Discovery

Define roles and responsibilities for all associated project tasks

- Identify stakeholder groups and participants
 - Identified Stakeholders (must have representation in workshops/interviews)
 - Additional Stakeholders
 - Operational requirements
 - Research requirements
- Identify key business processes to be supported within Stakeholder groups
- Identify key applications
- Perform interviews and workshops with all primary stakeholders and a representative sample of secondary stakeholders
 - Identify business initiatives, programs and projects that will have net new capacities and requirements
- Identify IT infrastructure to be included in detailed audit
 - storage devices (disk, tape, storage appliances, SAN fabric)
 - Relevant connected servers
- Gather disk storage asset information by having PATH provide storage array details:
 - Vendor, model, disk types and number, establish raw capacity
 - Useable disk capacities: RAID levels, usage and identify unused and unallocated capacity.
 - Number of connecting ports (F/C, iSCSI, etc.) and speed



- Value-added array-based software: snapshot/clone, replication and management
- Capacity of clones and snapshots used and for what applications and associated business processes
- Collect SAN switch and director asset details from PATH including:
 - Vendor, Make and Model numbers with number and type of total ports
 - Number of connections: servers, storage, ISL and free ports
 - Storage topology if possible
 - Associated SAN management software: version and capacity license
- Gather backup and tape storage asset information by having PATH provide component details:
 - Tape libraries: vendor, model, tape drive types and quantities
 - Data de-duplication devices: vendor, model, raw capacity
 - Number of useable library tape slots and tape media type
 - Tape capacities: native and compressed – average utilized capacity per cartridge.
 - Number of tape cartridges in total by location including onsite and offsite
 - Number of connecting ports (F/C, iSCSI etc.) and speed
 - Associated backup and recovery software
 - Backup policies and schedules
 - Backup server(s) configuration
- Financial details of storage devices listed above are to be provided by PATH staff
 - Capital costs and remaining book value (or lease cost and end date)
 - Warranty expiry date and maintenance cost per month or year
 - Costs of value-added software and monthly or yearly maintenance and capacity-based licensing.
- Gather server asset information by having PATH provide details:
 - Server manufacturer, model and hardware configuration
 - Operating system version and patch level
 - Environment type – production, development, test and any others
 - Total storage allocated, actual used and available
 - Number of paths and multi-pathing software for SAN-attach systems
 - Workload types
 - D/R plans and policies including offsite cycles, RTO and RPO per application grouping
- Gather server performance trending data using approved instrumentation to include:
 - Thirty days of CPU, memory, NIC and HBA usage
 - Server configuration and main application/business process use
 - Capacity of disk allocated and used (DAS and SAN)
- Validate all above data collected for completeness and readiness for analysis

Analysis, Planning & Design

- Create category summaries of all collected data
- Establish or determine growth rates based on a 5 year growth trend
- Financial data analysis including the following:
 - Establishing a cost of raw GB/month based on original, book value and maintenance amounts
 - Identify cost trends over 5 years based on the above and using the growth trends
- Establish storage tier definitions based on service requirements of analyzed hosts and applications as well as current storage use to provide PATH with a framework on where to place future workloads.
- Provide a tiered strategy to reduce cost while increasing capacities with an ideal state from the analyzed data including:
 - Online disk tiers
 - Backup tiers
 - Recovery tiers
 - Archive tiers
- Provide a visual scoring of existing environment to the ideal state to demonstrate gaps in consolidation, re-alignment and cost savings possibilities
- Provide a roadmap to achieve cost effective tiering to increase online capacities including planned and provided projects while reducing per GB costs.
- Provide a summary of Risk and Other Considerations as identified by data collection, analysis, discussions and as listed by PATH.
- Hold discussion and strategy sessions with PATH storage architect(s) and stakeholder representatives to ensure road map and strategy alignment to business needs
- Develop strategy for proposed Central File Service
- Develop strategy for proposed Central Backup and Recovery Service
- Develop proposed future shared storage infrastructure architecture
- Develop strategy for migration of current environment to proposed architecture

Documentation & Presentation

- Initial presentation review to a small team with the focus on findings and revision for management.
- Create initial draft document from – PATH to provide feedback before completion.
- Provide industry trends and analysts statements that support PATH's Storage Strategy and Roadmap recommendations
- Present summary of results to PATH with specific details around roadmap recommendations and alignment to future identified project plans.

Transition & Close

- Finalize document. Update documentation revisions from review and presentation feedback
- Hand-off of both the presentation and documentation in Microsoft Office PowerPoint and Word formats.
- Close out meeting and feedback with next steps

The following information lists the resources required for a successful hardware discovery and planning process, and the associated responsibilities.



PATH Responsibilities

Role	Project Responsibilities
Sponsor	<ul style="list-style-type: none"> ○ Provides focus for the effort and ensures that all documentation is made available to the AssetWorks team and the appropriate resources participate in the Discovery and Planning session. Approves and executes the appropriate AssetWorks recommendations.
Discovery Session Experts	<ul style="list-style-type: none"> ○ Provide detailed information regarding the enterprise, business drivers, architecture, processes, and other data pertaining to the focus of the effort.
Coordinator	<ul style="list-style-type: none"> ○ Works with the AssetWorks team to collect requisite documentation and coordinate Discovery session logistics (e.g., meeting rooms, schedules, notifications).

Deliverables

As a result of the Hardware Discovery and Planning, AssetWorks will present to PATH an overview and discussion of key observations and provide documentation containing the following information. This compilation of information will comprise the HPD.

The HPD will be approximately 30-50 pages in length. AssetWorks will provide one printed final report and a master electronic version in Microsoft Word.

Deliverable for Hardware Plan

- Baseline Project Plan – A sub-project plan, approved by both PATH and AssetWorks, that details the work to be performed, the schedule, and resource utilization for the project.
- Environment Analysis – A document that details current environment architecture.
- Hardware Plan – A document that details the hardware architecture and plan.
- Observations made and validated during inquiry, review, and synthesis
- Recommended next steps

PATH is responsible for all deliverables not specifically included above.

WBS B.4.0 Implementation Plan

AssetWorks will facilitate a series of working sessions with PATH staff to refine the implementation plan (the baseline will be based on the project plan included in this proposal).

The implementation plan will include

- An approved timeline, with specific start and end dates
- A list of staff and responsibilities
- A communication plan
- A list of policies and procedures to help manage project logistics and administrative needs
- Tasks for a two-phase approach including training tasks
- Acceptance criteria for deliverables in the next stage
- "Checkpoints" (embedded in the project plan) and quantifiable performance measurements that PATH can use to gauge progress
- Methods for creating and maintaining documentation throughout the project

The implementation plan will be approximately 10-20 pages in length. AssetWorks will provide one printed final report and a master electronic version in Microsoft Word.

Deliverable for Feature and Function Description

- FASuite implementation plan document.

PATH is responsible for all deliverables not specifically included above.



WBS B.5.0 Conversion Plan

AssetWorks will facilitate a series of working sessions with PATH staff to develop the conversion plan. The purpose of this task is to define the overall conversion process for new rail cars and the data from legacy systems for the current rail cars.

The conversion plan will include

- A list of the objectives and goals of the data conversion effort
- A definition of the methods, techniques, and approach to be taken
- A list of deliverables from the Data Conversion task in the Implementation Stage
- A definition of the scope (which vehicles, how many work orders, etc.) of conversion from each source system
- The expected Extraction and Transformation steps that PATH will undertake
- Data validation procedures and processes
- An expected timeline for conversion
- Suggested sources and methods for PATH to gather and enter required data that is not in the current systems

The conversion plan will be approximately 10-20 pages in length. AssetWorks will provide one printed final report and a master electronic version in Microsoft Word.

Deliverable for Feature and Function Description

- FASuite conversion plan document.

PATH is responsible for all deliverables not specifically included above.

WBS B.6.0 Functional Test Plan

AssetWorks will facilitate a series of working sessions with PATH staff to develop the functional test plan.

The test plan will include

- A list of the objectives and goals of the testing effort
- A description of the tests that will be performed
- A list of roles and responsibilities for testing
- The planned testing environment and data requirements
- Testing procedures
- A description of the PATH testing facilities
- Sample test plans and documentation of results

The functional test plan will be approximately 20-30 pages in length. AssetWorks will provide one printed final report and a master electronic version in Microsoft Word.

Deliverable for Feature and Function Description

- FASuite test plan document.

PATH is responsible for all deliverables not specifically included above.



WBS B.7.0 Operational Acceptance Test Plan

AssetWorks will facilitate a series of working sessions with PATH staff to develop the Operational Acceptance Test (OAT) plan. The OAT will be conducted over a three-month period after go-live. This SOW includes two OAT periods, one for each Phase. However, AssetWorks recommends some discussion during this planning period to consider a single OAT period for all users, which would reduce the cost of the overall project and still provide sufficient validation and testing opportunities for PATH.

The OAT plan will include

- A list of the objectives and goals of the testing effort
- A description of the tests that will be performed
- A list of roles and responsibilities for testing
- The planned testing environment and data requirements
- Testing and observation procedures for the OAT period
- A description of the PATH testing facilities
- Sample test plans and documentation of results

The OAT plan will be approximately 10-20 pages in length. AssetWorks will provide one printed final report and a master electronic version in Microsoft Word.

Deliverable for Feature and Function Description

- FASuite OAT plan document.

PATH is responsible for all deliverables not specifically included above.

WBS B.8.0 System Support Plan

AssetWorks will facilitate a series of working sessions with PATH staff to develop the System Support Plan (SSP). This plan will govern the support strategy during the System Support stage for the six month period following go-live. This SOW includes a single Support Stage (SSP period) for both implementation phases.

The SSP will include

- A list of the objectives and goals of the Support Stage
- The duties, obligations, and responsibilities of all parties during the Support Stage
- Descriptions of troubleshooting techniques for each AssetWorks application
- Procedures for PATH support staff to follow in terms of interacting with AssetWorks Customer Support in the longer term
- A description of how AssetWorks will provide application updates, enhancements, and fixes
- A description of how AssetWorks will implement major releases or modifications that may occur during the PATH project
- A description of a process by which PATH can report, track, and escalate application issues or problems encountered during the duration of the SSP Stage (and thereafter)

The SSP will be approximately 10-15 pages in length. AssetWorks will provide one printed final report and a master electronic version in Microsoft Word.

Deliverable for Feature and Function Description

- FASuite SSP document.

PATH is responsible for all deliverables not specifically included above.



WBS B.9.0 Training Plan

AssetWorks will facilitate a series of working sessions with PATH staff to develop the Training plan. This plan will outline the training services that AssetWorks and PATH will provide throughout the project.

The Training plan will include

- A list of the objectives and goals of the training
- A recommended plan for Supervisors
- A recommended plan for System Administrators
- A recommended plan for Maintenance Technicians
- Recommended procedures and logistics for training delivery
- Sample training materials and exercises

The Training plan will be approximately 20-30 pages in length. AssetWorks will provide one printed final report and a master electronic version in Microsoft Word.

Deliverable for Feature and Function Description

- FASuite Training plan document.

PATH is responsible for all deliverables not specifically included above.

WBS B.10.0 Parallel Test Plan

AssetWorks will facilitate a series of working sessions with PATH staff to develop the Parallel Test plan (PTP). The PTP will be conducted prior to go-live for each phase of implementation.

The PTP will include

- A list of the objectives and goals of the testing effort
- A description of the tests that will be performed
- A list of roles and responsibilities for testing
- The planned testing environment and scope
- The planned data entry requirements for PATH staff
- Testing and observation procedures for the parallel period
- A description of the PATH testing facilities
- Sample test plans and documentation of results

The PTP will be approximately 10-20 pages in length. AssetWorks will provide one printed final report and a master electronic version in Microsoft Word.

Deliverable for Feature and Function Description

- FASuite PTP document.

PATH is responsible for all deliverables not specifically included above.



Work Plan – Implementation Stage for Phase I

WBS C.1.0 Phase I – New Cars

WBS C.1.1 Hardware Acquisition

AssetWorks preliminarily (subject to the Hardware Plan) recommends the following hardware configuration and specifications for PATH's FASuite implementation. For optimal performance, AssetWorks recommends PATH take advantage of FASuite's n-tiered architecture. FASuite runs in the following tiers:

- InfoCenter: the zero-client browser user interface
- GUI: the presentation layer (graphical user interface) for System Admins
- APP: the application
- Database: the database

For this implementation AssetWorks recommends Oracle as the Relational Database Management System (RDBMS). AssetWorks recommends the following specifications for the production environment, based on assumptions of fewer than 1,000 equipment units and 200 or fewer concurrent users. For this implementation, based on current information, AssetWorks recommends a Windows-based operating system on the application and web servers, as follows, for the production environment.

Database Server

The requirements for a database server depend primarily on the size of the FASuite database and the maximum number of concurrent users. Memory on the database server is a major factor affecting FASuite performance; AssetWorks recommends always allowing for future expandability. For a database server dedicated to FASuite, AssetWorks recommends:

Processors:	4
Processor Speed:	2.0+ GHz
Hard Drives:	4 (RAID-5)
Size:	36.2 GB each
RAM:	4 GB

Application and Web Server (x4)

The requirements for the application server(s) depend primarily on the maximum number of concurrent FASuite users. AssetWorks recommends machines that meet the following specifications:

Processors:	2
-------------	---



Processor Speed: 2.0+ GHz
Hard Drives: 2 (RAID-1)
Size: 36.2 GB each
RAM: 4 GB

Reporting Server

The requirements for a web and reporting server depend primarily on the maximum number of concurrent FASuite users. AssetWorks recommends machines that meet the following specifications:

Processors: 2
Processor Speed: 2.0+ GHz
Hard Drives: 2 (RAID-1)
Size: 36.2 GB each
RAM: 4 GB

Interface Server

The requirements for a server depend primarily on the interface processing load. AssetWorks recommends machines that meet the following specifications:

Processors: 2
Processor Speed: 2.0+ GHz
Hard Drives: 2 (RAID-1)
Size: 36.2 GB each
RAM: 4 GB

Workstation Specifications

For all configurations, client workstations should be at least 200 MHz Pentium-based computers running Windows XP. We recommend at least 128 MB of RAM. The GUI and InfoCenter require a minimum display resolution of 1024 x 768 for proper viewing. AssetWorks recommends a machine that meets the following specifications:

256MB RAM
10GB HDD



Mouse and Keyboard

17" Monitor (19" Monitors recommended)

Windows 2000/XP

10/100 Ethernet NIC

Additional Requirements For Any Configuration

In addition to the above, AssetWorks also recommends PATH procure the following:

- An appropriate number of printers
- A standby power supply to protect the servers from power problems
- Modems and Remote Management software to support remote diagnostic communications with AssetWorks
- AssetWorks recommends 19" monitors in order to take better advantage of the FASuite screen and window capabilities
- Provision for disaster recovery

AssetWorks will not be responsible for any site preparation or construction or communications or cabling infrastructure. AssetWorks will not install any servers at any site. AssetWorks will not provide any operating system or Relational Database Management System (RDBMS) software for the servers.

AssetWorks will not provide any services or deliverables for this task.

Deliverable for Hardware Acquisition

- None.

WBS C.1.2 Hardware Installation

AssetWorks will not provide any services or deliverables for this task.

Deliverable for Hardware Installation

- None.



WBS C.1.3 Software Installation

Installation Services

Hosted Environment for Project Quick Start

As time is of the essence for this implementation, AssetWorks will provide a hosted instance of the application in order to execute project configuration and setup consulting tasks while PATH acquires hardware for its data center. Once PATH has the requisite hardware, operating system and RDBMS installed and connected to the network, AssetWorks will proceed with the software installation tasks described below. After installation of the software, AssetWorks will import the initial configurations into the PATH instances in the PATH data center.

PATH to prepare for the installation

PATH will install operating system and RDBMS software on the database, web, and application servers. AssetWorks assumes PATH will install the servers and resolve network configuration issues that arise as a result of the server operating system installation (in order to connect to the PATH wide area network).

PATH will provide the required RDBMS, web server (Microsoft IIS), and other operating software (including licenses, media, and documentation) for this installation task. AssetWorks will not be responsible for any construction or communications infrastructure. AssetWorks will not install any servers or other hardware.

AssetWorks will work with PATH to correctly size the FASuite database and ensure the PATH network environment is ready for the new system.

Create FASuite database and install applications

AssetWorks will create four distinct environments: Production, Training, Development, and Test. AssetWorks recommends the use of web-conferencing services to support AssetWorks' troubleshooting efforts throughout the project.

PATH will procure and install a web server. PATH will ensure the web server is ready for the installation. The web server must use Microsoft IIS. AssetWorks and PATH will install FASuite on PATH's web server device. PATH is responsible for connectivity over the Internet and Intranet, as desired. PATH will provide technical support related to the web server for the installation.

AssetWorks will work with PATH to install InfoCenter and MobileFocus on the server and at the first user site. PATH is responsible for installing and configuring client-side software after the first site.

PATH will devise a procedure to upgrade FASuite when AssetWorks makes new releases available. It is recommended that PATH document the procedure for making new versions of the system and documentation available to all locations.

System Testing

For each of the four FASuite environments, AssetWorks will conduct a high-level System Test with PATH staff, and will validate the FASuite system is installed and functional. The System Test Plan will consist of functional tests, defined as:

- Verify the ADMIN user can connect to the database



- Verify the screens are accessible from up to three workstations on the PATH network
- Verify data can be entered on several screens
- Verify a sampling of the standard reports can be executed

Deliverable for Software Installation

- Testing results certifying complete and satisfactory testing.

PATH is responsible for all deliverables not specifically included above.



WBS C.1.4 Business Process Assessment

AssetWorks will perform a Business Process Assessment (BPA) of PATH maintenance activities prior to proceeding with the implementation. The BPA will provide an evaluation of the PATH's existing vehicle maintenance operation in order to determine where improvements can be made prior to the implementation.

The BPA will identify practices and procedures that can be changed to provide for a more efficient vehicle maintenance operation and a smoother implementation and operation of FASuite. AssetWorks will perform the following tasks as part of the BPA:

Conduct Interview Sessions

AssetWorks will provide questionnaires for certain PATH personnel. The initial interview sessions will provide the AssetWorks project team with the opportunity to assess the current PATH business practices. The AssetWorks project team will observe efficiencies and redundancies in the system, and propose new processes. The interviews and sessions will provide AssetWorks with the following:

- Awareness of how the PATH works and processes data
- Ability to define information processes, functions, and functional areas
- Assessment of the likely adoption of TO BE processes and recommendations

AssetWorks will conduct interview sessions for the following PATH functional areas.

- Planning and Scheduling, such as PM scheduling, PM programs, and the development of PM checklist items
- Work Management, which will address topics including opening work orders, work assignment, labor hour tracking, indirect time, reviewing work orders, and requesting parts
- Inventory Management, which will address topics including inventory management, charging our materials, creating purchase requests, handling parts warranties, dealing with serialized parts, and other inventory management functions
- Rebuild Facilities, including how to stock and rebuild components and track the multi-stage aspects of heavy repair
- Warranty Activities, which will address claims and other warranty tracking, primarily for the new rail cars



The following image is representative of the proven tools AssetWorks will bring to the project.



Functional Configuration Questionnaire
Maintenance Planning and Scheduling

Distribution

To: Project Manager @Customer.com
Cc: [Customer] Core Implementation Team

Maintenance Planning & Scheduling	
Required Participants:	
Optional Participants:	
Date/Time/Location of Meeting:	
AssetWorks:	
Goal	
Goal:	<ol style="list-style-type: none"> 1 Understand how [Customer] plans and schedules all maintenance activities in their garage 2 Understand how [Customer] manages timekeeping and labor capture 3 Collect documentation (i.e. reports, forms, screen shots, etc.) 4 Create a graphical representation of current workflow
Attachment(s):	
Discussion Points	
Discussion Points:	<ol style="list-style-type: none"> 1 How does [Customer] currently plan and schedule maintenance activities? 2 How is work prioritized? 3 What systems and/or reports do you use to support scheduling? 4 How is refueling accomplished? 5 How does [Customer] capture labor currently? 6 Is labor at the garage level used to compute payroll? How? 7 Are there any pay differentials? How do they work? 8 Are there any new initiatives [Customer] is planning to implement with regard to timekeeping, or labor capture, or pay differential?
Attachment(s):	

Understanding the "As-Is"

Question:	Answer:	Answer provided by:	Action Item for:
1. Where mechanic technician comes into work, how do they know what to do?			

After completing the interview sessions, AssetWorks will compile the results of the interview and document the recommended TO BE processes and workflows. AssetWorks will present these recommendations to PATH in a two-day "conference room pilot" format to review the document and gather final feedback from PATH.



AssetWorks will revise the TO BE functional report and submit the final version to PATH. This report will be a document of approximately 30-50 pages.

Deliverable for Business Process Assessment

Deliverable materials will include the following:

- Functional TO BE Report.

PATH is responsible for all deliverables not specifically included above.

WBS C.1.5 Application Configuration

AssetWorks will assist the PATH team to configure FASuite based on the results and decisions from the BPA. This initial configuration will include data elements like location IDs, user groups, and department IDs. This “set-up” will also be the foundation for the implementation; very few, if any, changes will be made to this initial configuration since all groups (current and new) will share one database. Decisions made during this phase of the project will have a **direct effect** on the work flow in the roll-out of FASuite.

This group must have the authority and charter to make appropriate decisions regarding the FASuite implementation. The group representatives should have complete knowledge and familiarity with the operation, including parts inventory and procurement.

PATH will finalize the definition of all relevant data elements and work processes, including maintenance, parts management, procurement, and other job functions. PATH’s deliverable for this task is complete documentation of PATH’s definitions for all applicable data elements. This deliverable is a critical prerequisite to the development of the training material for the rollout.

AssetWorks will prepare an Application Configuration document as a deliverable to assist PATH in the ongoing management of the system. This high-level document will include the settings and defaults determined by the functional TO BE document. This document will be approximately 10-20 pages.

No system customizations are included in the baseline cost proposal.

Deliverable for Application Configuration

AssetWorks will provide the following deliverables:

- Application Configuration Document.

PATH is responsible for all deliverables not specifically included above.



WBS C.1.6 Systems Integration Development

Interface Development Preparation

AssetWorks standard procedures for developing an interface include the following tasks:

- Create a preliminary specification/interface design plan
- PATH project team reviews the preliminary specification/interface design plan
- AssetWorks reworks the specification/interface design plan as required
- PATH project team provides final approval of the specification/interface design plan
- AssetWorks builds interface and incorporates into the development environment
- AssetWorks tests interface
- AssetWorks provides documentation
- PATH evaluates and gives acceptance

AssetWorks will provide interface planning services to develop a roadmap for the integration between FASuite and PATH's legacy systems, as described below. The project team will discuss and specify the data elements required, the time of the exchange, and the method of data exchange.

AssetWorks and the project team will develop a mutually acceptable plan and schedule for the work to be completed and identify the resources and timeframe required for the efforts. AssetWorks assumes PATH will involve the appropriate staff to reach consensus and decisions on all interface specifications during the discussion and according to the proposed timeline.

For each of the following scenarios, AssetWorks has provided the proposed work flow or interface. These recommendations are based on our experience and on best practices for maintenance and system integration. AssetWorks assumes that the proposed interfaces in this section will rely on existing functionality and not require enhancements to the base application.

AssetWorks is willing to discuss alternative, more extensive integration options and designs with PATH to ensure the optimum design. However, for the basis of this proposal, the following assumptions and designs have been incorporated as the basis for the quotes provided. The project team will define a detailed specification for each interface before any work begins.

Configure and Tailor SAP/FASuite Interfaces

AssetWorks will work with PATH to configure and build the interfaces required, per the documented specifications, between FASuite and SAP to provide a best-of-breed solution for PATH. AssetWorks will provide the following SAP/FASuite interfaces (subject to the descriptions below).

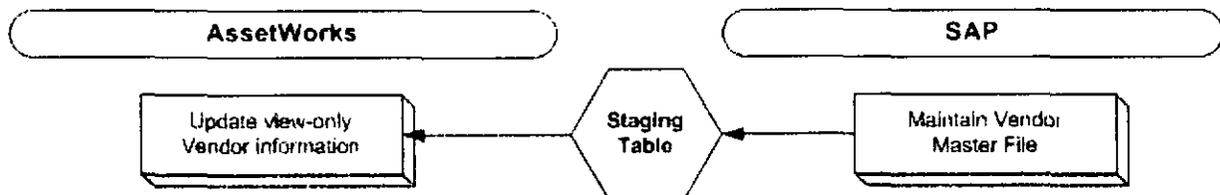
SAP / FASuite Interface		Interface Function
1	SAP to FASuite Vendor Master Interface	Add/update vendor info in FASuite

	SAP / FASuite Interface	Interface Function
2	SAP to FASuite Account Master Interface	Add/update Account codes in FASuite
3	FASuite to SAP Create Requisition Interface	Send purchase requests to SAP
4	SAP to FASuite Approved POs Interface	Update purchase request info in FASuite
5	SAP to FASuite Receipts Interface	Send parts receipts to FASuite
6	FASuite to SAP Part Requests Interface	Send parts requests to SAP Inventory
7	SAP to FASuite Parts Issues	Send parts issues to FASuite
8	FASuite to SAP work order costs to GL	Send work order costs to SAP GL
9	SAP parts adjustments/transfers to FASuite	Send part adjustments to FASuite

The following sections provide an overview of the tasks required to develop and configure the interfaces between FASuite and SAP. AssetWorks has described certain tasks as being performed by the Technical Services Provider (TSP). PATH will be responsible for performing those tasks and services (or for outsourcing those tasks and services to a third party).

Vendor Master (#1)

SAP will be the system of record for vendor information. This one-way synchronization will be limited to information in the vendor master files.



TSP will provide the services to have SAP send insert, update, and delete transactions for relevant vendor records to the Staging Table. PATH will define the "relevant vendor records" and use some differentiator within SAP to identify which vendor record changes will be passed to FASuite through this interface. The intention here is that "relevant vendor records" are those vendors that are used by Maintenance.

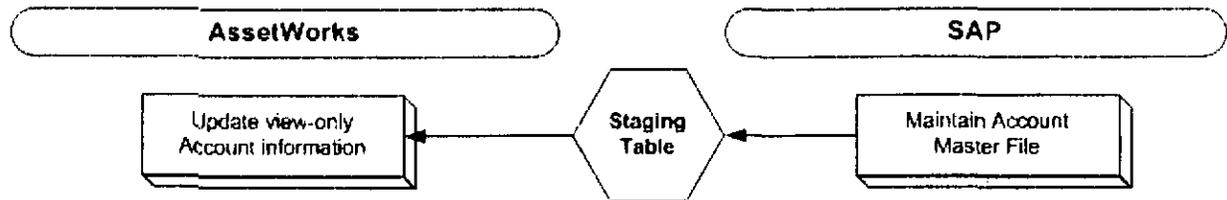
AssetWorks will provide the services to process these transactions from the Staging Table and update the Vendor Master information in FASuite.

TSP will be responsible for making this information available in the Staging Table in the AssetWorks-specified standard format. The interface will not connect or communicate directly with SAP. PATH will be responsible for re-processing errors from this interface.



Account Master (#2)

SAP will be the system of record for account information (e.g., GL codes). This one-way synchronization will be limited to information in the Account Master files.



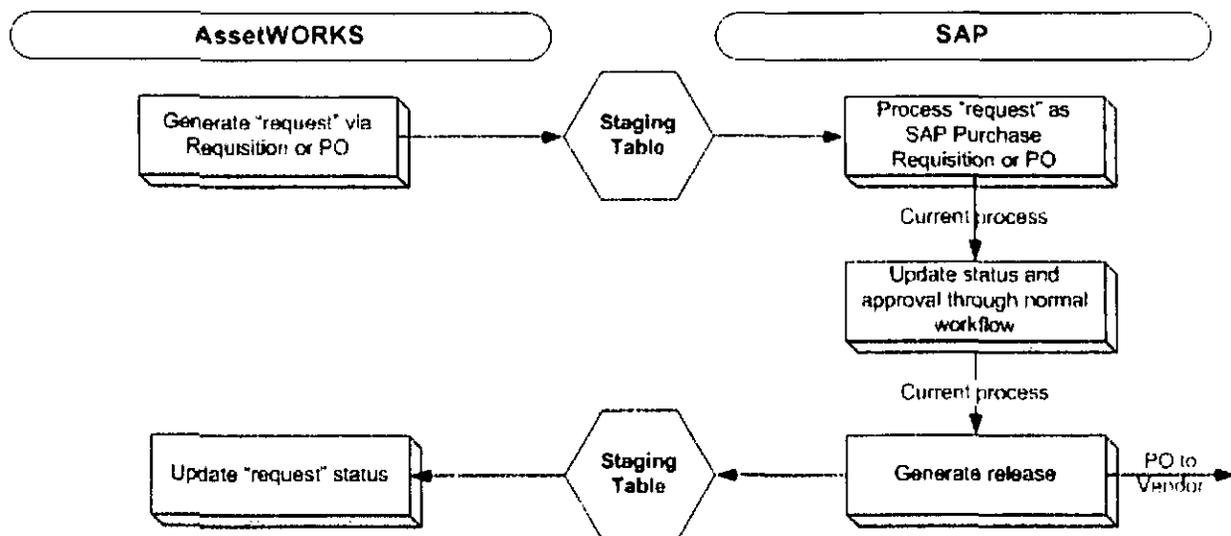
TSP will provide the services to have SAP send insert, update, and delete transactions for relevant account to the Staging Table. AssetWorks will provide the services to process these transactions from the Staging Table and update the Account Master information in FASuite.

TSP will be responsible for making this information available in the Staging Table in the AssetWorks-specified standard format. The interface will not connect or communicate directly with SAP. PATH will be responsible for re-processing errors from this interface.

FASuite will not maintain or store any budget information.

Parts Orders to Create Requisitions (#3 and #4)

This section includes both the interface to create requisitions in SAP and the interface to update the status of those "requests" in FASuite.



Users will enter a request to purchase a new "maintenance" item in FASuite using the Parts Requests, Purchase Order, Quick Orders, or Reorders screen. A "maintenance" item is defined as any item routinely purchased by and for the maintenance department, such as belts, filters, hoses, engines and alternators. PATH will segregate these items from other PATH stock keeping units (SKUs) using one or more commodity or classification codes in SAP.

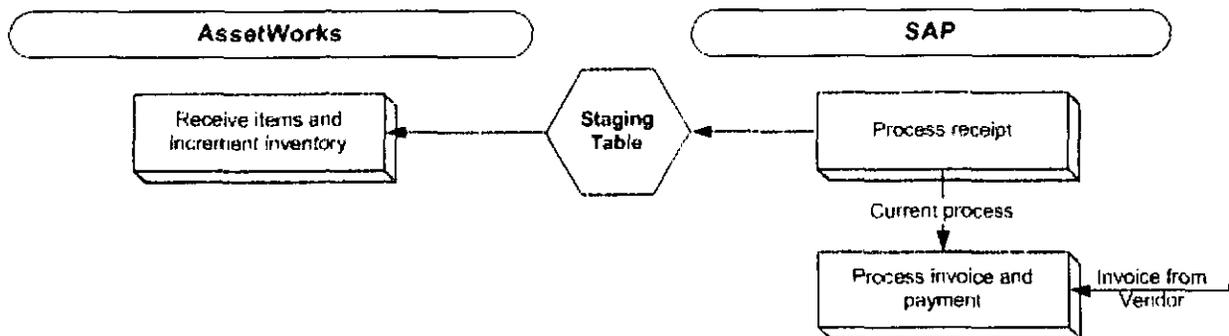
FASuite will not provide the workflow (edits, data entry rules, checks, etc.) that might exist in the SAP Purchase Requisition and Purchase Order Processes. Once the transaction is successfully processed, FASuite will send this request to the Staging Table.

TSP will provide the services to have SAP process this request from the Staging Table into SAP Purchasing. If the requested item does not yet exist in SAP, TSP will create the item in the item master table in SAP, if required. (In each transaction sent to the Staging Table, AssetWorks will include data elements required by SAP to create a new item master record, if one must be created.)

TSP will provide services to send a "Release" transaction to the Staging Table when PATH sends the Purchase Order to the vendor. AssetWorks will provide the services to process this update from the Staging Table and update the request in FASuite.

TSP will be responsible for making this information available in the Staging Table in the AssetWorks-specified standard format. The interface will not connect or communicate directly with SAP. PATH will be responsible for re-processing errors from this interface.

Receipt of Parts (#5)



Users will take delivery of ordered maintenance items in SAP. Once the transaction is successfully processed, TSP will provide services to send this receipt transaction to the Staging Table.

AssetWorks will provide the services to process this transaction from the Staging Table into FASuite.

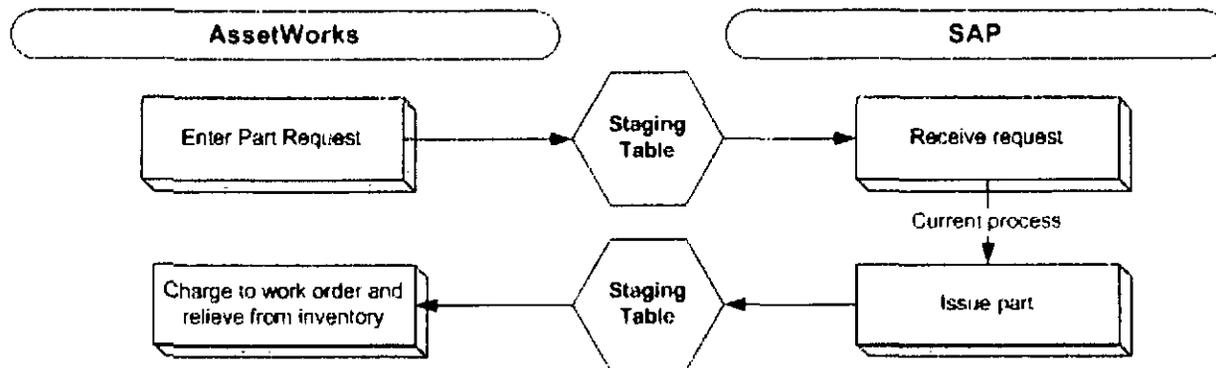
Once the receipt has been processed in SAP, it will follow the current business process through invoice matching, payment, etc. PATH will enter all invoice information directly in SAP. FASuite will have no role in the actual match or payment process. Correction for all invoicing and payment discrepancies will be handled manually.

TSP will be responsible for making this information available in the Staging Table in the AssetWorks-specified standard format. The interface will not connect or communicate directly with SAP. PATH will be responsible for re-processing errors from this interface.

Parts Requests to SAP Stockroom (#6 and #7)

This section includes both the interface to pass a parts request (demand) from FASuite to SAP, and to fill that demand through a parts issue transaction in SAP.





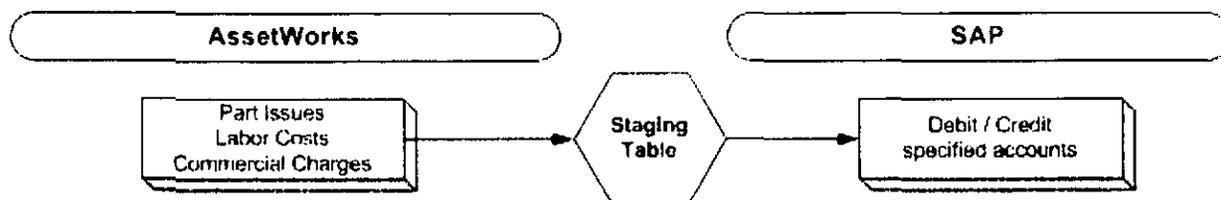
Users will enter a part request for a work order in FASuite. Once the transaction is successfully processed, FASuite will send this request to the Staging Table.

TSP will provide the services to have SAP process this request from the Staging Table into SAP, including the unique task, work order, and request information from FASuite. An SAP user will fulfill the order with on-hand items and issue it in SAP (and hand it physically to the Technician).

TSP will provide services to send this transaction to the Staging Table. AssetWorks will provide the services to process this part issue transaction from the Staging Table and update the work order charges.

TSP will be responsible for making this information available in the Staging Table in the AssetWorks-specified standard format. The interface will not connect or communicate directly with SAP. PATH will be responsible for re-processing errors from this interface.

Work Order Costs to GL (#8)



AssetWorks will provide an interface to provide work order costing information to SAP.

PATH will use one of the rate structures within FASuite's hierarchy of labor rates to calculate labor costs. PATH will review these rate options, as well as various markup and overhead capabilities, during the implementation. In any case, the labor rate in effect for a given task will be used to calculate the labor cost for that task; AssetWorks will use this cost for a subsequent Journal Voucher (JV) entry. All parts, labor, and commercial costs will include any of the FASuite mark-ups implemented by PATH.

AssetWorks will provide a JV entry for parts, labor, and commercial repair transactions on these work orders. The JV transactions will use the account ID specified in an "interface definition file" for Maintenance and the vehicle's



account ID (based on current assignment or FASuite account ID entry (e.g., for damage on a pool vehicle) at the time of the transaction).

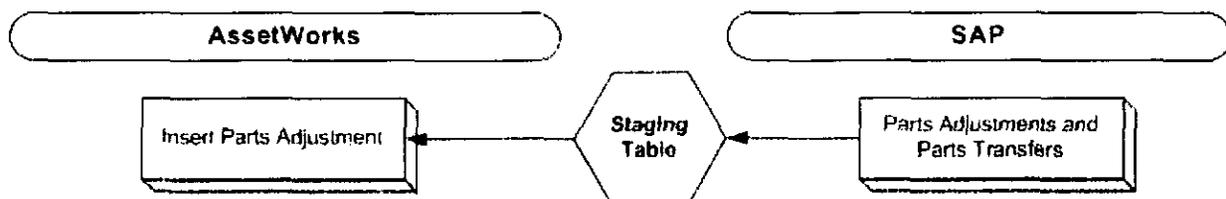
AssetWorks will provide a JV transaction for each direct charge transaction or for some roll-up or summary of posting transactions (e.g., all costs for each vehicle, all costs for each department, all costs for a month for each account ID, etc.) to reduce the number of JV transactions. PATH and AssetWorks will determine an appropriate "roll-up level" during the project.

According to the mutually agreed upon schedule, FASuite will send this JV transaction to the Staging Table. TSP will provide the services to have SAP process this JV transaction from the Staging Table into SAP. Once the JV transaction has been processed in SAP, it will follow the currently-defined business process.

AssetWorks assumes the PATH timekeeping system (i.e., the time clocks) drive payroll, and so an interface from AssetWorks to Payroll is not necessary. Further, this interface might not be required for detailed labor either. This interface is included mainly for detailed GL information that is driven by work order details and information that is not maintained in the timekeeping system or in SAP. AssetWorks recognizes that detailed parts costs and commercial costs might not be required since issues and purchase orders are already being recorded in SAP. However, if more detailed GL information is needed, AssetWorks can provide it through these parts and commercial transactions.

Parts Adjustments and Transfers (#9)

SAP will be the system of record for enterprise inventory information. This one-way synchronization will be used to pass adjustment and transfer transactions from SAP to FASuite to keep inventory on-hand information up to date in real time.



TSP will provide the services to have SAP send adjustment and one-step transfer transactions for part items to the Staging Table. AssetWorks will provide the services to process these transactions from the Staging Table and insert parts adjustment transactions in FASuite.

TSP will be responsible for making this information available in the Staging Table in the AssetWorks-specified standard format. The interface will not connect or communicate directly with SAP. PATH will be responsible for re-processing errors from this interface.

Interface Assumptions

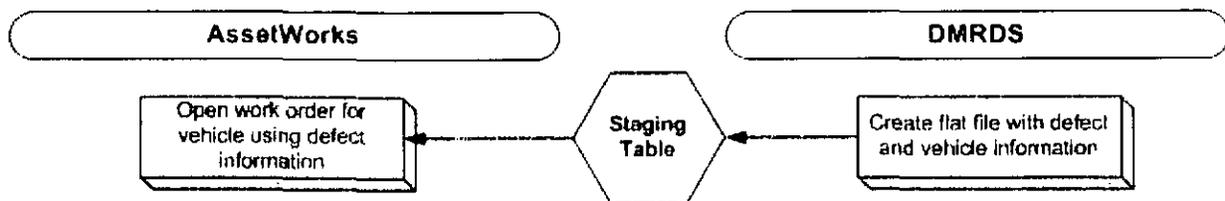
- AssetWorks, TSP, and PATH will mutually agree on the data elements and formats of the transactions.
- TSP will provide for storing FASuite unique identifiers in SAP where necessary. For example, TSP will provide fields for the FASuite request ID and line item number on purchase requests.
- Once any transaction has been processed into SAP, the work flow will follow the current business process. This Statement of Work does not include any effort to re-define, tailor, adjust, or configure SAP business processes downstream from the entry into SAP. FASuite will "feed" the SAP process already defined and implemented at PATH.



- There are no HR or Fixed Asset interfaces included in this Statement of Work, nor are there any interfaces included that are not specifically described above.
- PATH will monitor, review, and re-process all interface errors.

DMRDS Interface to FASuite

AssetWorks will provide a method for creating work orders in FASuite from a DMRDS flat file that includes vehicle and defect information.



AssetWorks will provide a mechanism that polls for and processes a flat file placed on an accessible network drive by DMRDS. This file will contain all required vehicle and defect information, which FASuite will use to open work orders.

AssetWorks will provide a mechanism that processes this data file, which PATH will provide in real time. The file will contain, at a minimum, the following data elements: valid FASuite equipment ID (e.g., Car No.), timestamp, valid FASuite symptom ID (or cross-reference), and other data elements that may be agreed on during the specification process (e.g., meter reading). AssetWorks will provide these standard formats for PATH's review at the appropriate time.

PATH will be responsible for making this information available in the Staging Table in the AssetWorks-specified format. The interface will not connect or communicate directly with DMRDS. This effort does not include (presently) a transfer of equipment information to or from FASuite, although such an interface is certainly possible.

AssetWorks recommends further discussion regarding this interface so that a more practical, and possibly more effective, interface can be developed.

IETM Link from within FASuite

AssetWorks will provide, on the InfoCenter Home page, a link to the IETM application. This link will execute the IETM executable (assuming IETM is loaded on the workstation and can be executed from the workstation), or the link will be a URL to IETM (depending on the architecture of IETM at the time. This link will not pass any parameters from InfoCenter, but will simply start the IETM application or connect to the IETM home page (depending on the IETM architecture at the time).

The interface will not connect or communicate directly with IETM. This effort does not include (presently) a transfer of data or information to or from FASuite, although such an interface is certainly possible.

AssetWorks recommends further discussion regarding this interface so that a more practical, and possibly more effective, interface can be developed.



Deliverable for Systems Integration Development

- Documented interface plan and functional specification for each of the interfaces described above.
- Working interfaces as described above.
- Interface test plans and test results.



WBS C.1.7 Report Development Services

AssetWorks will install the standard reports, which are used by other AssetWorks FASuite customers, including other public transportation agencies. In the early stages of the engagement, AssetWorks will work with the PATH Project Manager to develop a list of other required reports and order each report by priority.

This proposal includes up to 208 hours of report development services, to be specified and used during the engagement. AssetWorks estimates this level of effort would be sufficient to create and test approximately five to ten low- to medium-complexity reports. AssetWorks will develop the agreed-upon custom reports in the Reporting environment, using Crystal Reports XI OEM Embedded Edition. PATH and AssetWorks will agree on a written specification and an estimate for the level of effort required to complete each custom report before any development work begins.

AssetWorks will provide high-level instructions to the PATH staff regarding how to create other custom reports (e.g., what tables to use for certain data). PATH staff can then create an unlimited number of custom reports or enhance the standard reports.

Deliverable for Reports Development

AssetWorks will provide the following deliverables:

- Report development and testing services.
- Accurate, production-ready reports.

PATH is responsible for all deliverables not specifically included above.

WBS C.1.8 Data Conversion Services

Data Conversion Preparation

AssetWorks standard procedures for executing Data Conversions include the following:

- Create a specification/data conversion plan
- PATH project team approves the specification/data conversion plan
- AssetWorks reworks the specification/data conversion plan as required
- PATH project team provides final approval of the specification/data conversion plan
- AssetWorks converts data in accordance with the specification
- AssetWorks and PATH review converted data
- AssetWorks provides documentation and a schedule and date ranges for conversions
- PATH gives final acceptance

The objective of these data conversion services is to process extracted data from the applicable PATH legacy systems and map the extracted data into FASuite. PATH will provide a sample of the legacy data as soon as possible. Using this sample, the team will define exactly what data will be converted from the current system and define a mapping of data into FASuite. AssetWorks will help PATH finalize the data mapping and identify the specific sources for each data element. AssetWorks and PATH will define which information will be loaded into FASuite.

Data Conversion Procedures and Assumptions

AssetWorks will determine the necessary data required to make the system operational (e.g., asset data, current inventory levels, etc.) and then identify, in conjunction with PATH staff, what data will be available from current systems, and what data PATH may have to develop or enter. Once the data conversion specifications are completed, PATH will extract the data from its current systems. AssetWorks will be responsible for populating FASuite with approved and "clean" PATH data. In the standard Extraction, Transformation, and Load (ETL) process, PATH will be responsible for the Extraction and Transformation, while AssetWorks will be responsible for the Load.

Format of Converted Data

AssetWorks assumes that all PATH data files are formatted to facilitate uniform electronic conversion. AssetWorks requires that PATH supply all conversion data in text documents (flat file ASCII format) with necessary documentation.

AssetWorks will provide Microsoft Excel templates to assist in loading data into FASuite. AssetWorks will convert only the data that maps into FASuite. Data that does not map into FASuite will not be converted. Further, only data elements that can be entered on an FASuite screen are part of this conversion.

PATH will provide the data in the properly formatted spreadsheets (per AssetWorks' specification) for loading into FASuite. AssetWorks makes the following assumptions about the data from the legacy PATH system(s):

- The data files for the asset master records for new cars will be text-based flat files with one row of data per asset
- The data files for the part master records for new cars will be text-based flat files with one row of data per part



- AssetWorks will use default values for any data element that FASuite requires that is not in the data file.
- PATH will provide each test data file and each production data file in exactly the same format.
- AssetWorks will not be responsible for “scrubbing” or “cleansing” legacy PATH data.
- AssetWorks will not source or manually enter any data.

PATH will provide one ASCII file from each legacy application. AssetWorks will not be responsible for converting hard copy data records.

Conversion of Specific Data

AssetWorks and PATH will jointly resolve any issue arising out of the conversion of historical repair and maintenance data, including codes (if any) to be changed. AssetWorks will help PATH finalize the data mapping for equipment and part master records and identify the specific sources for each data element. AssetWorks and PATH will identify cost information that will be loaded into FASuite.

Data Conversion Testing

After AssetWorks and PATH have jointly documented the data mapping and data load process, AssetWorks will test the results from PATH's data extractions. These tests will validate the data migration strategy that the team defined in earlier stages. This process will require involvement from the PATH Information Technology personnel supporting the existing systems. Upon completion, AssetWorks will provide all testing results to PATH for acceptance.

PATH Validation of Data Conversion

AssetWorks will convert samples of the data for review and validation purposes. AssetWorks will assist the PATH Project Manager in the validation process. AssetWorks will convert the data based on the rules defined earlier in the project. Data will be converted into the development environment and validated by PATH before being converted into the production environment.

Data Conversion Documentation

Prior to conversion into the development environment, AssetWorks will provide to PATH a document explaining the conversion process and mapping the converted data into FASuite. Upon completion of conversion to the development environment, AssetWorks will test the conversion process by working with the PATH project team to move the data (dry run) into the FASuite database. Data validation will occur, followed by live conversion of data into the production environment. AssetWorks will use FASuite's batch processing feature to load the data on these screens.

AssetWorks will provide one complete, successful conversion based on the conversion specifications into Test/Development, and then one complete, successful conversion based on the conversion specifications into Production.

Deliverable for Data Conversion Services

AssetWorks will provide the following deliverables:



- Data Element Mapping Document for data conversion.
- Data Conversion Technical Specifications for maintenance data conversion.
- Data Conversion Schedule for maintenance data conversion.
- Converted data.

PATH is responsible for all deliverables not specifically included above.



WBS C.1.9 Testing Services

AssetWorks will prepare plans, similar in scope, for Unit Tests, Integrated Tests, and User Tests, per the project plan.

User Testing

Review User Test Plan

AssetWorks will review the User Test Plan with PATH staff to ensure the functions of each system component are ready for live operations. The User Test Plan will consist of the following functional tests:

- Verify the security and access control functions for several User Groups
- Add and modify equipment primary information
- Add and modify parts primary information
- Open a repair order and a PM order for an equipment unit
- Charge labor to the work orders and verify the charges/credits of hours and costs
- Charge inventory parts to the work orders and verify the charges/credits of quantity and cost as well as proper inventory relief
- Charge commercial charges to the work orders and verify the charges of labor and parts
- Close the repair and PM orders
- Verify work order charges
- Adjust parts inventory both upward and downward
- Generate a sampling of standard reports
- Verify a sample of asset master records
- Verify a sample of vehicle maintenance history
- Verify a sample of part master records
- Generate a sampling of standard reports

Execute User Test

AssetWorks will use sample PATH data (where possible) to demonstrate the features of FASuite in the test environment, according to the above test plan.

Document and provide test results

AssetWorks will provide test scripts and document the results of all testing, including a passed/failed indication and any modifications made to the procedures during the test.

Deliverable for User Testing Services

AssetWorks will provide the following deliverables:



- Written User Test Plans.
- Test scripts for FASuite user testing.
- Test results for FASuite user testing.

PATH is responsible for all deliverables not specifically included above.



WBS C.1.10 Training Planning Services

The AssetWorks project team will develop and deliver a comprehensive training program to provide FASuite training for various types of PATH users. The training will be role-based and will differ for trainees from the various organizational and functional areas. Each PATH trainee will have the basic skills in the overall use of FASuite and strong knowledge of how to use the application in his or her specific job function or area of expertise. The deliverables will not include remedial training for computer skills or any computer-based training.

PATH will provide all subsequent user training required in connection with new members entering the user community and on an ongoing basis. Consequently, AssetWorks is proposing a Train-the-Trainer element to the overall training program. Any training materials, including presentation materials, delivered to PATH will be delivered as electronic media in Microsoft Word or Microsoft PowerPoint format.

AssetWorks will create and maintain the training database (on the PATH infrastructure) to be used during the training program. For each training course, AssetWorks will furnish written certifications for each person it trains to certify that he or she has completed the course.

Develop Training Outline

AssetWorks will develop a training plan that describes training that will be delivered. AssetWorks will develop a plan that addresses the following topics:

- Assessment of required levels of training for PATH's current Operations user roles and Trainer roles (see below)
- Samples of training media for each type of role described below (e.g., handouts, practice exercises, and screenshots with step-by-step instructions).

AssetWorks will develop training materials for each of the identified user groups, or roles, as follows.

- System Operation Administrator (Phase I only)
- System Internals Administrator (Application Admin)
- Storekeeper
- Vehicle Maintenance Personnel (Technicians)
- Car Configuration Administrator
- Warranty Administrator (Phase II only)
- Maintenance Planner
- Maintenance Supervisor

AssetWorks and/or PATH will train each of these groups separately for those functions they will need to fulfill their roles in the vehicle maintenance and material management processes. AssetWorks will develop the training courses and materials, organize the classes, and conduct the training program on PATH premises. PATH is responsible for providing and preparing the training facility.



Develop Training Materials

Once PATH approves the Training Outline, the AssetWorks project team will complete the training materials and begin scheduling and coordinating the training. AssetWorks training materials assume all users are familiar with a Windows environment; the AssetWorks training will not include any Windows or remedial computer training.

The training will cover work order functions; parts and labor posting functions; and other common features and transactions. The topics and work flows included in the training will be those finalized by the PATH team during the system setup and follow-up tasks. Any deviations in the defined and agreed upon work flow will cause delays and added costs to the training.

With PATH's assistance, AssetWorks will facilitate two workshops, per the project plan, to test the training materials and gauge the clarity and completeness of the draft curriculum. Selected courses will be addressed in each workshop.

AssetWorks will provide a master electronic version for the PATH Project Manager. AssetWorks will produce and provide one copy of the relevant training materials for each trainee (i.e., one copy for each person who formally attends a course). PATH will be authorized to use any training materials for ongoing training within PATH.

Deliver Training Session "Dry Run" for End User Training

The AssetWorks project team will provide abbreviated "dry run" training sessions for the PATH project team, and selected key users, to get feedback on the end user training program. This opportunity for feedback will allow the PATH project team to ensure that the training approach meets the needs of the end users.

All courses will consist of a combination of classroom and hands-on instruction. Training will include classroom and hands-on instruction through the use of the actual application. PATH may choose to record the training sessions (by video, audio, or both) and will have all rights to these recordings.

Deliverable for Training Planning

AssetWorks will provide the following deliverables:

- Training Outlines for trainers and end users.
- Training materials for trainers and end users.
- End user and Trainer "exercise kits" for end users and trainers.

PATH is responsible for all deliverables not specifically included above.



WBS C.1.11 Training Delivery Services

AssetWorks will provide on-site training to PATH (as outlined above) in a classroom environment suitable for training. PATH will be responsible for providing and preparing the training facility.

The program will be conducted at the PATH facilities in Harrison, NJ.

Training Administration

AssetWorks will maintain class registration in PATH's PeopleSoft Human Resources system. PATH will provide AssetWorks with sufficient PeopleSoft Registration & Scheduling training for up to four AssetWorks team members and provide the necessary training documentation.

AssetWorks will:

- Work with PATH Departmental Training coordinators (PATH will identify Training Coordinators) to coordinate and schedule all identified users in FASuite training classes. This effort would include any participant cancellations as well as re-scheduling. PATH will identify the complete list of users in advance.
- Prepare class schedules and notification to end-users and training coordinators.
- Schedule all training classes.
- Provide weekly status reports regarding participant enrollments and completions.
- Ensure that all training materials, class rosters, and course evaluations are in all scheduled classes prior to training date.
- Maintain the class attendance roster and provide notification of no-shows and/or cancellations to the PATH Training Manager.

PATH will ensure all training rooms are fully equipped with working projectors, computers, and other equipment for each training class.

Training Delivery

AssetWorks will deliver the following training.

Information Technology Team Training (System Operation Administrator)

AssetWorks will provide up to two days of IT training for up to twelve users (assuming PATH's training facility has a sufficient number of workstations for this training). These trainees will be responsible for supporting the FASuite application from a technical or "back office" perspective. The training will cover the following areas of FASuite:

System Operation Administrator

Application logging and troubleshooting

Mobile device hardware and software

InfoCenter installation and upgrades

Interface troubleshooting

PATH Trainer Training

AssetWorks will provide Trainer training to designated PATH "trainers" for the roll-out of FASuite. AssetWorks will provide up to three days of Trainer training for up to twenty-four users in two classes of ten each (assuming PATH's training facility has a sufficient number of workstations for these concurrent training sessions). These

trainees will be responsible for training all PATH end users in the use of FASuite for the roll-out and on an ongoing basis. The training will cover the following areas of FASuite:

Trainers

FASuite overview and orientation	Work order management functions
Labor and time entry	Materials and parts request functions for technicians
Use of selected standard reports	Basic troubleshooting and administrative functions

The topics and work flows included in the training will be those finalized by the PATH team during the BPA, system setup, and follow-up tasks. Any deviations in the defined and agreed upon work flow may cause delays and added costs to the training.

End User Training

PATH will provide Operational training to the following end users. The topics and work flows included in the training will be those finalized by the PATH team during the system setup and follow-up tasks. PATH should remain especially sensitive to necessary last-minute procedural changes or clarifications based on end user feedback.

System Internals Administrator (Application Admin)

System login	Users and User Groups
Set-up Options	Table Management
Use of selected standard reports	Application and interface troubleshooting
Ad Hoc Reporting	Notifications/Dashboard Configuration

Storekeeper

System login	Part Requests
Part Primary Records and cross-references	Enterprise Purchasing
Use of selected standard reports	Other parts features

Maintenance (Technicians)

System login	Work order look-up functions
Labor and time entry	Materials and parts request functions for technicians
Use of selected standard reports	Basic troubleshooting

Maintenance Planner

System login	Work order management functions
Multi-Unit Projects and Campaigns	Class/Task information and PM planning
Use of selected standard reports	Basic troubleshooting



Maintenance Supervisor

System login	Work order management functions
Labor and time entry and management	Materials and parts request functions for managers
Use of selected standard reports	Basic troubleshooting

Car Configuration Administrator

System login	Work order management functions
Multi-Unit Projects and Campaigns	Class/Task information and PM planning
Subsystems/Properties	Equipment primary information management
Use of selected standard and Ad Hoc reports	Basic troubleshooting

PATH will identify at least one "key user" at each location to closely support the cutover, particularly after the training concludes. This individual will be responsible for answering initial end user questions and, most importantly, implementing subsequent changes or alterations to the documented procedures. AssetWorks recommends that these "key users" be those that attended the core team training sessions described above.

Deliverable for Training Delivery Services

AssetWorks will provide the following deliverables, as described in the RFP:

- Trainer and End User training classes.
- Rosters and class evaluations for each class.

PATH is responsible for all deliverables not specifically included above.

WBS C.1.12 Operational Acceptance Test

Implementation Services

AssetWorks will provide remote and on-site post-implementation support for a period of three months commencing with PATH's go-live on the new system, per the project plan.

When PATH commences live operations using FASuite, AssetWorks will be on-site, rotating between locations, to provide "go live" assistance for the PATH fleet management operation. This step is critical to success.

The AssetWorks and PATH team will provide refresher training and help on the shop floors and offices to make sure the transition is as smooth as possible. This time includes verification of proper use of equipment and system performance, adherence to defined processes, auditing of inventory processes for accuracy, and tracking and resolving system issues that arise. In addition, AssetWorks will

- Support PATH in the identification and resolution of application issues
- Monitor the operation and usage of FASuite to identify possible application and workflow improvements

AssetWorks has provided for decreasing levels of remote and on-site post-implementation support. In total, AssetWorks will deliver 648 hours of remote and on-site support to PATH's maintenance and IT staff for Phase I.

During the post-implementation period, AssetWorks will provide some support to all shifts (however, this level of effort does not include full-time coverage for all shifts). AssetWorks will generally provide support during any one shift per day (day, swing, or night). When possible and agreed, AssetWorks will provide support to multiple shifts on a given day (e.g., by covering the last four hours of one shift and the first four hours of a second shift).

This work plan does not guarantee full-time support during any one shift or during all portions of the post-implementation period, but rather a mutually agreed-upon distribution of the provided number of support hours throughout the post-implementation support period.

Customer Support Services

In addition to the above, AssetWorks Customer Support is available to PATH's primary points of contact (up to three persons) for assistance with any standard application issue. Please see the Software Maintenance Agreement for more information about these services.

Deliverable for Operational Acceptance Test Services

- Post-implementation support.
- Bi-weekly status reports to PATH detailing the observations and FASuite support effort.

PATH is responsible for all deliverables not specifically included above.



Work Plan – Implementation Stage for Phase II

WBS C.2.0 Phase II Current Operations

Certain Phase I tasks, such as Software Installation and Business Process Assessment, apply completely to Phase II. AssetWorks will use these Phase I tasks to support Phase II. Consequently, this section of the Statement of Work includes only those tasks that are different from or occur at different times than corresponding Phase I tasks.

WBS C.2.1 Data Conversion Services

Data Conversion Preparation

AssetWorks standard procedures for executing Data Conversions include the following:

- Create a specification/data conversion plan
- PATH project team approves the specification/data conversion plan
- AssetWorks reworks the specification/data conversion plan as required
- PATH project team provides final approval of the specification/data conversion plan
- AssetWorks converts data in accordance with the specification
- AssetWorks and PATH review converted data
- AssetWorks provides documentation and a schedule and date ranges for conversions
- PATH gives final acceptance

The objective of these data conversion services is to load asset records for the new rail cars into FASuite. PATH will provide a sample of the legacy data as soon as possible. Using this sample, the team will define exactly what data will be loaded and define a mapping of data into FASuite. AssetWorks will help PATH finalize the data mapping and identify the specific sources for each data element.

Data Conversion Procedures and Assumptions

AssetWorks will determine the necessary asset data required and then identify, in conjunction with PATH staff, what data will be available from KRC and what data PATH may have to develop or enter. Once the data conversion specifications are completed, PATH will provide the asset records. AssetWorks will be responsible for populating FASuite with approved and “clean” PATH data.

Format of Converted Data

AssetWorks assumes that all PATH data files are formatted to facilitate uniform electronic conversion. AssetWorks requires that PATH supply all conversion data in text documents (flat file ASCII format) with necessary documentation.

AssetWorks will provide Microsoft Excel templates to assist in loading data into FASuite. AssetWorks will convert only the data that maps into FASuite. Data that does not map into FASuite will not be converted. Further, only data elements that can be entered on an FASuite screen are part of this conversion.



PATH will provide the data in the properly formatted spreadsheets (per AssetWorks' specification) for loading into FASuite. AssetWorks makes the following assumptions about the data from the legacy PATH system(s):

- The data files for the asset master records will be text-based flat files with one row of data per asset
- The data files for the part master records will be text-based flat files with one row of data per part
- The data files for work order history will be text-based flat files with one row of data per labor or part transaction, including accurate work order and task references
- AssetWorks will use default values for any data element that FASuite requires that is not in the data file.
- PATH will provide each test data file and each production data file in exactly the same format.
- AssetWorks will not be responsible for "scrubbing" or "cleansing" legacy PATH data.
- AssetWorks will not source or manually enter any data.

PATH will provide one flat file record for each new rail car. AssetWorks will not be responsible for converting hard copy data records.

Conversion of Specific Data

AssetWorks will help PATH finalize the asset master data mapping for equipment and part master records and identify the specific sources for each data element. There will be no repair cost information loaded into FASuite for these assets.

Data Conversion Testing

After AssetWorks and PATH have jointly documented the data mapping and data load process, AssetWorks will test the results from PATH's data extractions. These tests will validate the data migration strategy that the team defined in earlier stages. This process will require involvement from the PATH Information Technology personnel supporting the existing systems. Upon completion, AssetWorks will provide all testing results to PATH for acceptance.

PATH Validation of Data Conversion

AssetWorks will convert samples of the data for review and validation purposes. AssetWorks will assist the PATH Project Manager in the validation process. AssetWorks will convert the data based on the rules defined earlier in the project. Data will be converted into the development environment and validated by PATH before being converted into the production environment.

Data Conversion Documentation

Prior to conversion into the development environment, AssetWorks will provide to PATH a document explaining the conversion process and mapping the converted data into FASuite. Upon completion of conversion to the development environment, AssetWorks will test the conversion process by working with the PATH project team to move the data (dry run) into the FASuite database. Data validation will occur, followed by live conversion of data into the production environment. AssetWorks will use FASuite's batch processing feature to load the data on these screens.



AssetWorks will provide one complete, successful conversion based on the conversion specifications into Test/Development, and then one complete, successful conversion based on the conversion specifications into Production.

Catalog Scanning and Hot-Spotting

AssetWorks will provide the scanning and hot-spotting services for the Illustrated Parts Catalog with the following assumptions.

- PATH will send the documents via delivery or electronically and an off-site location
- AssetWorks will scan and hot-spot up to 2,000 pages
- Pages will be standard 8 ½ x 11 with one drawing or parts list per page
- Pages that are 8 ½ x 11 with drawing and parts list on same page, or 11 x 17, or Engineering diagrams, or A4 size pages, or any fold-out hydraulic or electric schematics are NOT included

AssetWorks recommends reviewing the lists of documents with PATH prior to agreeing to a final scope of work. Many factors, including the age of the document and the relevance of the document given the future fleet configuration, can significantly affect the level of effort required. AssetWorks recommends further discussion regarding this conversion requirement before any work begins.

Moreover, if PATH prefers, AssetWorks will provide data conversion services for selected documents and train PATH staff to convert the remainder (some or all, and on an as-needed basis). AssetWorks suggests working with PATH to find the most cost-effective way to convert these documents.

Current Maintenance Systems Data

AssetWorks will convert asset master record information and maintenance history for up to 400 active rail cars (facilities and MOW assets and maintenance history are not included). AssetWorks will develop a data conversion process for the following data items.

- Vehicle Master (New Rail Cars)
- Parts Master (from SAP)
- Work Order
 - Header
 - Labor hours
 - Parts issues

Only data from the online database will be converted to FASuite. Data from archived tapes are not included. The conversion process will not include any other data.

Deliverable for Data Conversion Services

AssetWorks will provide the following deliverables:

- Data Element Mapping Document for new asset data load.



- Technical Specifications for new asset data load.
- Schedule for asset data load.
- Loaded asset data.

PATH is responsible for all deliverables not specifically included above.



WBS C.2.2 Testing Services

AssetWorks will use the plans for Unit Tests, Integrated Tests, and User Tests from Phase I.

Unit Testing

Validate Unit Test Plan from Phase I

AssetWorks and PATH will validate the Phase I plan to ensure it still applies. AssetWorks assumes no changes will be required.

Execute Unit Test Plan

AssetWorks will use sample PATH data (where possible) to demonstrate the FASuite system features and to display the converted data in the test environment, according to the above test plans. The test plan will be executed according to the schedule in the project plan.

Document and provide test results

AssetWorks will provide documented test results that include the test criteria and note the outcome of each test. The document will be delivered in Microsoft Word and will be approximately 10-20 pages in length.

Integrated Testing

Validate Integrated Test Plan from Phase I

AssetWorks and PATH will validate the Phase I plan to ensure it still applies. AssetWorks assumes no changes will be required.

Execute Integrated Test Plan

AssetWorks will use sample PATH data (where possible) to demonstrate the FASuite integration and to display the converted data in the test environment, according to the above test plan.

Document and provide test results

AssetWorks will provide documented test results that define the test criteria and note outcome of each test.

User Testing

Validate User Test Plan from Phase I

AssetWorks and PATH will validate the Phase I plan to ensure it still applies. AssetWorks assumes no changes will be required.

Execute User Test

AssetWorks will use sample PATH data (where possible) to demonstrate the features of FASuite in the test environment, according to the above test plan.



Document and provide test results

AssetWorks will provide test scripts and document the results of all testing, including a passed/failed indication and any modifications made to the procedures during the test.

Deliverable for System Testing Services

AssetWorks will provide the following deliverables:

- Test results for FASuite unit, integration, and user testing.

PATH is responsible for all deliverables not specifically included above.



WBS C.2.3 Training Delivery Services

AssetWorks will use the training materials and procedures from Phase I training tasks. AssetWorks assumes no changes will be required.

AssetWorks will provide on-site training to PATH (as outlined above) in a classroom environment suitable for training. PATH will be responsible for providing and preparing the training facility.

The program will be conducted at the PATH facilities in Harrison, NJ.

Training Administration

AssetWorks will maintain class registration in PATH's PeopleSoft Human Resources system. PATH will provide AssetWorks with sufficient PeopleSoft Registration & Scheduling training for up to four AssetWorks team members and provide the necessary training documentation.

AssetWorks will:

- Work with PATH Departmental Training coordinators (PATH will identify Training Coordinators) to coordinate and schedule all identified users in FASuite training classes. This effort would include any participant cancellations as well as re-scheduling. PATH will identify the complete list of users in advance.
- Prepare class schedules and notification to end-users and training coordinators.
- Schedule all training classes.
- Provide weekly status reports regarding participant enrollments and completions.
- Ensure that all training materials, class rosters, and course evaluations are in all scheduled classes prior to training date.
- Maintain the class attendance roster and provide notification of no-shows and/or cancellations to the PATH Training Manager.

PATH will ensure all training rooms are fully equipped with working projectors, computers, and other equipment for each training class.

Training Delivery

AssetWorks will deliver the following training.

PATH Trainer Training

AssetWorks will provide Trainer training to designated PATH "trainers" for the roll-out of FASuite. AssetWorks will provide up to three days of Trainer training for up to twenty-four users in two classes of ten each (assuming PATH's training facility has a sufficient number of workstations for these concurrent training sessions). These trainees will be responsible for training all PATH end users in the use of FASuite for the roll-out and on an ongoing basis. The training will cover the following areas of FASuite:

Trainers

FASuite overview and orientation

Labor and time entry

Use of selected standard reports

Work order management functions

Materials and parts request functions for technicians

Basic troubleshooting and administrative functions

The topics and work flows included in the training will be those finalized by the PATH team during the BPA, system setup, and follow-up tasks. Any deviations in the defined and agreed upon work flow may cause delays and added costs to the training.

End User Training

PATH will provide Operational training to the following end users. The topics and work flows included in the training will be those finalized by the PATH team during the system setup and follow-up tasks. PATH should remain especially sensitive to necessary last-minute procedural changes or clarifications based on end user feedback.

System Internals Administrator (Application Admin)	
System login	Users and User Groups
Set-up Options	Table Management
Use of selected standard reports	Basic troubleshooting

Storekeeper	
System login	Part Requests
Part Primary Records and cross-references	Ordering
Use of selected standard reports	Other parts features

Maintenance (Technicians)	
System login	Work order look-up functions
Labor and time entry	Materials and parts request functions for technicians
Use of selected standard reports	Basic troubleshooting

Warranty Administrator	
System login	Work order management functions
Multi-Unit Projects and Campaigns	Warranty Claims
Use of selected standard reports	Parts Warranty and Vehicle Warranty Set-up

Maintenance Planner	
System login	Work order management functions
Multi-Unit Projects and Campaigns	Class/Task information and PM planning
Use of selected standard reports	Basic troubleshooting



Maintenance Supervisor

System login	Work order management functions
Labor and time entry and management	Materials and parts request functions for managers
Use of selected standard reports	Basic troubleshooting

Car Configuration Administrator

System login	Work order management functions
Multi-Unit Projects and Campaigns	Class/Task information and PM planning
Use of selected standard reports	Basic troubleshooting

PATH will identify at least one "key user" at each location to closely support the cutover, particularly after the training concludes. This individual will be responsible for answering initial end user questions and, most importantly, implementing subsequent changes or alterations to the documented procedures. AssetWorks recommends that these "key users" be those that attended the core team training sessions described above.

Deliverable for Training Delivery Services

AssetWorks will provide the following deliverables, as described in the RFP:

- Trainer and End User training classes.
- Rosters and class evaluations for each class.

PATH is responsible for all deliverables not specifically included above.



WBS C.2.4 Operational Acceptance Test

AssetWorks recommends further discussion about the implementation of the OAT for Phase II. It is very likely that the two OAT periods could be combined to provide much better support at a lower cost to PATH. However, in the event the schedules cannot coincide, AssetWorks has included a full OAT for Phase II.

Implementation Services

AssetWorks will provide remote and on-site post-implementation support for a period of three months commencing with PATH's go-live on the new system, per the project plan.

When PATH commences live operations using FASuite, AssetWorks will be on-site, rotating between locations, to provide "go live" assistance for the PATH fleet management operation. This step is critical to success.

The AssetWorks and PATH team will provide refresher training and help on the shop floors and offices to make sure the transition is as smooth as possible. This time includes verification of proper use of equipment and system performance, adherence to defined processes, auditing of inventory processes for accuracy, and tracking and resolving system issues that arise. In addition, AssetWorks will

- Support PATH in the identification and resolution of application issues
- Monitor the operation and usage of FASuite to identify possible application and workflow improvements

AssetWorks has provided for decreasing levels of remote and on-site post-implementation support over the three-month period. In total, AssetWorks will deliver 480 hours of remote and on-site support to PATH's maintenance and IT staff for Phase II.

During the post-implementation period, AssetWorks will provide some support to all shifts (however, this level of effort does not include full-time coverage for all shifts). AssetWorks will generally provide support during any one shift per day (day, swing, or night). When possible and agreed, AssetWorks will provide support to multiple shifts on a given day (e.g., by covering the last four hours of one shift and the first four hours of a second shift).

This work plan does not guarantee full-time support during any one shift or during all portions of the post-implementation period, but rather a mutually agreed-upon distribution of the provided number of support hours throughout the post-implementation support period.

Customer Support Services

In addition to the above, AssetWorks Customer Support is available to PATH's primary points of contact (up to three persons) for assistance with any standard application issue. Please see the Software Maintenance Agreement for more information about these services.

Deliverable for Operational Acceptance Test Services

- Post-implementation support.
- Bi-weekly status reports to PATH detailing the observations and FASuite support effort.

PATH is responsible for all deliverables not specifically included above.



Work Plan – Support Stage

AssetWorks has proposed a single Support Stage for this engagement, scheduled to begin after the Phase II OAT. This approach will allow the Phase I project to wrap up and burn in, while the team completes the Phase II OAT (since no new applications can be installed during the Phase II OAT anyway).

If the six week gap in the extended support is not desirable, or the gap is larger because of a delay in the completion of Phase II (such as the rail cars not being delivered as represented here), AssetWorks will revise this plan and add a second Support Stage.

AssetWorks will provide support services, through its Customer Support department as outlined in the AssetWorks Software Maintenance Agreement, which include, for AssetWorks software:

- software error corrections
- software updates and new releases to the application software
- support for user questions from designated points of contact
- support for emergency recovery situations

WBS D.1.0 Project Management Services

AssetWorks will provide project management and oversight services to execute the project plan. The AssetWorks project manager will coordinate all AssetWorks project activities. AssetWorks will provide the following project management services:

- Coordination of project resources
- Serve as the main point of contact for the PATH project manager
- Manage any AssetWorks subcontractors
- Provide updates every two weeks to the work plan and project budget, or as requested by the PATH project manager

AssetWorks will ensure sufficient resources are available to support the project requirements. AssetWorks will assign a senior-level program manager to provide additional subject matter expertise, monitor the project resources and budget, and ensure quality delivery of services. This manager is PATH's first escalation point for any issues arising during the project.

The AssetWorks Project Manager will monitor the project resources to ensure quality delivery of services and that the Deliverables are completed on time and in accordance with the project requirements.

Deliverable for Project Management Services

- Relevant status reports and meetings regarding FASuite.

PATH is responsible for all deliverables not specifically included above.



WBS D.2.0 Capacity Management And Performance Monitoring

AssetWorks will provide a staff member, through a combination of on-site and off-site services, to support PATH in this "turnover" stage for the AssetWorks applications. Efforts will be limited to observations and recommendations, and do not include any hardware or software procurement or installation.

Per the project plan, AssetWorks will

- monitor the system performance
- recommend corrective actions to correct capacity and performance inadequacies, using best judgment
- maintain records on application performance and resource usage and sampled user response time to recommend future server expansion needs
- maintain communication with the PATH's Application Manager and user community in regard to plans for application expansion or modification, which would impact System capacity or performance.
- track such items as database/file sizes, and concurrent users
- take reasonable preventative action to minimize application failure due to insufficient resource levels
- monitor CPU and memory usage on application and database servers
- investigate system problems that result in unsatisfactory performance and take reasonable steps to remedy the problem

AssetWorks has included up to 1,152 hours of services by a technical, experienced resource in the proposal for this task.

Deliverable for Capacity Management And Performance Monitoring

- Relevant status reports.
- Observation reports and recommendations.

PATH is responsible for all deliverables not specifically included above.



WBS D.3.0 Change Management Administration

AssetWorks will provide a staff member, through a combination of on-site and off-site services, to support PATH in this "turnover" stage for the AssetWorks applications. Efforts will be limited to observations and recommendations, and do not include any hardware or software procurement or installation.

Although all changes and upgrades will be the sole responsibility of PATH, AssetWorks will advise PATH so that all changes to the application are made in a controlled manner. PATH will ensure that all application changes are properly authorized, tested and documented prior to implementation in the production environment, in accordance with a structured maintenance methodology. AssetWorks will maintain a general awareness of changes to PATH's information infrastructure, and have appropriate back-out/reversal recommendations available as necessary.

Per the project plan, AssetWorks will

- Inform PATH management of new software options for AssetWorks-provided software
- Maintain contact with the PATH System Administrator to keep him/her aware of AssetWorks software upgrades and fixes and hot packs

PATH will

- establish a segregated test and quality assurance environment for all testing and upgrade tasks
- maintain segregated test and quality assurance environment(s) insulated from the production environment for testing of all changes to software prior to introduction to the production environment
- assume control of the training environment AssetWorks established for the training in the Implementation Stage
- establish and enforce procedures to ensure that only approved changes are implemented

However, since PATH will be one of many AssetWorks customers using an out-of-the-box application, AssetWorks' internal QA and Customer Support functions will simplify many of these efforts for PATH.

AssetWorks has included up to 288 hours of services by a technical, experienced resource in the proposal for this task.

Deliverable for Change Management Administration

- Support in upgrade planning.

PATH is responsible for all deliverables not specifically included above.

WBS D.4.0 Coaching and User Assistance

AssetWorks will provide a staff member, through a combination of on-site and off-site services, to support PATH as requested for assistance with the AssetWorks applications.

AssetWorks will

- provide technical and second level end-user training to the system users
- provide technical support to user department staff at internal/external meetings
- conduct ongoing and refresher training for the trainers when requested
- serve as a resource for PATH staff as related to application functionality

AssetWorks has included up to 360 hours of training in the proposal for this task.

Deliverable for Change Management Administration

- Training and support services.

PATH is responsible for all deliverables not specifically included above.



WBS D.5.0 Business Resumption Planning

AssetWorks work with the PATH Applications Manager and the user departments to participate in activities associated with the PATH's Business Resumption Plan. AssetWorks will be primarily responsible for the portion of the plan concerned with providing continuing application management services for the application.

AssetWorks has included up to 288 hours of on-site and off-site services in the proposal for this task.

As an optional follow-on task, and as part of a mutually agreed Change Order, AssetWorks will participate in tests of the Business Resumption Plan scheduled by PATH, typically quarterly.

Deliverable for Change Management Administration

- BRP consulting services.

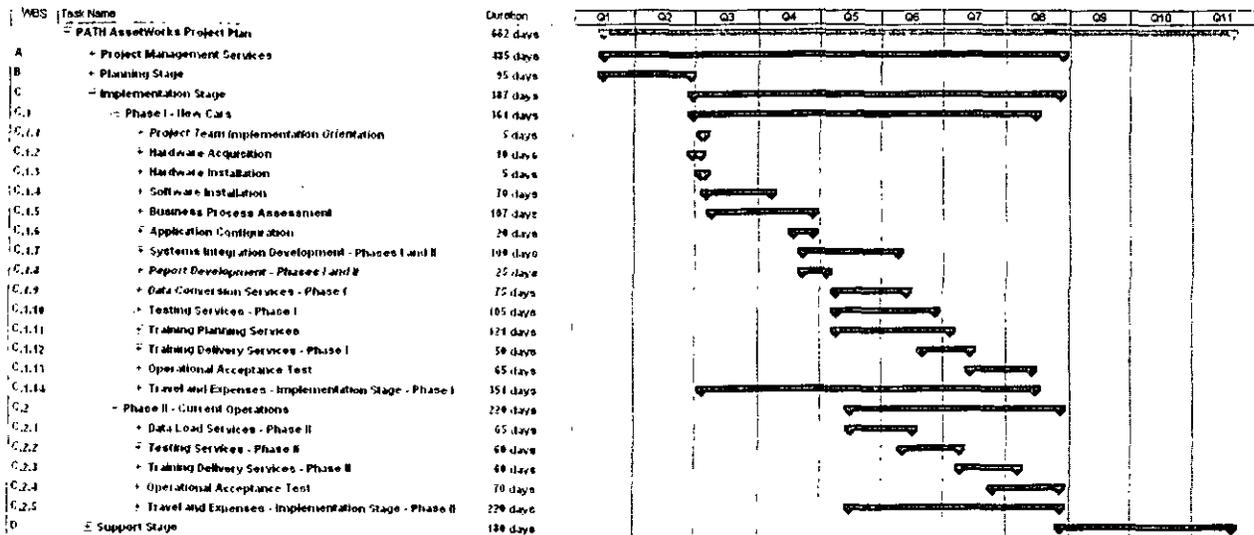
PATH is responsible for all deliverables not specifically included above.



Preliminary Timeline

The following graph depicts the proposed timeline for this project. Please see the complete Microsoft Project document for a complete project plan, including a Gantt chart.

All tasks described herein assume the durations and timelines represented below. A change to the schedule may result in a change to the implementation costs.



Assumptions

The following general assumptions apply to this proposal:

General

1. This is a fixed-fee effort. Under no circumstances will AssetWorks expend more hours than the number of hours indicated in the project plan.
2. This scope of work relates only to out-of-the-box features and functions for AssetWorks software. No tailoring, customizations, or enhancements are included.
3. *AssetWorks' consulting estimates do not include installation and/or configuration of any computer hardware and peripheral equipment. PATH will be responsible for installing and configuring computer hardware and peripheral equipment such as printers and bar code equipment (if applicable).*
4. PATH will have all of the necessary and appropriate personnel at all of the meetings for the purpose of defining the requirements of the system.
5. PATH will appoint a single point of contact for the duration of the project. This person should have project management responsibilities and decision-making authority. This person will be the focal point of contact for AssetWorks' Customer Support department.
6. All training sessions will be based on standard application training materials.
7. PATH will implement this solution such that all assets will be in a single production FASuite database.
8. AssetWorks will provide on-site training to PATH (as outlined above) in a classroom environment suitable for training. PATH will be responsible for providing and preparing the training facility.
9. This proposal includes only the interfaces stated in this Statement of Work. AssetWorks will provide estimates for other interfaces as may be required on an as-needed basis.
10. PATH will receive all standard, out-of-the-box reports at no extra cost.
11. This Statement of Work does not include any costs associated with 3rd party vendors or software that may be needed to complete the implementation.
12. PATH commits to training appropriate functional and technical resources as required.
13. PATH is responsible for all manual data entry.

Project Management and Risk Factors

14. The PATH project manager will be responsible for obtaining any required authorizations, approvals and/or signoffs by PATH related to project deliverables and project progression in a timeframe in alignment with the project work plan. Delays to this process as well as any PATH tasks not completed within the work plan timeframe will be subject to the Change Order Management process, delayed deadlines, and increased services fees.
15. This Statement of Work does not include the expenses associated with PATH or PATH resources assigned to the project.
16. PATH remains responsible for all integration effort not described in this Statement of Work.
17. The project schedule is contingent upon the timely attainment of external milestones that are outside of AssetWorks control. Examples include but are not limited to the acquisition of the requisite software licenses and hardware and the approval of requisite capital appropriation requests as required.

18. PATH will have five days to review each deliverable. After five days, the deliverable will be deemed accepted. If changes are requested before the five days, AssetWorks will make the requested revisions, subject to scope, and then submit the final deliverable. There will not be multiple review cycles, unless otherwise mutually agreed.
19. Circumstances may necessitate changes to the tasks and/or time estimates, at which time AssetWorks and PATH will discuss these changes in good faith at their earliest opportunity.

Infrastructure

20. PATH will provide a project work area and infrastructure at the centralized implementation location appropriate for the size of the combined PATH/AssetWorks project team. This infrastructure should include desks, chairs, telephones, and workstations with network access to printers and to the applications and implementation databases.
21. System, server, and workstation backups are the responsibility of PATH. This includes the development and execution of the system backups and recovery programs.
22. PATH personnel assume the responsibility for applying software patches.
23. Acquisition, installation, testing, support, and tuning of any additional required application software, hardware, RDBMS, other software, peripherals and communications infrastructure will be the responsibility of PATH.
24. PATH will be responsible for deploying access to the FASuite system and for providing all supporting software, hardware, and connectivity for the servers. The Web server must use Microsoft IIS.
25. The following information technology services are not included in this Statement of Work: network connections; telecommunications network(s); operating system, network and database administration; disaster recovery planning; the acquisition, installation, testing and tuning of any required hardware, operating software, peripherals and communications infrastructure.

PATH Resources

26. Assumes all PATH project team resources will be committed to the project as of the project start date.
27. Assumes PATH will provide the following resources to insure a successful implementation.
 - Executive Steering Committee – Without proper vision and guidance from a company's executives, many projects fail to reach their desired goals and objectives. The role of the Executive Steering Committee will be to participate in setting the goals and scope of the project and to participate in periodic status meetings with the project team.
 - Project Manager - A Project Manager will be assigned with appropriate decision-making authority.
 - Subject Matter Experts - These resources will be considered part of the core project team and will participate in tasks including Project Team training. Often these experts consist of Functional Leads in their respective areas of expertise (e.g., Maintenance), as well as other supporting personnel from the various departments. The resources designated for these roles should have a good working knowledge of how PATH processes are performed and understand the reasons for the current processes.
 - Technical Experts – A team of Technical Experts will be involved in the technical duties that come with a AssetWorks implementation. Examples include a Technical Lead for system administration, database administration, web administration, printer administration, software patches, etc.



Implementation Plan

ID	WBS Task Name	Duration	Q-1	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12
0	PATH AssetWorks Project Plan	662 days													
1	Project Management Services	485 days													
2	Project Start-up	10 days													
3	Notice to Proceed	0 days													
4	Project Kick-off and Planning	10 days													
5	Project Management	475 days													
6	Provide project and program management and oversight	475 days													
7	Change Management	351 days													
8	Execute the PATH Change Management Plan	95 days													
9	Planning Stage	5 days													
10	Project Team Orientation	3 days													
11	Prepare orientation materials	2 days													
12	Deliver orientation to project team	55 days													
13	FFD Planning	10 days													
14	PATH Resources Identified - FFD Advisory Group	5 days													
15	Develop and Document FFD Plan	0 days													
16	Checkpoints - Review and acceptance of FFD Plan	5 days													
17	Checkpoints - Review and acceptance of FFD Plan	5 days													
18	Checkpoints - Adjust project plan as necessary	0 days													
19	FFD Development	45 days													
20	Conduct working sessions to review requirements	10 days													
21	Create preliminary document	10 days													
22	Review preliminary document	5 days													
23	Modify document as required	5 days													
24	Checkpoints - Review and acceptance of document	0 days													
25	Identify desired enhancements/gaps	5 days													
26	Complete document, including cost estimates for selected enhancements	5 days													
27	Checkpoints - Review and acceptance of document with costs	5 days													
28	Checkpoints - Adjust project plan as necessary	0 days													
29	Hardware Plan	50 days													
30	Hardware Planning	10 days													
31	PATH Resources Identified - Advisory Group	0 days													
32	Develop and Document Plan	5 days													
33	Checkpoints - Review and acceptance of Hardware Plan	5 days													
34	Checkpoints - Adjust project plan as necessary	0 days													
35	Plan Development	40 days													
36	Conduct working sessions	5 days													
37	Complete discovery	10 days													
38	Create preliminary document	10 days													
39	Review preliminary document	5 days													
40	Modify document as required	5 days													
41	Checkpoints - Review and acceptance of document	0 days													
42	Checkpoints - Adjust project plan as necessary	25 days													
43	Implementation Plan	0 days													
44	Planning	0 days													
45	PATH Resources Identified - Advisory Group	0 days													
46	Plan Development	25 days													
47	Conduct working sessions	5 days													
48	Create preliminary document	5 days													
49	Review preliminary document	5 days													
50	Modify document as required	5 days													
51	Checkpoints - Review and acceptance of document	0 days													
52	Checkpoints - Adjust project plan as necessary	0 days													
53	Conversion Plan	30 days													
54	Planning	0 days													
55	PATH Resources Identified - Advisory Group	0 days													
56	Plan Development	30 days													
57	Conduct working sessions	10 days													
58	Create preliminary document	5 days													
59	Review preliminary document	5 days													
60	Modify document as required	5 days													
61	Checkpoints - Review and acceptance of document	0 days													
62	Checkpoints - Adjust project plan as necessary	25 days													
63	Functional Test Plan	0 days													
64	Planning	0 days													
65	PATH Resources Identified - Advisory Group	0 days													
66	Plan Development	25 days													
67	Conduct working sessions	5 days													
68	Create preliminary document	5 days													

Implementation Plan

ID	WBS	Task Name	Duration	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12
69	B.6.2.2	Review preliminary document	5 days												
70	B.6.2.4	Modify document as required	5 days												
71	B.6.2.5	Checkpoint - Review and acceptance of document	0 days												
72	B.6.2.6	Checkpoint - Adjust project plan as necessary	25 days												
73	B.7	Operational Acceptance Test Plan	0 days												
74	B.7.1	Planning	0 days												
75	B.7.1.1	PATH Resources Identified - Advisory Group	0 days												
76	B.7.2	Plan Development	25 days												
77	B.7.2.1	Conduct working sessions	5 days												
78	B.7.2.2	Create preliminary document	5 days												
79	B.7.2.3	Review preliminary document	5 days												
80	B.7.2.4	Modify document as required	5 days												
81	B.7.2.5	Modify document as required	5 days												
82	B.7.2.6	Checkpoint - Review and acceptance of document	0 days												
83	B.8	Checkpoint - Adjust project plan as necessary	25 days												
84	B.8.1	System Support Plan	0 days												
85	B.8.1.1	Planning	0 days												
86	B.8.2	PATH Resources Identified - Advisory Group	0 days												
87	B.8.2.1	Plan Development	25 days												
88	B.8.2.2	Conduct working sessions	5 days												
89	B.8.2.3	Create preliminary document	5 days												
90	B.8.2.4	Review preliminary document	5 days												
91	B.8.2.5	Modify document as required	5 days												
92	B.8.2.6	Checkpoint - Review and acceptance of document	0 days												
93	B.9	Checkpoint - Adjust project plan as necessary	30 days												
94	B.9.1	Training Plan	0 days												
95	B.9.1.1	Planning	0 days												
96	B.9.2	PATH Resources Identified - Advisory Group	0 days												
97	B.9.2.1	Plan Development	30 days												
98	B.9.2.2	Conduct working sessions	10 days												
99	B.9.2.3	Create preliminary document	5 days												
100	B.9.2.4	Review preliminary document	5 days												
101	B.9.2.5	Modify document as required	5 days												
102	B.9.2.6	Checkpoint - Review and acceptance of document	0 days												
103	B.10	Checkpoint - Adjust project plan as necessary	25 days												
104	B.10.1	Parallel Testing Plan	0 days												
105	B.10.1.1	Planning	0 days												
106	B.10.2	PATH Resources Identified - Advisory Group	0 days												
107	B.10.2.1	Plan Development	25 days												
108	B.10.2.2	Conduct working sessions	5 days												
109	B.10.2.3	Create preliminary document	5 days												
110	B.10.2.4	Review preliminary document	5 days												
111	B.10.2.5	Modify document as required	5 days												
112	B.10.2.6	Checkpoint - Review and acceptance of document	0 days												
113	B.11	Checkpoint - Adjust project plan as necessary	80 days												
114	B.11.1	Travel and Expenses - Planning Stage	80 days												
115	B.11.2	Travel Costs	80 days												
116	C	Expenses	387 days												
117	C.1	Implementation Stage	361 days												
118	C.1.1	Phase I - New Cars	5 days												
119	C.1.1.1	Project Team Implementation Orientation	3 days												
120	C.1.1.2	Prepare orientation materials	2 days												
121	C.1.2	Deliver orientation to project team	10 days												
122	C.1.2.1	Hardware Acquisition	10 days												
123	C.1.3	Acquire hardware for servers, network, and workstations	5 days												
124	C.1.3.1	Hardware Installation	5 days												
125	C.1.4	Install and configure all hardware	5 days												
126	C.1.4.1	Software Installation	70 days												
127	C.1.4.1.1	Installation Services	68 days												
128	C.1.4.1.2	Install Software in Development environment	2 days												
129	C.1.4.1.3	Install Software in Test environment	1 day												
130	C.1.4.1.4	Install Software in QA/Training environment	2 days												
131	C.1.4.2	System Testing Services	66 days												
132	C.1.4.2.1	Conduct System Test in Development environment	2 days												
133	C.1.4.2.2	Conduct System Test in Test environment	2 days												
134	C.1.4.2.3	Conduct System Test in QA/Training environment	2 days												
135	C.1.4.2.4	Conduct System Test in Prod environment	2 days												
136	C.1.5	Business Process Assessment	107 days												
137	C.1.5.1	Kick-off Meeting	2 days												

Implementation Plan

ID	WBS	Task Name	Duration	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12
138	C.1.5.2	Prepare for interviews	3 days												
139	C.1.5.3	Operations - Current Processes	23 days												
140	C.1.5.3.1	Planning & Scheduling Activities	5 days												
141	C.1.5.3.1	Interview - Planning & Scheduling	2 days												
142	C.1.5.3.1	Field Observations - Planning & Scheduling	2 days												
143	C.1.5.3.1	Documentation - Planning & Scheduling	1 day												
144	C.1.5.3.2	Work Management	5 days												
145	C.1.5.3.2	Interview - Work Management	2 days												
146	C.1.5.3.2	Field Observations - Work Management	2 days												
147	C.1.5.3.2	Documentation - Work Management	1 day												
148	C.1.5.3.3	Materials/Purchasing Interviews	5 days												
149	C.1.5.3.3	Interview - Materials/Purchasing	2 days												
150	C.1.5.3.3	Field Observations - Materials/Purchasing	2 days												
151	C.1.5.3.3	Documentation - Materials/Purchasing	1 day												
152	C.1.5.3.4	Backshops	5 days												
153	C.1.5.3.4	Interview - Backshop Overview	2 days												
154	C.1.5.3.4	Field observations - Backshop, all functions	1 day												
155	C.1.5.3.4	Documentation - Backshop, all functions	2 days												
156	C.1.5.3.5	Review All Activities	5 days												
157	C.1.5.3.5	Identify potential process changes	5 days												
158	C.1.5.3.5	Prepare for Future Process discussions	5 days												
159	C.1.5.3.5	Checkpoints - PATH Core Team Review of Notes	52 days												
160	C.1.5.4	Operations - Future Processes	9 days												
161	C.1.5.4.1	Planning & Scheduling Activities	2 days												
162	C.1.5.4.1	Workshop - Planning & Scheduling	2 days												
163	C.1.5.4.1	Documentation - Planning & Scheduling	2 days												
164	C.1.5.4.1	PATH Review and Feedback - Planning & Scheduling	3 days												
165	C.1.5.4.1	AssetWorks Revisions - Planning & Scheduling	5 days												
166	C.1.5.4.2	Work Management	9 days												
167	C.1.5.4.2	Workshop - Work Management	2 days												
168	C.1.5.4.2	Documentation - Work Management	2 days												
169	C.1.5.4.2	PATH Review and Feedback - Work Management	3 days												
170	C.1.5.4.2	AssetWorks Revisions - Work Management	5 days												
171	C.1.5.4.3	Warranty Activities	9 days												
172	C.1.5.4.3	Workshop - Warranty Activities	2 days												
173	C.1.5.4.3	Documentation - Warranty Activities	2 days												
174	C.1.5.4.3	PATH Review and Feedback - Warranty Activities	3 days												
175	C.1.5.4.3	AssetWorks Revisions - Warranty	5 days												
176	C.1.5.4.4	Materials/Purchasing Interviews	15 days												
177	C.1.5.4.4	Workshop - Materials/Purchasing	5 days												
178	C.1.5.4.4	Documentation - Materials/Purchasing	5 days												
179	C.1.5.4.4	PATH Review and Feedback - Materials/Purchasing	3 days												
180	C.1.5.4.4	AssetWorks Revisions - Materials/Purchasing	5 days												
181	C.1.5.4.5	Backshops	10 days												
182	C.1.5.4.5	Workshop - Backshop Overview	2 days												
183	C.1.5.4.5	Documentation - all functions	3 days												
184	C.1.5.4.5	PATH Review and Feedback - Backshop, all functions	3 days												
185	C.1.5.4.5	AssetWorks Revisions - Backshop, all functions	5 days												
186	C.1.5.5	Complete BPA report	25 days												
187	C.1.5.5.1	Checkpoints - Make sure all interviews are complete	0 days												
188	C.1.5.5.2	Consolidate Findings	2 days												
189	C.1.5.5.3	Prepare and submit preliminary report	8 days												
190	C.1.5.5.4	Checkpoints - PATH Core Team Review of Preliminary report	5 days												
191	C.1.5.5.5	Joint Review of Proposed TO BE Solution (CRP)	10 days												
192	C.1.5.5.6	Complete and submit final report	5 days												
193	C.1.5.5.7	Checkpoints - PATH Core Team acceptance of report	0 days												
194	C.1.5.5.8	Checkpoints - Adjust project plan as necessary	20 days												
195	C.1.6	Application Configuration	20 days												
196	C.1.6.1	Configure FASure (security, org structure, etc.)	0 days												
197	C.1.6.2	Document system configuration	20 days												
198	C.1.7	Systems Integration Development - Phases I and II	100 days												
199	C.1.7.1	Interface Development Preparation	15 days												
200	C.1.7.1.1	PATH Resources identified - Integration Advisory Group	0 days												
201	C.1.7.1.2	Document Integration Plan	5 days												
202	C.1.7.1.3	Checkpoints - Review and acceptance of integration plan	0 days												
203	C.1.7.1.4	Checkpoints - Adjust project plan as necessary	0 days												
204	C.1.7.2	SAP Interfaces - Phase I	85 days												
205	C.1.7.2.1	Create preliminary interface specifications	20 days												
206	C.1.7.2.2	Review preliminary specifications	20 days												

Implementation Plan

ID	WBS	Task Name	Duration	Q-1	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12
207	C.1.7.2.3	Modify specifications as agreed	20 days													
208	C.1.7.2.4	Checkpoint - Approve interface specifications	0 days													
209	C.1.7.2.5	Develop interfaces	40 days													
210	C.1.7.2.6	Test and validate interfaces	40 days													
211	C.1.7.2.7	Prepare interface documentation	40 days													
212	C.1.7.3	DMRDS Interface - Phase II	30 days													
213	C.1.7.3.1	Create preliminary interface specification	5 days													
214	C.1.7.3.2	Review preliminary specification	5 days													
215	C.1.7.3.3	Modify specification as required	5 days													
216	C.1.7.3.4	Checkpoint - Approve interface specification	0 days													
217	C.1.7.3.5	Develop interface	10 days													
218	C.1.7.3.6	Test and validate interface	10 days													
219	C.1.7.3.7	Prepare interface documentation	5 days													
220	C.1.7.4	IETM Interface - Phase II	25 days													
221	C.1.7.4.1	Create preliminary interface specification	5 days													
222	C.1.7.4.2	Review preliminary specification	5 days													
223	C.1.7.4.3	Modify specification as required	5 days													
224	C.1.7.4.4	Checkpoint - Approve interface specification	0 days													
225	C.1.7.4.5	Develop interface	5 days													
226	C.1.7.4.6	Test and validate interface	5 days													
227	C.1.7.4.7	Prepare interface documentation	5 days													
228	C.1.8	Report Development - Phases I and II	25 days													
229	C.1.8.1	PATH Resources Identified - Reports Advisory Group	0 days													
230	C.1.8.2	Specify additional reports and priorities	5 days													
231	C.1.8.3	Develop custom reports	20 days													
232	C.1.8.4	PATH Staff to develop additional reports	20 days													
233	C.1.9	Data Conversion Services - Phase I	75 days													
234	C.1.9.1	Data Conversion Preparation	10 days													
235	C.1.9.1.1	PATH Resources Identified - Data Conversion Advisory Group	0 days													
236	C.1.9.1.2	Review Data Conversion Plan	0 days													
237	C.1.9.1.3	Checkpoint - Validation of Data Conversion Plan	10 days													
238	C.1.9.1.4	Checkpoint - Adjust project plan as necessary	0 days													
239	C.1.9.2	New Car Data	65 days													
240	C.1.9.2.1	Create preliminary conversion spec	5 days													
241	C.1.9.2.2	Approve preliminary specification	5 days													
242	C.1.9.2.3	Modify specification as required	5 days													
243	C.1.9.2.4	Checkpoint - Approve conversion specification	0 days													
244	C.1.9.2.5	Build and Execute conversion	20 days													
245	C.1.9.2.6	Complete conversion	0 days													
246	C.1.9.2.7	Checkpoint - Review conversion progress	30 days													
247	C.1.9.2.8	Test and validate conversion	10 days													
248	C.1.9.2.9	Prepare conversion procedure docs	10 days													
249	C.1.9.2.1	Checkpoint - Review and accept conversion	0 days													
250	C.1.10	Testing Services - Phase I	106 days													
251	C.1.10.1	Testing Preparation	0 days													
252	C.1.10.1.1	PATH Resources Identified - Testing Advisory Group	0 days													
253	C.1.10.2	Develop Test Plans	15 days													
254	C.1.10.2.1	Unit Test	5 days													
255	C.1.10.2.2	Prepare Test Plan	5 days													
256	C.1.10.2.3	Checkpoint - Review and acceptance of Test Plan	0 days													
257	C.1.10.2.4	Integrated Test	5 days													
258	C.1.10.2.5	Prepare Test Plan	5 days													
259	C.1.10.2.6	Checkpoint - Review and acceptance of Test Plan	0 days													
260	C.1.10.2.7	User Acceptance Test	5 days													
261	C.1.10.2.8	Prepare Test Plan	5 days													
262	C.1.10.2.9	Checkpoint - Review and acceptance of Test Plan	0 days													
263	C.1.10.3	Execute Test Plans	90 days													
264	C.1.10.3.1	Unit Test	25 days													
265	C.1.10.3.2	Prepare for Test	5 days													
266	C.1.10.3.3	Execute Test Plan	20 days													
267	C.1.10.3.4	Document Test Results and Correct	10 days													
268	C.1.10.3.5	Checkpoint - Review and acceptance of Test Results	0 days													
269	C.1.10.3.6	Checkpoint - Adjust project plan as necessary	0 days													
270	C.1.10.3.7	Integrated Test	50 days													
271	C.1.10.3.8	Prepare for Test	5 days													
272	C.1.10.3.9	Execute Test Plan	15 days													
273	C.1.10.3.10	Document Test Results and Correct	5 days													
274	C.1.10.3.11	Checkpoint - Review and acceptance of Test Results	0 days													
275	C.1.10.3.12	Checkpoint - Adjust project plan as necessary	0 days													

Implementation Plan

ID	WBS	Task Name	Duration	Q-1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12
276	C.1.10.3	User Acceptance Test	15 days												
277	C.1.10.3	Prepare for Test	5 days												
278	C.1.10.3	Execute Test Plan	5 days												
279	C.1.10.3	Document Test Results and Correct	5 days												
280	C.1.10.3	Checkpoint - Review and acceptance of Test Results	0 days												
281	C.1.10.3	Checkpoint - Adjust project plan as necessary	0 days												
282	C.1.11	Training Planning Services	121 days												
283	C.1.11.1	Training Preparation	65 days												
284	C.1.11.1	PATH Resources Identified - Training Advisory Group	0 days												
285	C.1.11.1	Review Training Plan	5 days												
286	C.1.11.1	Checkpoint - Validation of Training Plan	0 days												
287	C.1.11.1	Checkpoint - Adjust project plan as necessary	0 days												
288	C.1.11.1	Prepare Training support systems and processes	60 days												
289	C.1.11.2	Develop Training Outline	5 days												
290	C.1.11.2	Prepare Training Outline	4 days												
291	C.1.11.2	Present Training Outline	1 day												
292	C.1.11.2	Checkpoint - Review of Training Outline	0 days												
293	C.1.11.3	Develop Training Materials	30 days												
294	C.1.11.3	Develop draft training materials for each role	9 days												
295	C.1.11.3	Present draft training materials	1 day												
296	C.1.11.3	Checkpoint - Review of draft training materials	0 days												
297	C.1.11.3	Continue developing training materials	10 days												
298	C.1.11.3	Conduct training workshop for Supervisor Role	1 day												
299	C.1.11.3	Conduct training workshop for Technician Role	1 day												
300	C.1.11.3	Complete training materials	7 days												
301	C.1.11.3	Present training materials	1 day												
302	C.1.11.3	Checkpoint - Review and acceptance of training materials	0 days												
303	C.1.11.4	Deliver Training Session "Dry Run" for End User Training	9 days												
304	C.1.11.4	Prepare for training session "Dry Run"	5 days												
305	C.1.11.4	Supervisor training "Dry Run"	2 days												
306	C.1.11.4	Technician training "Dry Run"	2 days												
307	C.1.11.4	Checkpoint - Review and accept Training Program	0 days												
308	C.1.11.5	Deliver Final Training Materials	0 days												
309	C.1.11.5	Deliver final training materials	0 days												
310	C.1.12	Training Delivery Services - Phase I	50 days												
311	C.1.12.1	Training Administration	50 days												
312	C.1.12.1	Training scheduling and registration	50 days												
313	C.1.12.2	Information Technology Team Training	5 days												
314	C.1.12.2	Provide training to IT staff	5 days												
315	C.1.12.3	PATH Trainer Training	5 days												
316	C.1.12.3	Provide training to Trainers	5 days												
317	C.1.12.4	End User Training	15 days												
318	C.1.12.4	Provide training for end users	15 days												
319	C.1.12.5	Training Completion	0 days												
320	C.1.12.5	Verify and accept training completion	0 days												
321	C.1.12.5	Checkpoint - Proceed to Training and Production Roll-out	0 days												
322	C.1.13	Operational Acceptance Test	65 days												
323	C.1.13.1	Checkpoint - Verify system readiness and commence live operations	0 days												
324	C.1.13.2	Commence Live Operations	0 days												
325	C.1.13.3	Provide remote and on-site production support	65 days												
326	C.1.14	Travel and Expenses - Implementation Stage - Phase I	351 days												
327	C.1.14.1	Travel Costs - Implementation Stage - Phase I	351 days												
328	C.1.14.2	Documentation	220 days												
329	C.2	Phase II - Current Operations	65 days												
330	C.2.1	Data Load Services - Phase II	10 days												
331	C.2.1.1	Data Load Preparation	85 days												
332	C.2.1.1.1	PATH Resources Identified - Data Conversion Advisory Group	0 days												
333	C.2.1.1.2	Review Data Conversion Plan	10 days												
334	C.2.1.1.3	Checkpoint - Validation of Data Conversion Plan	0 days												
335	C.2.1.1.4	Checkpoint - Adjust project plan as necessary	0 days												
336	C.2.1.2	Current Asset Data	50 days												
337	C.2.1.2.1	Create preliminary conversion spec	10 days												
338	C.2.1.2.2	Approve preliminary specification	5 days												
339	C.2.1.2.3	Modify specification as required	5 days												
340	C.2.1.2.4	Checkpoint - Approve conversion specification	0 days												
341	C.2.1.2.5	Build and Execute conversion	15 days												
342	C.2.1.2.6	Checkpoint - Review conversion progress	0 days												
343	C.2.1.2.7	Complete conversion	15 days												
344	C.2.1.2.8	Test and validate conversion	10 days												

Implementation Plan

ID	WBS	Task Name	Duration	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12
345	C.2.1.2.9	Prepare conversion procedure docs	10 days												
346	C.2.1.2.1	<u>Checkpoint - Review and accept conversion</u>	0 days												
347	C.2.1.3	Online Parts Catalog Data Conversion Services	35 days												
348	C.2.1.3.1	<u>Checkpoint - Validate conversion methodology</u>	0 days												
348	C.2.1.3.2	Complete conversion	30 days												
350	C.2.1.3.3	Test and validate conversion	10 days												
351	C.2.1.3.4	<u>Checkpoint - Review and accept conversion</u>	0 days												
352	C.2.2	Testing Services - Phase II	60 days												
353	C.2.2.1	Testing Preparation	0 days												
354	C.2.2.1.1	PATH Resources Identified - Testing Advisory Group	0 days												
355	C.2.2.2	Develop Test Plans	0 days												
356	C.2.2.2.1	Unit Test	0 days												
357	C.2.2.2.1	Prepare Test Plan	0 days												
357	C.2.2.2.1	<u>Checkpoint - Validate Phase I Test Plan</u>	0 days												
359	C.2.2.2.2	Integrated Test	0 days												
360	C.2.2.2.2	Prepare Test Plan	0 days												
361	C.2.2.2.2	<u>Checkpoint - Validate Phase I Test Plan</u>	0 days												
362	C.2.2.2.3	User Acceptance Test	0 days												
363	C.2.2.2.3	Prepare Test Plan	0 days												
364	C.2.2.2.3	<u>Checkpoint - Validate Phase I Test Plan</u>	0 days												
365	C.2.2.3	Execute Test Plans	45 days												
366	C.2.2.3.1	Unit Test	15 days												
367	C.2.2.3.1	Prepare for Test	5 days												
368	C.2.2.3.1	Execute Test Plan	10 days												
369	C.2.2.3.1	Document Test Results and Correct	10 days												
370	C.2.2.3.1	<u>Checkpoint - Review and acceptance of Test Results</u>	0 days												
371	C.2.2.3.1	<u>Checkpoint - Adjust project plan as necessary</u>	0 days												
372	C.2.2.3.2	Integrated Test	15 days												
373	C.2.2.3.2	Prepare for Test	5 days												
374	C.2.2.3.2	Execute Test Plan	10 days												
375	C.2.2.3.2	Document Test Results and Correct	5 days												
376	C.2.2.3.2	<u>Checkpoint - Review and acceptance of Test Results</u>	0 days												
377	C.2.2.3.2	<u>Checkpoint - Adjust project plan as necessary</u>	0 days												
378	C.2.2.3.3	User Acceptance Test	15 days												
379	C.2.2.3.3	Prepare for Test	5 days												
380	C.2.2.3.3	Execute Test Plan	5 days												
381	C.2.2.3.3	Document Test Results and Correct	5 days												
382	C.2.2.3.3	<u>Checkpoint - Review and acceptance of Test Results</u>	0 days												
383	C.2.2.3.3	<u>Checkpoint - Adjust project plan as necessary</u>	0 days												
384	C.2.3	Training Delivery Services - Phase I	60 days												
385	C.2.3.1	Training Administration	60 days												
386	C.2.3.1.1	Training scheduling and registration	60 days												
387	C.2.3.2	PATH Trainer Training	5 days												
388	C.2.3.2.1	Provide training to Trainers	5 days												
389	C.2.3.3	End User Training	15 days												
390	C.2.3.3.1	Provide training for end users	15 days												
391	C.2.3.4	Training Completion	0 days												
392	C.2.3.4.1	<u>Checkpoint - Verify and accept training completion</u>	0 days												
393	C.2.4	Operational Acceptance Test	70 days												
394	C.2.4.1	Commence Live Operations	0 days												
395	C.2.4.2	Provide remote and on-site production support	0 days												
396	C.2.4.3	Travel and Expenses - Implementation Stage - Phase II	70 days												
397	C.2.5	Travel and Expenses - Implementation Stage - Phase II	220 days												
398	C.2.5.1	Documentation	220 days												
399	C.2.5.2	Documentation	220 days												
400	D	Support Stage	180 days												
401	D.2	Project Management	180 days												
402	D.2.1	Provide project and program management and oversight	180 days												
403	D.3	Capacity Management and Performance Monitoring	180 days												
404	D.3.1	Provide monitoring of AssetWorks software	180 days												
405	D.4	Change Management Administration	180 days												
406	D.4.3	Provide change management assistance (for software installations)	180 days												
407	D.5	Coaching and User Assistance	180 days												
408	D.5.1	Provide Ongoing Training	180 days												
409	D.6	Business Resumption Planning	180 days												
410	D.6.1	Provide consulting to develop and BR plan	180 days												
411	D.7	Travel and Expenses - Support Stage	180 days												
412	D.7.1	Travel Costs - Support Stage	180 days												
413	D.7.2	Documentation	180 days												





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ROBERT R. HALLET, PMP

SENIOR PROGRAM MANAGER

Qualifications

Mr. Hallet is an adept at strategic planning, project management, and resource allocation throughout the project life cycle. Project and financial management experience offers turnkey, comprehensive management to cost-critical IT efforts. In depth experience with AssetWorks FASuites project management.

As a Senior Program Manager, Mr. Hallet has managed resources, schedules, risks/issues and quality of implementation deliverables for AssetWorks' FASuite customers.

Relevant Experience

MARTA, Atlanta, GA, Senior Program Manager- System Development

During his tenure with MARTA, Robert has worked in the capacity of Senior Program Manager assisting this large transit agency in:

- completion of business process definition
- functional and technical designs of interfaces, conversions, reports and enhancements
- performing change management activities
- managing system, unit and integration testing
- developing training plans and materials

CTA- Chicago Transit Authority, Program Manager- System Development

- Program Manager for the FASuite project at the Chicago Transit Authority. Managed a multi-vendor team in a \$7 Million implementation of FASuite for all of the CTA's bus and rail (rolling stock) vehicles.
- NPV of \$15 Million based on business process improvement recommendations
- Mitigated several risk events, maintaining project profitability within corporate standards
- Defined business requirements and selected vendor for an online plan submittal and review pilot program for a large municipal client
- Proof of concept successful
- *Managing business and technical requirements definition phase of capital project management application that will facilitate management of over \$5 Billion in roadway improvements*
- Mentored and trained other SD●I project managers, which resulted in:
 - Building knowledgebase of lessons learned for improved project delivery
 - Standardizing practices and project templates based on PMI best practices

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- Presenting staff development seminars in project management knowledge areas and tools

Additional implementation customers include:

- Denver Regional Transportation District (RTD)- Program Manager
- Lockheed Martin – Project Manager
- Hillsborough Area Rapid Transit (HART)- Program Manager
- Des Moines Area Rapid Transit (DART) – Program Manager
- Massachusetts Bay Transit Authority (MBTA) – Program Manager

Education

Northwestern University, Chicago, Illinois

Information Systems Project Management Program

Northeastern University, Boston, Massachusetts

Master of Public Administration

Purdue University, West Lafayette, Indiana

Bachelor of Arts, Law and Society

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Brief Summary of Experience

Pamela Chow

Senior Implementation Specialist/ Subject Matter Expert (SME)

Since joining AssetWorks in the fall of 2005, Ms. Chow has worked as a project manager for a variety of implementations of FleetFocus™FA Suite. Ms. Chow came to AssetWorks with years of experience as a Fleet Analyst specializing in government fleets. Her invaluable experience allows Ms. Chow to be an effective and proactive project manager

Massachusetts Bay Commuter Rail (MBCR)

Senior Implementation Specialist/SME- Ms. Chow worked as the Projected Manager for the implementation of FleetFocus™FA Suite including motor pool, InfoCenter, and Dashboards (KPIs) optional modules setup. Additionally, Ms. Chow assisted in writing the technical specifications for three (3) custom interfaces – including one to the customer's ERP financial system.

Rochester Genesee Regional Transportation Authority

Implementation Specialist- Ms. Chow is serving as the 'subject matter expert' assisting RGRTA with configuration and decision-making of FleetFocus™FA Suite for this large transit organization. Additionally she assisted in the design of the Human Resources and Purchasing interfaces.

Denver RTD

Ms Chow worked as the Project Director for this large, phased implementation assisting the RTD in rolling out FASuite modules including RailFocus and LinearFocus. Tasked with bringing together multiple departments with divergent systems into a single, efficient business process, Ms. Chow oversaw the development of integration specifications, legacy data migration and compliance with mandatory FTA practices and reporting requirements.

Monterey-Salinas Transit, Monterey, California –

Ms. Chow is the implementation specialist and technical lead for the FleetFocusFA implementation at MST. In this capacity he has been responsible for overseeing project status/budget as well as all setup and training related to the various technologies being implemented: MobileFocus handheld devices, FuelFocus automated fueling system, and Catbase illustrated parts catalog.

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Santa Barbara Metropolitan Transit District, Santa Barbara, California
Ms. Chow led the engagement to implement FleetFocusFA for SBMTD. She was responsible for planning new maintenance processes and all on-site training for the project. Ms. Chow also led design efforts for interfaces to SBMTD's financial accounting system.

City of Cedar Rapids, IA

Project Manager- Ms. Chow worked as the Project Manager for the implementation of FleetFocus™FA Suite including InfoCenter, shop scheduling, planners' workbench, and MobileFocus implementations. Additionally, several custom interfaces will be created; including interfaces to the Oracle ERP system they are implementing.

Additional Customer Implementation Experience:

- United Airlines
- California Dept of Transportation
- Florida Power and Light
- Energy East
- Nevada Power
- County of Alameda, CA
- County of Cobb, GA
- City of Modesto, CA
- University of Wyoming

SUSIE WADE
SENIOR IMPLEMENTATION SPECIALIST

Qualifications

Ms. Wade works as a Project Manager/Implementation Specialist of AssetWorks' FleetFocus/FASuite software. Responsibilities included scheduling projects using MS Project, assigning resources, tracking budget and implementation schedule and writing weekly status reports. Clients included: Area Transportation Authority (ATA Transit) North Central Pennsylvania, U.S. Navy Special Warfare Group Hampton Roads Virginia, MV Transportation, Southern California Regional Railroad Authority/Metrolink, Calgary Police, Minnesota Manufacturing Mining, Honolulu Board of Water Supply, Washoe County-NV, San Diego Police Department, Illinois Division of Vehicles, Coach USA, Austin Telecommunication, Jefferson County-LA, and Henrico County-VA.

Relevant Experience

Since joining AssetWorks, Ms. Wade has worked on the following projects.

Memphis Area Transit Authority (MATA), Memphis, TN

Ms. Wade worked as the Project Manager overseeing and coordinating the implementation of FASuite Enterprise (InfoCenter Shop Activity, FleetFocusFA, EquipmentFocus, MobileFocus and FuelFocus). MATA has 208 buses, 55 paratransits, 20 trolleys, 60 support vehicles, 5 major facilities and 90 users. The majority of the maintenance on the rolling stock assets is performed at two maintenance facilities that operate 24 hours a day, 365 days a year. Ms. Wade performed system installation and setup, hardware and network configuration, database installation, and data conversion (including historical data extraction) from legacy system. She also developed the specifications and oversaw the development of the custom payroll interface. Developed custom reports to support the Stock Room, Procurement Department and Maintenance Facilities.

Sun Tran, Tucson, AZ

As Project Manager, Ms. Wade coordinated the implementation of FASuite Enterprise (InfoCenter Shop Activity, FleetFocusFA, EquipmentFocus, MobileFocus and FuelFocus). Sun Tran has 189 fixed route buses, 60 support vehicles, 120 facility assets, and 80 users. The vehicle maintenance shop operates 24 hours a day, 365 days a year. Additionally, she performed system installation and setup, hardware and network configuration, database installation, and data conversion (including historical data extraction) from legacy system. Developed custom reports to support the Stock Room, Procurement Department and Maintenance Facilities.

Metrolink/Southern California Regional Rail Authority (SCRRA), Los Angeles, CA

Implementation of FASuite Enterprise: (FleetFocusFA, RailFocus, LinearFocus, EquipmentFocus). On-going rollout of the FASuite product line for Metrolink, including our FAInfoCenter powered by Crystal 9, Optram's ORIM Digital Track Chart Software, MobileFocus for the palm OS, with integration to Oracle ERP. Perform system installation and setup, hardware and network configuration, database installation, and data conversion for equipment, parts and detailed work order historical data. Provide consulting on coding structure.

MV Transportation, Fairfield, CA

MV operates 3500 bus and Para transit vehicles throughout North America, as one of the largest transit operation and maintenance outsource companies in the business. Perform system installation and setup, hardware and network configuration, database installation, and data conversion for equipment, parts and detailed work order historical data. Provide consulting on coding structure. MV is live with their first shops and is now rolling out throughout North America.

Honolulu Board of Water Supply, Honolulu, HI

Implementation of FleetFocus/FA Suite (with Motor Pool module) The division has 2500 vehicles, 3 shops, and 30 users. Performed system installation and setup, hardware and network configuration, database installation, and data conversion. Provided consulting on coding structure. Developed specifications and oversaw the development of the custom interfaces.

Hertz Corporation, Oklahoma City, OK

As a member of AssetWorks Implementation Team for FASuite Enterprise Implementation: (InfoCenter Shop Activity, InfoCenter Enterprise Portal and FleetFocus FASuite), Ms. Wade performed business process assessment, system installation and setup, database installation, data mapping from legacy systems to FASuite and key user training.

Prior Experience

Senior Technical Consultant

Perform server installations, hardware and network configuration, Oracle and MS SQL Server database installation, and data conversion from various legacy systems. Provide consulting for best business practice. Develop technical requirements documentation and customized training documentation. Train customer end-users on AssetWorks software applications, SQL Plus, Excel, Access, and Crystal reporting tools. Design, develop and implemented third-party software interfaces to AssetWorks software for accounting, payroll, fuel systems, credit card systems, etc. Develop custom reports and applications using Excel, Access, Crystal, MS SQL Server and Oracle. Clients included: United States Marine Corp, Pepsi Bottling Company USA, Boeing, Hawaiian Electric Company, and Virginia Beach-VA

Senior Programmer/Analyst

Develop new graphical user interface (GUI): compile specifications of features to be included in the new product; then programmed the GUI. Design, implement and support the MS SQL Server database. Track software conversion project including: assigning jobs to programmers and quality assurance, projecting completion dates, and producing status reports.

Systems Administrator

Install, configure, repair and upgrade company's computing systems and peripherals. Implement and maintain company's local area network. Test, document and install biannual software releases for general ledger, accounts receivable, accounts payable, payroll, purchase orders and inventory control software applications. Act as liaison between company staff, clients and hardware distributors.

System Support Specialist

Support international and national customer base on software and hardware. Produce all documentation and reference work used to aid in the support and training of clients. Resolve problems related to servers, peripherals and system/application software nationwide.

Customer Account Manager

Conduct weekly on-site training sessions on use of accounting and inventory control application software. Design and produce training documents and procedures for in-house customer account managers.

Education

BS, Computer Science, Transylvania University, Lexington, KY, 1984

BS, Chemistry, Transylvania University, Lexington, KY, 1984

BS, Mathematics, Transylvania University, Lexington, KY, 1984

MS, Computer Science, Washington University, St Louis, MO, 1986



Ellen Hurst

Senior Implementation Specialist/ Subject Matter Expert (SME)

Range of Experience

With 8+ years of experience of fleet management implementation for the public sector, Ms. Hurst brings a wealth of experience to business processes for the shop floor as well as systems integration. Ms. Hurst's responsibilities include project management, implementation assistance, and resolution of technical support issues, onsite training, and consulting.

Some of her implementation experience includes:

Hillsborough Area Rapid Transit (HART), Tampa, FL

As the Senior Project Manager, Ms. Hurst oversaw the implementation of FleetFocus and MobileFocus for the transit's fleets of some 300 pieces of equipment as well as HART's linear assets (2.5 miles) and its historical streetcar division (15 cars)

Metropolitan Atlanta Rapid Transit Authority (MARTA)

Ms. Hurst is provided technical assistance and serving as a subject matter expert for MARTA's implementation of FASuite for rail, fleet, facilities and linear assets.

New Jersey Transit – Rail Division (NJT)

Ms. Hurst provided project management for NJT's migration from MMS and implementation of FASuite for 1400 units, including supervision a sub-contractor who assisted in the BPA process, provided training and data conversion services.

Add'l Fleet Project Experience

Central Florida Regional Transportation Authority (LYNX)

Ms. Hurst provided project management for LYNX's implementation of FASuite for 300 units, including supervision of sub-contractors who assisted in the BPA process, provided training and developed interfaces for product integration with the Great Plains accounting system as requested by LYNX.

Toledo Area Regional Transit Authority (TARTA)

Ms. Hurst provided project management for TARTA's implementation of FASuite for 200 units, including supervision of two staff that performed the implementation and provided training.

Stark Area Regional Transit Authority (SARTA)

Ms. Hurst provided project management for SARTA's implementation of FASuite for 200 units, including supervision of two staff that performed the implementation and provided training. She also completed the software specifications for product integration with the Great Plains accounting system as requested by SARTA.

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State of Wisconsin Department of Administration (WDOA) –Ms. Hurst is providing project management for a business review and gap analysis to determine if full or partial functionality of a WDOA home-grown procurement tracking system can be migrated to FASuite.

Continental Airlines –

Ms. Hurst worked as the Senior Project Manager for this large global carrier in the Ground Services Equipment Division which oversees some 30,000 pieces of equipment. Ellen assisted in the development of several interfaces including purchasing and finance as well as custom notifications and custom dashboards. Currently in the data conversion phase, anticipating go live with the first two cities in October, then rolling out to the rest of the country over the next 24 months.

City of Garland, TX

The City claims some 2000 vehicles maintained at four locations by a staff of 30 technicians. Ms. Hurst worked as the Project Manager including implementation of a fuel interface and MobileFocus. The City is currently investigating FleetFocus to NAPA real time functionality.

New Mexico State Police (NMSP) - Ms. Hurst provided project management for the fast-track implementation of FASuite at NMSP. Under Ms. Hurst's direction, NMSP rolled out FASuite to all shop and district locations in less than three months from project kick-off to go-live.

Florida Power and Light – Ms. Hurst is the Project Manager for Phase 2 of Equipment Planning as FPL has contracted with AssetWorks to expand functionality throughout its operations.

Texas Department of MHMR (TDMHMR) (1999 to 2000) – Ms. Hurst provided project management services, including software installation, implementation, and training services, for TDMHMR's implementation of FASuite for their 5,000 unit fleet. TDMHMR selected FASuite to manage all aspects of their fleet at 20 locations and wanted to implement the software quickly. Under Ms. Hurst's direction, TDMHMR began using FASuite at all locations less than 6 months after software purchase. During the project, Ms. Hurst worked closely with Prototype staff members and directed a core group of TDMHMR users in establishing and implementing best practices for coding structures and reporting, etc. Ms. Hurst provided train-the-trainer classes prior to statewide rollout and oversaw the 5-month pilot project, which was performed at 20 state school and state hospital shops and encompassed 40 to 50 users.

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Professional History

AssetWorks, La Jolla, CA, Senior Project Manager, 2003 – Present

Senior Project Manager

Responsibilities also include the scope of the project, periodic status reports, acceptance forms, change orders and best practice recommendations, developing project road-map using MS Project. Provide the overall direction to the team and oversee the day to day project responsibilities resulting in value added services to the customer. Ensure client satisfaction at all times during the engagement. Manage projects for budget adherence and client expectations

Independent Consultant, Austin, TX 2002-2003

Consultant

Freelance services in project management, training and documentation (manuals, curricula, handouts, and, reports) for business clients.

Peregrine Systems, Inc., San Diego, CA, Sr Project Mgr 2000 - 2002

Senior Technical Consultant

Served as project manager or team member of various projects for a of public and private sector clients. Performed needs assessments and mapped out project plans to ensure the successful implementation of software according to the needs of the client. Implementation at clients included the development of test scenarios, test plans, performance of system testing and facilitating user acceptance testing for clients. Developed training materials and provided training. Non-project-related assignments - Participated in the development of test environments; ensured that test results were properly documented, executed, and tracked; tracked corrective action and assisted the development teams in reproducing and solving product-related problems; and identified the reliability, performance, and functionality of software products.

Texas Department of MHMR, CAFM Program Office, Systems Manager, 1999-2000

Ms. Hurst served as project manager for the implementation of a fleet management system, a facilities management system and a facility assessment system. Responsibilities included budget development, account management, database management, control management, supervision and training of field staff, technical support and report creation/generation.

Education & Professional Affiliations

B.A., Latin/English Minor, Texas Tech University

Postgraduate Masters Level Coursework, Classical Humanities

Continuing Education courses/seminars in Total Quality Management, Leadership, and Project Management

Member, Project Management Institute – Austin Chapter



GARY FROST
SENIOR IMPLEMENTATION SPECIALIST/SUBJECT MATTER EXPERT (SME)

Qualifications

Gary Frost has over 12 years of experience in software, management and training. His range of project experience includes the following:

- Project Management
- Project Planner
- Training
- Software Implementation
- Data formatting
- Data Migration
- Business Process Analysis
- Business Process Improvement
- Regional Training Sessions

Relevant Experience

Since joining AssetWorks, projects have included:

Denver RTD:

Denver RTD rolled out FleetFocus to their Bus/Rail/Stationary shops and Mr. Frost assisted in creating training documentation and exercises. Gary also focused on the creation of numerous report specifications that were critical to day-to-day use at RTD. He implemented RailFocus and LinearFocus modules for RTD and worked bringing multiple systems and methodologies under a single, streamlined process.

Chicago Transit Authority:

Mr. Frost was the Project Manager for the Chicago Transit Authority implementation and conducted over 30 interviews with Subject Matter experts during the Business Process Analysis phase and contributed to the BPA documentation. Mr. Frost provided workflow analysis, reengineering and definition of best practice for the Business Process Improvement deliverable. He organized reports, data conversion, training, warranty, system configuration advisory groups and helped steer each group keeping best practice in mind. Mr. Frost has assisted in writing interface specifications for Oracle HR/GL and Materials interface and contributed to the testing process. He provides ongoing training to all facets of the CTA, including technicians, supervisors, MobileFocus users and system administrators.

State of Wisconsin, County of Sonoma, County of San Jose, City of Seattle, Eugene Water and Electric Board, City of Livermore, County of Fresno, City of Santa Barbara, County of Santa Clara, County of Siskiyou, City of Renton, County of Alameda, Redwood City, Denver RTD, City of Fairfield, Lane Transit, City of Milpitas, :

Mr. Frost performed implementation services for these projects since 1999, including data conversion from legacy systems, Oracle and MS SQL Server database installations and post-implementation consulting. He also provided consulting for best business practices, developed timeline requirements documentation and customized training documentation. Mr. Frost assisted with creation of utilities used in the migration of data into FleetFocus FA. Gary designed, developed and implemented third-party software interfaces to AssetWorks software for accounting, payroll, fuel systems and credit card systems. He also develops custom reports and applications using Oracle, Excel, Access, and MS SQL Server.

United States Marine Corp:

The USMC rolled out FleetFocus in stages and began the implementation in 2007. Mr. Frost works as the Senior Project Manager and is responsible for all aspects of this complex and large project. Because of the shifting priorities of the USMC, Gary must be ready and willing to meet last minute schedule changes and work within the structure of a large governmental agency. In order to ensure the success of the project, the USMC

has designated certain persons as 'vital' and has guaranteed their commitment to the project for the duration. As part of his responsibilities, Gary has developed a number of customer-specific business processes to gather and send data to various military and government oversight agencies. Gary has also worked extensively with the USMC on configuring the security module of FleetFocus to mask certain fields and to encrypt data.

City of Tucson, AZ:

The City of Tucson re-implemented FleetFocus, extracting out historical information from two maintenance systems and rolling out FASuite InfoCenter to the Maintenance and Fire Departments. During the implementation Mr. Frost did a full analysis of workflow processes currently in place and made recommendations to make changes as needed to best practice industry standards. Gary assisted in extracting data from a legacy system and did extensive cleanup to coding structures, while steering the City to a structure that can be used for reporting analysis.

City of Livermore, CA:

The City of Livermore implemented FleetFocus for its rolling stock of some 500 units and an additional 1200 pieces of equipment including everything from generators, to police radios to lawn mowers. The City introduced wand devices as a way to read barcodes on the various assets as opposed to manually typing in the information. The barcode use extends to the small inventory store and to the employees themselves who scan on and off tasks throughout the day.

City of San Jose, CA:

The City of San Jose implemented FleetFocus as a way to better control costs over its inventory of some 4000 units and some 12,000 pieces of equipment. The City also rolled out the Motor Pool module of FleetFocus and can now allow City employees to make online reservations or report trouble tickets using the web-based InfoCenter.

Pepsi-Cola:

Mr. Frost was the Project Manager for this implementation of FleetFocus FA from December 1998 to December 2002. Mr. Frost provided onsite training for Fleet Managers and Business Unit Managers associated with each of Pepsi's 10 Business Units throughout North America. Mr. Frost was the main point of contact and provided *general oversight and consulting services, including suggestions for business process reengineering, definition of best practices, and implementation oversight*. He provided ongoing training for implementations at new Pepsi-Cola locations, and follow-up training for sites that were implemented. Gary trained Pepsi's system administrator and created Report Directory Materials in addition to training additional users.

Baltimore Gas & Electric:

Mr. Frost was Project Manager for this implementation of FleetFocus FA from July 1998 to January 2000. During that time, he provided general oversight and consulting services, and directed the onsite implementation team that performed software installation, training, data conversion, and other implementation services. Mr. Frost also managed the Acceptance Test Plan that was completed for BG&E. In collaboration with the FleetFocus FA development team, he designed the Acceptance Test Plan and *then supervised the completion of acceptance testing (each screen was tested for data integrity using automated scripts)*. Mr. Frost also provided post implementation support services, including addressing FleetFocus FA operational and technical issues, database problems, etc.

Regional Training Manager:

Mr. Frost has managed all aspects of the Regional training sessions throughout North America. His responsibilities include the creation of agendas and training materials in addition to scheduling all sessions and communications to all AssetWorks customers.

Professional History

1997-Present AssetWorks, Inc. La Jolla, CA, Senior Project Manager

Education

B.A., Finance and Economics, California State University, Chico, 1981

Technical Skills

Software: FASuite (FleetFocus FA, RailFocus, EquipmentFocus, LinearFocus, MobileFocus, InfoCenter) Lotus Notes, Outlook, Excel, Access, Word, Power Point, Visio, Crystal reports/BOE

Hardware: PC's, Servers, Printers, Barcode Equipment, Handheld Devices

Languages: SQL Databases: Oracle, MSSQL, Access



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Heidi J. Davis

Senior Implementation Specialist- Subject Matter Expert (SME)

Range of Experience

Since joining AssetWorks in the fall of 2005, Ms. Davis has worked as a implementation specialist for a variety of implementations of FleetFocus/FA Suite. Ms. Davis came to AssetWorks with years of experience as a Fleet Analyst specializing in government fleets. Her invaluable experience allows Ms. Davis to be an effective and proactive project manager.

Des Moines Area Transit (DART)

Senior Implementation Specialist/SME: Ms Davis implemented FleetFocus for the maintenance management of DART's fleet of 132 fixed route, 124 rideshare, and approximately 60 paratransit, oncall, and service vehicles. In addition, the transit uses FleetFocus for managing the building and grounds to schedule and record the maintenance of the bus shelters, bus stops, buildings and fixtures. DART also uses FleetFocus Enterprise Purchasing to maintain a \$760,000 parts inventory.

Denver Regional Transportation District (RTD)

Senior Implementation Specialist/SME - Ms. Davis worked as the Project Manager for the implementation of FleetFocus™FA Suite including InfoCenter, shop scheduling, planners' workbench, and MobileFocus implementations. Additionally, several custom interfaces will be created; including interfaces to the Oracle ERP system they are implementing.

Metropolitan Atlanta Rapid Transportation Authority (MARTA)

Senior Implementation Specialist/SME - Ms. Davis is serving as the 'subject matter expert' assisting MARTA with configuration and decision-making of FleetFocus™FA Suite for this large urban transit organization.

Rochester Genesee Regional Transportation Authority (RGRTA)

Project Manager- Ms. Davis worked as the Projected Manager for the implementation of FleetFocus™FA Suite including linear, rail, InfoCenter, and shop scheduling optional modules setup. Additionally, Ms. Davis wrote the technical specifications for three (3) custom interfaces – including one to the customer's ERP financial system.

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Additional Transit Customer Experience Includes:

- Massachusetts Bay Commuter Rail
- MBTA
- Chicago Transit Authority

Professional Experience

Jefferson County Fleet Svs, Golden, CO 1998-2005

Fleet Analyst and Fleet Administrator for large and diverse fleet of vehicles and heavy equipment. Ms. Davis' responsibilities included: Life cycle cost analysis, Cost per mile analysis, Prepare and maintain annual budget, Implemented motor pool optional module, Maintained system and tailored to meet Jefferson County's operational needs.

Education

University of Colorado, B.A. 1993

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Gary Warlick

Range of Experience

Senior Implementation Specialist

Mr. Warlick has over 25 years experience in the transportation industry, 20 of which have been with AssetWorks, Inc. implementing our FleetFocus and FuelFocus applications. His broad range of client experience includes state and local governments, maintenance outsourcing companies, private transportation companies and utilities. Gary has always been an innovator who utilizes a controlled change process to continually produce quality results. Specific work experiences include:

County of Ulster, New York:

Project Manager

Responsible for implementing fleet of approximately 1000 assets centered in Kingston, New York with project details including:

- FleetFocus to SunGard/HTE financial interface
- Third-party fuel interface including import/validation of fleet credit card transactions
- Data Conversion from legacy system
- Implementation of MobileFocus handheld, wireless data capture

City of Hampton, VA:

Project Manager

Responsible for the implementation and training of FuelFocus for this existing FleetFocus customer with project details including:

- Customized integration of Lincoln Lube product dispensing system
- Customized integration of GPS Telematics solution

City of New York

Project Manager

- Project Manager for the City of New York FleetFocus implementation, which included 11 city agencies, 40,000 plus vehicles, \$25 million plus in parts inventories, and more than 1300 employees.
- Management of data conversions and interfaces with other systems.
- Design and reengineering of business processes to enhance effectiveness of the system and reduce costs to the customer.
- Design and implementation of systems to collect and manage information needed for decision-making and reporting including a total assessment of these business practices.
- Design and implementation of interfaces to various financial packages.
- Created user-specific methodology to reduce clerical input and increase accuracy using bar codes, wedge readers, handheld readers, microfiche, etc.
- Has worked with employees at all organization levels from the shop floor to the boardroom.

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Professional Experience

Cities, Counties & States

City of Seattle
City of Renton
City of Norwalk, CT
City of Hampton, VA
...and many more

Transit Agencies:

SARTA
MARTA
CTA (Chicago Transit)
MBTA (Mass. Bay Transit)
NJT
DART (Delaware Area)

Transportation Companies:

Wilson Trucking
Overnite Transportation
Allied Industries
American Freightways
ANR Advance Transp
Catawba Transportation
CRST, Inc.
Dayton Freight Lines
E&L Transport
KJ Transportation
Kleysen Transportation
Nationsway Transport
Preston Trucking
Watkins Motor Lines
Yellow Freight Lines

Public and Private Corporations:

Chemical Leaman
Hildrup - United Van Lines
Perdue Farms, Inc.
Griffin Management
Wetterau Foods, Inc.
Lucky Foods, Inc.
Archer Daniels Midland
Acme Markets
American Stores
Beatrice Foods
Certified Grocers of CA
Gateway Foods
Jewel Food Stores
Kimberly Clark
Northwest Airlines
Spartan Stores, Inc.
Stop and Shop
Wakefern Foods, Inc.

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Paul Ernsdorff

Senior Technical Manager

Relevant & Related
Experience

Mr. Ernsdorff has over 20 years experiences in Support, Development and Consultancy in IT projects and over 15 years experience in fleet management. Paul has experienced every level of the package development and customer support cycle from programming, to design and system analysis, to implementation specialist and consultancy.

As the lead architect for the FASuite solution, Paul is responsible for the overall management and direction of the FleetFocus/FASuite application including:

- Full lifecycle application development
- Designing, coding and debugging applications in various software languages.
- Software analysis, code analysis, requirements analysis, software review, identification of code metrics, system risk analysis, software reliability analysis
- Object-oriented Design and Analysis (OOA and OOD)
- Software modeling and simulation
- Front end graphical user interface design
- Performance tuning, improvement, balancing, usability, automation.
- Integrate software with third-party systems including ERP systems
- Evaluate and identify new technologies for implementation
- Maintain standards compliance
- Implement localization or globalization of software

Paul's broad professional background includes the following:

1999 - present Senior Technical Manager, AssetWorks

Since joining AssetWorks, Paul has been responsible for ensuring the successful forward progression of the FASuite Fleet management System.

Paul manages the enhancements and fixes for the FASuite application and plays an extensive role in formulating the future direction of the application as a whole.

1986 – 1999 Software Engineer/DBA Consultant, Peregrine Systems Inc.

Paul played an integral role in the design and implementation of the Web based design and release of this FMS solution using ASP and XML technology.

He has provided DBA consultancy, support and training to an extensive client base at Peregrine.

Designed and managed successful implementation of QA standards for IT projects.

During his time at Peregrine, Paul has designed, developed and implemented large number of IT projects.

Advised and implemented Disaster and Recovery strategies at customer sites and for Peregrine Systems.

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Technical Skills

Paul has a wealth of technical knowledge including the following platforms:

- ASPX
- CSharp
- XML
- Web development using ASP.
- JAVA
- HTML
- Visual Basic.
- SQL Server – DBA and development.
- Oracle – DBA and development.
- Ingres – DBA and development.
- C/C++
- OpenRoad
- Informix – DBA and development.
- Windows95, Windows NT, Windows 2000, Windows XP
- UNIX - HP and Solaris.

Education

Eastern Washington University, B.S.: Electrical Engineering

Washington State University, M.S.: Computer Science

Anna Hu**SUMMARY:**

<p>RELEVANT EXPERTISE:</p> <ul style="list-style-type: none"> • Primavera P3E, Proliance, MS Project, Niku, ABT, workbench, Popkin Enterprise • LiveLink, Peoplesoft Financials & HRMS, HR, Benefit, Payroll, GL, AP, AM • Oracle, MS SQL Server, FoxPro 2.6, MS Access • Crystal, SQR, nVision, Cognos, Access <p>YEARS OF EXPERIENCE: 15+</p> <p>EDUCATION:</p> <ul style="list-style-type: none"> • Executive MBA, Columbia University • M.S., Computer Science, Long Island University • B.S., Information Systems, East China Institute of Technology <p>TRAINING:</p> <ul style="list-style-type: none"> • N/A <p>AWARDS:</p> <ul style="list-style-type: none"> • N/A <p>CERTIFICATIONS:</p> <ul style="list-style-type: none"> • Project Management Institute Training • Microsoft Certified Solution Developer (MCSD) • Microsoft Certified Product Specialist • Oracle 8i/Oracle 7.3 Database Administrator • Peoplesoft System Administrator/Security Administrator • SUN Solaris System Administrator

Ms. Hu brings a unique combination of project management consulting and IT technical expertise as a senior business solution provider. Ms. Hu has over 15 years of technical expertise in business requirement evaluation, business process reengineering, infrastructure design, contract and license negotiation, cost reduction and outsourcing, relational database management, software development technology, web solution design, data warehouse, and decision support reporting system for large infrastructure Project Management industry. She is also an accomplished Primavera and LiveLink implementer and possessed technical expertise on team building, system deployment, integration, security administration, migration and change control management, customization and enterprise reporting. She serves as an executive sponsor and senior project manager for a variety of engagements, including Port Authority of NY&NJ, New York City School Construction Authority, San Francisco Public Utility Commission, US Department of Energy and US Army. Ms. Hu is skilled in handling technical, financial and political issues associated with large complex projects and programs.

Experience:**Stellar Services, Vice President
PA InCAPs**

Ms. Hu led a team of experts and delivered a web based tool integrated with the Primavera Enterprise product, SAP, and other enterprise systems that were used at Port Authority and upgraded the existing mainframe Captrak system to an integrated InCAPs system.

PA Contract Management Program

Ms. Hu led a team of experts to develop a Dot.Net based application for the collection and editing of contract data for the Port Authorities Engineering Contracts Group. This application manages user roles and all data validation processes for the CMS application and is integrated with both the Livelink-based Contract Questionnaire Workflow and Primavera based PPW application.

PA OMWP Program

Ms. Hu led a team of experts to develop an online web-based system for the Operating Major Works Program to serve in the areas of project management, financial tracking and reporting, managing the fiscal budgets for operating projects at the area/job level and tracking actual to budget to ensure it does not exceed the total operating budget for the year.

NYC SCA

Ms. Hu provided a through GAP analysis on their existing Primavera systems, and designed and implemented an import program to migrate 7000+ projects from legacy systems to the newly enhanced and upgraded Primavera 6.0 system.

NYSDOT

Ms. Hu led a team of expert Primavera professionals and performed an in-depth assessment for NYSDOT on their enterprise Primavera implementation. The team interviewed over 50 NYSDOT executives and functional area leaders to get their business needs, mapped to the existing system and applications and identified unmet needs with system enhancement recommendations. Our assessment report also provided a future enterprise project/program management vision along with the longterm and shortterm implementation road map.

City of San Antonio, Department of Public Works

Ms. Hu led Stellar team for the multi-year enterprise project management suite (Primavera, Expedition, SharePoint, Earn-value metrics integration) implementation for City of San Antonio, Department of Public Works. She delivered the solution in a impossible turn-around timeframe to show the project schedule, cost, risk and KPIs on the SharePoint portal.

Department of Energy, National Nuclear Security Administrations

Ms. Hu was responsible for managing the 5 year implementation and maintenance contract with Department of Energy, National Nuclear Security Administrations, Office of Secure Transportation for the enterprise Funds Management System. She led a cross-function team at multiple locations to implement the web-based Stellar OneView™ system providing data extraction function from various DOE systems including Primavera Enterprise Scheduler (P3e), Oracle Financials, PeopleSoft, etc. as well as other files in various formats. She produced reports of procurement processes, cost, cash management, and project schedules were all kept up to date and available for users to access anywhere at any time. Ms. Hu served as a liaison between multiple customer departments and internal project staff. Responsibilities include managing implementation staff and budgets in various company locations from proposal start to project close-out stages. These functions included strategic planning, analyzing data, task prioritization, selecting solution strategies, resource management, and management of change control processes.

Columbus Regional Airport Authority

Ms. Hu led a team of three staff to build the online web portal for Columbus Regional Airport Authority to allow the collaboration among various groups and enhance project/program management efficiency.

Jewish Associate of Senior Americans (JASA)

Ms. Hu as project manager, led the team to design and develop the new web-based case management system for JASA – Jewish Associate of Senior Americans under SharePoint Portal server.

New Jersey State Department of Transportation

Ms. Hu was involved in Life cycle project management for the agency wide construction program management and control system automation.

New York City Office of Citywide Administration

Ms. Hu business process analysis and evaluation; case trial process automation and database system design and development

Scholastic, Inc., Project Manager

Led Peoplesoft HRMS and Kronos Time Capture implementation and Global rollout. Delivered an enterprise HR system (including benefit, Time & labor and payroll) with high system availability, stability and security

Other projects Ms. Hu participated in:

- Forest City Ratner Company Business Process Review and Assessment
- Clean Water Atlanta Project Control System Integration
- Gruntal & Co., Project Manager
- Merrill Lynch, Consultant/Programmer Analyst
- National Aeronautics and Space Administration of China/Information Center of Beijing
- Aerospace Automatic Control Institute, Database Administrator



Marcia Shapiro

SUMMARY:

RELEVANT EXPERTISE:

- Software Development
- Software Deployment
- System Integration
- Contract Negotiation
- Contract Management
- Project Oversight
- Quality Assurance
- Program Management

YEARS OF EXPERIENCE: 30+

EDUCATION:

- Master of Masters in Public Administration (MPA)
Rutgers University,
Newark, NJ 1979
Concentration in Public Management
- B.A. with Honors
University of Connecticut,
Storrs, CT 1975
Departmental Honors Fellow in History
- National Endowment for the Humanities Program for Public Administrators
1976
Selected through nationwide competition.

AWARDS:

- N/A

AFFILIATIONS:

- President
WTS Greater New York Chapter
- Mentor
WTS Greater New York Chapter's
Mentoring Program
2005 & 2006

Ms. Shapiro is a high-energy, entrepreneurial senior executive with experience directing multi-million dollar public sector technology deployments. Proven ability to lead, inspire, and manage. Broad range of experience in all aspects of software development and system integration with specific expertise in contract negotiation, contract management, and project oversight. Currently 2010-2011 President of the Greater New York Chapter of WTS, a 330-member division of an international professional association working to advance women in transportation.

Experience:

Marine Tiger Technologies

Ms. Shapiro is a self-employed consultant specializing in strategic planning, software deployment, project oversight/quality assurance, and program management. Currently leading the deployment of a complex software application for the New York City Department of Education to 1600 schools and 135,000 users.

CH2M HILL

Regional sales lead for a global technology consultancy focused on IT solutions for public sector clients. Provided strategic leadership and served as Principal-in-Charge for proposals and projects in the areas of security, asset management, building information management and geospatial solutions. Developed partnerships and alliances leading to teaming opportunities on major programs. Liaison to U.S Department of Energy-funded Solar America Cities program in New York City; stakeholders include Con Edison, CUNY, NYC Economic Development Corporation, and NYC Mayor's Office of Long-Term Planning and Sustainability. Worked with NYC Office of Emergency Management on potential use of solar energy for emergency services including street lighting, water purification, and transitional housing.

Marine Tiger Technologies

Full-time consultant to the City of New York's Office of Payroll and Accounting (OPA). Served as Quality Assurance Lead for the design and rollout of a Web-based time and attendance system, which has been deployed to 58 city agencies and over 40,000 users. Responsibilities include mentoring project staff,

evaluating deployment methodologies, and analysis of project metrics. Served as liaison to 15 city agencies and met with the Executive Director of OPA on a weekly basis to report on project status, issues, and risks. Accomplishments included process improvements throughout the implementation cycle, resulting in reduced implementation time and improved communications among stakeholders. Also effected changes to the program to improve user acceptance of the new system.

Spear Technologies

New York Region Implementation Director for a leading provider of enterprise asset management solutions to the public transit and rail market. Full P & L responsibility. Prepared *revenue forecasts, project plans, resource schedules, and department budgets*. Recruited and supervised both in-house and third party professional services staff. Managed up to 25 project team members including 10 direct reports. Led business development activities for the region and negotiated contracts with company's largest customers including MTA New York City Transit, MTA Metro-North Railroad, Amtrak, and the Port Authority of New York and New Jersey.

Managed all aspects of a five-year multi-agency program for MTA New York City Transit, the largest transit agency in the U.S., with over 45,000 employees. Formulated strategic technology goals in conjunction with business/functional leaders, served as focal point for problem resolution and escalation, and managed relationships with technology partners.

Key accomplishments:

- Won \$11 million contract with MTA New York City Transit (NYCT)
- Won \$1.5 million project with New Jersey Turnpike Authority over 13 competing firms.
- Successfully implemented 10,000+ user asset management system for 724 miles of rail track, and for Metrocard vending machines and turnstiles in 420 New York City subway stations
- Overcame challenges to introducing COTS product to users of customized mainframe-based legacy

Managed a \$2.3 million project to implement a computerized maintenance management system for NYCT Department of Subway, Division of Car Equipment. Accountable for scope, schedule and budget. Exceeded targets for project profitability and negotiated significant follow-on work. Hands-on involvement in key tasks including functional requirements definition, business process design, change management, user training, documentation, and customer support for a user base of 4,000.

Computran Systems Corporation

Corporate Vice President for a systems engineering consulting firm specializing in computer-based transportation solutions. Participated in strategic planning and decision-making as a member of the firm's Executive Committee. Supervised geographically dispersed professional staff of 12 project managers, engineers, and technical specialists. Led wide range of consulting projects including:

- Traffic mitigation strategies for I-95 reconstruction in Philadelphia, PA for Pennsylvania DOT
- Design of Phoenix Freeway Management System, one of the first ITS projects in the U.S. for Arizona DOT,

- Security camera design at Newark Airport parking lots, variable message sign design at La Guardia Airport, and control center modernization at Holland Tunnel for the Port Authority of New York and New Jersey
- Traffic Command Center Operation for the Prospect Expressway Reconstruction Project for NYS DOT, Region 11.

Managed implementation of computerized traffic signal systems in Jerusalem, Israel; Brampton, Ontario; and Broward County, Florida. Managed DBE subcontracts and partner relationships for computerized traffic signal system project for the District of Columbia.

Director of Telecommunications Services, August, 1981 to December, 1986

Developed a national telecommunications consulting practice providing design, engineering and financial consulting services to municipalities building their own telecommunications infrastructure.

City of Paterson, New Jersey (pop. 140,000)

Second in command to City's Business Administrator with direct oversight of Divisions of Purchasing, Data Processing, and Personnel. Coordinated preparation of \$60 million citywide budget, managed special projects and participated in all aspects of policy development. Managed IT vendors and contracts from procurement through closeout.

Participated in a team that automated major city functions including municipal budget preparation, budget management, and accounts payable and receivables. Managed Municipal Court operations, developed grant proposals and administered grant programs.



Rozaliya Kiperman

SUMMARY:

RELEVANT EXPERTISE:

- Project Management
- Project Support Engineering
- Business Analysis
- Requirements Gathering Management
- System Design
- Configuration Management
- Integration Management

YEARS OF EXPERIENCE: 25+

EDUCATION:

- Associate Degree Business Administration & Computer Science
Adelphi Business Institute
New York, NY
- Bachelor of Science, Accounting
Odessa State Economics University
Ukraine

AWARDS:

- NA

CERTIFICATIONS & AFFILIATIONS:

- Certified Project Management Professional - (PM/PMP)
Project Management Institute -
PMI NYC Chapter Member
- Certified Scrum Master (CSM)
Member of the Scrum Alliance Organization
- Certified Enterprise Management (ECM) Practitioner - Member of
AIM (Association for Information and Image Management)
Organization
- CMMI Team Leader & Facilitator
- Certified by Software Engineering Institute
- Highest security clearance from the "Secure Worker Access Consortium" (SWAC)
- Toastmasters International Club - Member

Ms. Rozaliya Kiperman is a highly experienced Project Lead/ Project Support Engineer with a record of continuing advancement and achievement in project management leadership roles with financial services and construction firms. She is PMP and CMM certified and well versed in ensuring SOX Risk Compliance within the Information Technology function, and is a valued member of PMI NYC organization. Ms. Kiperman is certified Scrum Master trained in using Scrum method of agile software development framework, and she is also a member of the Scrum Alliance organization. Ms. Kiperman has proven Project Management skills utilized in driving efficient and effective collaboration between IT and critical business functions. She is uniquely qualified to translate business drivers and needs to a highly technical audience and complex technical concepts to bottom line terminology that demystifies IT and proves its value as a partner to the business. She has more than 25 years experience in the Finance Industry and one year in the Construction Industry.

Experience:

Stellar Services

Port Authority of NY & NJ Projects

Provides project control support services on the PTCC project as a subcontractor at Henry Brothers Electronics (HBE) using Primavera P6 Enterprise Project. Provides project control support services on the CCIP project as a subcontractor at Henry Brothers Electronics (HBE) using Primavera P6 Enterprise Project. Provides project control support services for projects involving maintenance work at the LGA, JFK and EWR airports as a subcontractor at Henry Brothers Electronics (HBE) using Microsoft Project. Provides project control support services on the MCPR project. Completed Scheduling, Requirements gathering, Application testing, Quality Assurance, writing presentation materials and the User Manual for a new Monthly Capital Program Report (MCPR) system at Port Authority of NY & NJ. The MCPR system has been rolled out by Corporate PMO office to PA staff. This application collects information from Primavera, and other various cost information databases such as SQL, and uses Crystal Reports for reporting purposes.

Lead Solution Designer

Coordinates with various projects and holders to manage project task delivery and communicates project status. Coordinates with various projects and holders to manage project task delivery and communicate effectively project status. Evaluates business requirement matrix and designs project control system control solution. Develops technical solutions using various project control systems including Primavera P6, Contract Manager, P6 Web and Primavera timesheet, SharePoint and Livelink. Evaluates best solution for integrated project/program schedule, cost, budget and document management. Led the Oracle Primavera software prototyping, configuration and integration development.

Program Manager

Oversees all projects in the Stella Services portfolio. Develops the company's status reporting program. Promotes continuous improvements and adherence to Project management industrial practice. Prepares project status reports by collecting from various sources, including schedules, costs, requirements, timesheets, etc. Analyzes and summarizes project status information and trends.

Security Information Manager (SIM)

Ensures that company's staff is in compliance with the PANY&NJ Information Security Handbook.

American International Group

Served in a contracting role as Senior Project Manager in the Derivatives Operations Support System of the Corporate Comptrollers, Derivatives Accounting Group. Promoted continuous improvement in the accounting for each derivative traded within AIG and its subsidiaries worldwide and other outside agencies. Orchestrated the development and implementation of numerous projects driving improvement in the implementation of various AIG Accounting schedules and FASB standards including FAS 133 and 157. Managed several groups of developers, including ETL and Reporting. All reporting was done using Crystal Reports.

JP Morgan Chase & Company***Vice President/Program Manager, Expense Data Warehouse System***

Managed program consisting of decommissioning five legacy systems and creating data warehouse containing all expenses of JP Morgan Chase. Ensured uninterrupted 24/7 availability of a web-based MIS reporting application to all employees and vendors of the company. Guided the efforts of as many as 40 professionals in virtual teams located in New York/New Jersey, Ohio, Chicago, and India with a focus on consistently high levels of quality and customer service.

Planned, organized, and controlled all application development projects while advising senior management on appropriate human, financial, and tool resource allocation necessary to project completion on a timely and cost effective basis with consistently high levels of quality. Identified and engaged all key stakeholders, contributors, and business/technical resources essential to the development, documentation, and implementation of new features and applications as well

as maintenance and support of existing applications. Periodically advised senior management on projects status, major issues, scope changes, resource changes, and milestone achievements as well as project team performance.

Vice President Project Manager, Customer Profitability Program

Provided critical technical support to more than 20,000 users around the globe by ensuring the continued availability of a Customer Profitability data available through Oracle Discoverer and Oracle Reports retained in Data Warehouse with a 1+ TB, star schema design and a Calculation Engine. Successfully managed all project activities performed by a Reporting Team of ten professionals.

Vice President /Project Manager, Corporate Planning and Forecast Application

Directed the efforts of eight developers engaged in the design, development, and implementation of reporting modules supporting corporate planning and forecasting for Corporate Finance and seven lines of business with Monthly Estimates and Outlooks, Mid Year Forecasts, and Budgets.

Vice President /Project Manager, Organization Profitability Reporting Facility

Ensured the on-line distribution and availability of profitability data to a global user base of 1,200 professionals. Directed proper reconciliation of Customer and Organizational profitability data.

2nd Vice President/Project Manager, Organizational Profitability Systems

Guided the effort of six developers comprising the Data Presentation Team while personally directing all Y2K remediation efforts, including all Quality Assurance and User Acceptance Testing.







AssetWORKS

Minimum Hardware Recommendations

AssetWorks recommends the following hardware configuration and hardware specifications to provide reasonable performance, capacity, and response for a FleetFocus FA implementation. These are guidelines only and the size of your organization will dictate specific hardware needs. The specifications below are designed towards an organization of 5,000 active equipment units. For optimal performance, AssetWorks recommends customers take advantage of FleetFocus FA's tiered architecture:

1. FleetFocus FA client: presentation layer on a workstation via Internet Explorer or administrative graphical user interface
2. FleetFocus FA Web: Internet Information Services web server
3. FleetFocus FA APP: core application code
4. FleetFocus FA database: Oracle or Microsoft SQL Server database
5. FleetFocus FA reporting: Crystal Reports Server

Database Server

The requirements for a database server depend primarily on the size of the FleetFocus FA database and the maximum number of concurrent users. Memory on the database server is a major factor affecting FleetFocus FA performance; AssetWorks recommends always allowing for future expandability. For a database server dedicated to FleetFocus FA, AssetWorks recommends:

Processor Cores: 4
Drives: RAID configuration to your organization's standard
Size/Speed: 100 GB available space for data with 10k rpm
RAM: 4 GB

Application/Web/Reporting Server

The requirements for an application server depend primarily on the maximum number of concurrent FleetFocus FA users. AssetWorks recommends a machine that meets the following specifications (for fewer than 100 concurrent users):

Processor Cores: 4
Hard Drives: RAID configuration to your organization's standard
Size/Speed: 50 GB available space for applications with 10k rpm
RAM: 4 GB

Optional Dedicated Reporting Server

For organizations that require significant reporting, an additional server dedicated to Crystal Reports Server is recommended. AssetWorks recommends a machine that meets the following specifications:

Processor Cores: 2
Hard Drives: RAID configuration to your organization's standard
Size/Speed: 50 GB available space for applications with 10k rpm
RAM: 2 GB

Workstation Specifications

For all configurations, client workstations should be Windows Vista or XP with Internet Explorer 6 or 7. The FleetFocus FA presentation layer requires a screen resolution of 800x600 but 1024x768

AssetWORKS

is suggested for optimal screen viewing. AssetWorks recommends a machine that meets the following specifications:

1 GB RAM
10 GB available hard disk space
Mouse and Keyboard
17" Monitor (**touchscreen recommended for shop floor PC's running InfoCenter Shop Activity Portal**)
Windows Vista/XP
10/100 Ethernet NIC

Communications Infrastructure

The FleetFocus FA presentation layer will run over local area networks, wide area networks, Intranets, the Internet, and dial-up connections for limited usage.

Additional Requirements for Any Configuration

In addition to the above, AssetWorks also recommends customers procure the following:

1. An appropriate number of printers or label printers
2. An appropriately sized backup subsystem
3. A standby power supply to protect the application server and the database server from power problems
4. AssetWorks recommends 17" monitors in order to take better advantage of the FleetFocus FA screen and window capabilities
5. AssetWorks recommends touch screens for technician input
6. Provision for disaster recovery

Bar Code Hardware

Laser Scanner Wedges - per shop and storeroom PC
PSC QuickScan 6000 with cable

Bar Code Label Printer - one for each shop
Zebra S4M or Zebra TLP 2844 Printer
Accessories
3"W x 1.5"L label with ribbon

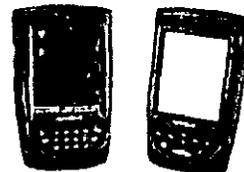
Intermec 3400D bar code printer with null modem cable
Accessories
4" W x 1.5"L label, 4 rolls of 2,400 labels each
4.1" W x 6000"L ribbon

MobileFocus Requirements

AssetWorks MobileFocus software is only certified for Symbol hardware units which must have Windows Mobile OS; color screens with an integrated bar code scanner are recommended.

Recommendations:

Symbol MC9060
Symbol MC9090
Symbol MC50
Symbol MC70
Symbol MC90



InfoCenter Touch-screen Kiosk

The InfoCenter Touch-screen Kiosk is a hardware option available from AssetWorks that puts the power of InfoCenter and FleetFocus FA's Illustrated Parts Catalog (IPC) directly on the shop floor. The kiosk is a ruggedized, standalone unit that was designed and manufactured for the rigors of the shop environment, and its easy-to-use touch-screen user interface is much less intimidating than a standard "mouse and keyboard" configuration. The InfoCenter Kiosk provides your organization's technicians the information they need – where they need it and when they need it. Because of its user-friendly design, technicians are far more likely to adopt the new technology, enabling your organization to benefit from lower training costs and virtually instantaneous improvements in employee productivity.









AssetWORKS

A TRAPEZE GROUP COMPANY



How AssetWorks Integrated Product Suite Helps RTD Maintain Their Bus, Rail and Linear Operations

Nestled at the base of the Rocky Mountains is the bustling city of Denver, Colorado. With an average of 300 sunny days per year, Denver is located in the heart of an outdoor adventure land and home to many major corporations. With so much to offer, it is no surprise that Denver is one of the fastest growing cities in America.

Created in 1969 to serve the Denver area, the Regional Transportation District (RTD) services this broad area that covers 2,337 square miles throughout eight counties in the Denver-Aurora-Boulder area. With over 1,000 buses, RTD offers a variety of transportation services to a population of 2.7 million including 140 local, express, and regional bus routes servicing 10,000 bus stops, six light rail lines providing 35 miles of light rail service, and nearly 80 Park-n-Rides. In addition, RTD offers Access-a-Ride demand response paratransit, free mall shuttle service, and transportation for many of Denver's special events.

AssetWorks fully integrated Enterprise Asset Management (EAM) software product line—FleetFocus, RailFocus, EquipmentFocus and LinearFocus—has been RTD's solution for total asset and maintenance management since 2007. RTD uses the AssetWorks solution in all of its maintenance facilities to manage bus, paratransit, support fleet, and light rail operations as well as its maintenance of way, rebuild, body, and electronics, treasury, and facilities operations. RTD tracks all aspects of its operation on AssetWorks' single database, including real-time labor capture, work order management, materials management and fuel and fluid data to ensure that it is tracking real-time operating costs.

RTD also requires private contractors who are responsible for the maintenance of over 400 of RTD buses to track their activities within FleetFocus. The inclusion of commercial vendors allows RTD to review performance measures and efficiency for the entire fleet in a consistent manner while ensuring that RTD 'best practices' are enforced at all levels.

Quality Data In = Quality Data Out

Reports are only as accurate as the information that is put into the system. Since implementing FleetFocus in the Bus Department, RTD has become a paperless shop. Daily tasks performed by several hundred supervisors and technicians are now captured in real-time by FleetFocus including recording labor, processing work orders, ordering and issuing parts. The ease of use offered by FleetFocus ensures that all employees, regardless of computer-skill level, utilize the system comfortably and consistently.

“ FleetFocus offers a happy balance between how much time a technician needs to spend at a kiosk entering information and his time performing work on the shop floor. It allows them to enter information and get information out of the system very efficiently in a short amount of time. ”

*Dean Shaklee
General Superintendent
of Maintenance*

“ Based on the inspection items that require follow-up repairs listed on the report, the supervisors and I are able to identify effortlessly which segments or equipment are in need of work and send the appropriate staff to handle the job. The reports that we get from LinearFocus are an important tool for us managing our workload.”

*Terry Emmons
Acting Manager,
Maintenance-of-Way*

Dean Shaklee, General Superintendent of Maintenance, notes that productivity has increased since moving to a paperless shop. “FleetFocus offers a happy balance between how much time a technician needs to spend at a kiosk entering information and his time performing work on the shop floor,” says Shaklee. “It allows them to enter information and get information out of the system very efficiently in a short amount of time.”

FleetFocus, along with all of AssetWorks integrated products, provides RTD with sophisticated reporting and trending information. RTD relies heavily on these reporting capabilities to manage their daily workload. In addition to AssetWorks' out of the box reports, based on the specific needs of different departments and managers, RTD has created upwards of 100 custom reports, which are generated automatically and then emailed directly to the appropriate recipients. Reports can also be executed on an “as-needed” basis. These reports are tailored to provide specific information to help RTD's management make daily and long term decisions.

Staying on Top of Inspections

Daily reports are an example of how technology can help supervisors and directors manage through facts. By reviewing accurate and dynamic data, RTD is able to proactively manage staff and workload which increases operational efficiency and translates into increased equipment availability.

RTD's Maintenance-of-Way (MOW) department relies on this same reporting capabilities provided by LinearFocus. Tracking inspections and PM information is critical to this department, which must provide detailed inspection information for every mile of track to the Colorado Public Utilities Commission and the Federal Railroad Administration (FRA).

Terry Emmons, Acting Manager of the MOW department, relies on a Service Request Report to manage his department's workload. “Based on the inspection items that require follow-up repairs listed on the report, the supervisors and I are able to identify effortlessly which segments or equipment are in need of work and send the appropriate staff to handle the job”, says Emmons. “The reports that we get from LinearFocus are an important tool for us managing our workload.”

In another sector of operations, RTD's Rail Department uses RailFocus for compliance and audit reporting as well as to manage inspections and PM appointments. Railcars undergo many inspections each year, with some as frequent as every two weeks. To maximize efficiency, the Rail Department lines up PM appointments with inspections so the rail car experiences less downtime for maintenance.

Each day, Lou Cripps, Light Rail Maintenance Supervisor, runs two reports: Scheduled Activity by Equipment; to show which cars are due for multiple inspections, and Scheduled Activity by Meter; to show the miles until inspection is due. He uses this information to schedule work orders and maintenance activities. As required by the Public Utilities Commission (PUC) and Federal Transit Administration (FTA), both of whom who oversee the operation, inspections and defect reporting must have a paper trail. RTD performs its inspections using both RailFocus and on paper and then manually inputs defects found into RailFocus as work orders with specific tasks to address the inspection items. RTD has found this to be a quick and accurate process which has improved their audits from the PUC and FTA.

“Inspections and audits are an important part of our maintenance practices,” comments Lou Cripps. “Prior to using AssetWorks an audit from the PUC or FTA may have taken several days. AssetWorks software now helps us organize all the inspection and maintenance data. It's very easy to access when we need it.”

Smart Coding

Symptom codes, sometimes called complaint codes and task codes, are an important part of the maintenance process because they are what direct the subsequent action and solution for a particular issue. The challenge that transits face with coding structures is that if they are too general, then the reports that reference them don't provide enough detailed information to be useful. If, however, a transit fleet uses a coding structure that is too granular, it can be both confusing and time-consuming for the technician. The key is to strike the right balance

that keeps both the shop floor running smoothly and gives management the data they need.

Prior to going live with the FleetFocus system, RTD invested a great deal of time creating smart codes that were very well thought-out and logical. Working as a team led by both Dave Ober and Dave Richardson, RTD personnel created codes that captured and described virtually anything that could go wrong with a vehicle in an intuitive, logical and manageable list of codes. This complete list translates into very good reporting. It also allows RTD to track comebacks for the same complaint code with much greater accuracy.

Keeping Track of Serialized Components

Trains are designed so that most major components, such as the HVAC, motors, gear boxes, and pantograph, can be removed and swapped out. This methodology enables maintenance to bring a railcar into the facility, remove the questionable or broken part, replace it with a working part, and then send the train back out into revenue service. This can happen in as little as four to six hours.

A major part of RTD's ability to get such efficiency out of the AssetWorks integrated software was its investment in setting the system up to meet its needs from the beginning. Much like the smart coding, RTD personnel were diligent about setting up all their serialized components within the AssetWorks system. The Serialized Components functionality is an extremely effective tool for managing these parts. It keeps track of components and parent units silently behind the scenes so that technicians can focus on the work of keeping railcars running on the track.

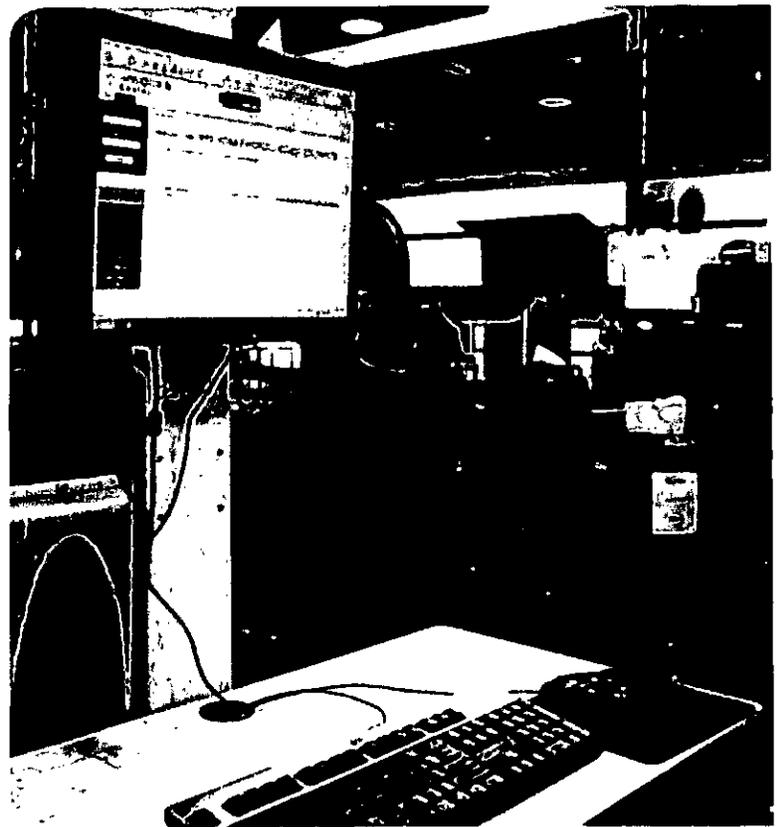
When a railcar comes in for service and a component is to be swapped, the technician uses a drop down list to select the part to be removed. AssetWorks then changes the status of that component from "installed" to "needs rebuild" and places it into the Production Planning queue. When the technician replaces the component with a new one, AssetWorks tracks the component from "In stock" to "installed." As the component needing to be rebuilt is worked on in the Rebuild Shop, AssetWorks continues tracking the work orders, labor and parts associated with its repair. As soon as the work on the component has been finalized, AssetWorks changes its category to "In Stock" so that it is ready to be installed when needed.

"It took a great amount of effort to set up all the components the way that we wanted, however it was worth the time. Now that the system is running full steam, the Serialized Components tool is extremely useful. I am constantly amazed by how powerful the system is," asserts Lou Cripps.

The Serialized Components function is also instrumental in determining the lifecycle cost of the trains. The costs associated with purchase and upkeep travel with the serialized components and the rail cars. This allows RTD to understand which rail cars paired with which components are the most economical to operate.

Production Planning

RTD operates a Unit Rebuild Shop, a Body Shop, and an Electronics shop. The system RTD used prior to implementing AssetWorks was unable to track parts or labor costs on rebuildable or fabricated parts. As a result, these costs were not accounted for prior to the implementation of the AssetWorks software suite. AssetWorks' Technician Portal solved this problem for RTD by giving RTD the tool it needed to track all costs associated with a unit rebuild or parts fabrication, including real-time labor and parts costs. This portal allows RTD to accurately



“ Inspections and audits are an important part of our maintenance practices. Prior to using FA Suite an audit from the PUC or FTA may have taken several days. FA Suite now helps us organize all the inspection and maintenance data. It's very easy to access when we need it. ”

*Lou Cripps
Light Rail
Maintenance Supervisor*

capture the costs of their rebuild or fabrication operations which allows RTD to account for these costs when the parts are put on an asset or into inventory.

In addition, the system has the ability to track rebuildable parts and components throughout their lifecycle, from the time a rebuildable part is:

- Removed from a parent unit
- Transferred to a rebuild center
- Throughout the stages of the rebuild process
- Placed back into inventory
- Installed on a new Parent Equipment Unit

AssetWorks Production Planning functionality allows RTD's Unit, Body, and Electronics shop supervisors to monitor and schedule incoming production requests. Generated by the Inventory Control department, these requests alert the Unit, Body, or Electronics shop supervisors that stock is needed on a rebuildable or fabricated part. These production requests appear in a central repository called the Production Management portal. From this portal, the supervisor has visibility into the number of pending and active production requests as well as the number of open work orders for part and component rebuilds or fabrications. With a single click, the supervisor can drill into the Production Management screen and view the details of each request or work order. Supervisors may also create new work orders from an incoming production request and release rebuilt or fabricated items into inventory as they are completed without having to navigate out of the Production Management portal.

"We got what we were hoping for when we went to the FleetFocus system. We are able to capture the costs for what we do. This creates and easily shows the true value for what these technicians do," says Steve Gieske, Operating Division Maintenance Manager for District Shops.

Investing in their Future

In order to keep their operation running as smoothly as possible, the RTD maintenance department is committed to providing excellent training opportunities for all of its seven hundred employees. The main facility houses a training center where they offer education throughout the year.

RTD is also making huge investments in the infrastructure that will allow them to increase their services to Denver's population. This project, referred to as FasTracks, is RTD's 12-year comprehensive plan to build and operate high-speed rail lines, as well as expand and improve bus service and Park-n-Rides throughout the region. FasTracks includes:

- 122 miles of new light rail and commuter rail
- 18 miles of bus rapid transit service
- 57 new transit stations
- 21,213 additional parking spaces at transit Park-n-Rides
- Enhanced bus service and FastConnects throughout the region

Because of their stellar past performance, commitment to excellence and their ongoing investment in both their staff and the transportation infrastructure, RTD is often recognized as one of the nation's premier transportation agencies. The American Public Transportation Association (APTA) has awarded RTD with the Outstanding Public Transportation System Achievement Award three times, most recently in 2008.

AssetWorks is proud to count RTD in our list of over 450 clients, including over 80 public transportation authorities in North America. As our clients' needs grow and evolve our software solutions continue to expand to stay ahead of the curve and provide the ability to incorporate best practices into the maintenance operation.

Overview

Customer
**Regional Transportation
Distriction (RTD) Denver**

Industry
Public Transit

Fleet Size and Makeup
**1,048 Busses
(611 operated by RTD,
437 by private contractors)
118 Rail Cars
35 Miles of Track**

Number of shops
**4 RTD shops
4 private contractor shops
2 light rail shops**

Number of Technicians
**Bus 175: Light Rail Tech 43:
Power and Signal Tech 15**

Product
**FA Suite:
FleetFocus™
LinearFocus™
RailFocus™**



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POWER IN THE PALM OF THEIR HANDS

How the Metropolitan Atlanta Rapid Transit Authority utilizes AssetWorks software and handheld devices to transform its Maintenance-of-Way operations

The Metropolitan Atlanta Rapid Transit Authority (MARTA) is the ninth-largest transit system in the U.S. Over 450,000 passengers use MARTA every single day. In order to keep that many citizens moving, it takes 4,000 MARTA employees to ensure that its bus, rail, and paratransit service runs safely, smoothly, and on time.

Although MARTA has always been innovative, with time and growth its asset management challenges increased. The authority needed to replace its legacy asset and maintenance management system, a "green screened" mainframe, and improve reporting across all departments and assets. MARTA also needed improved labor tracking, project and warranty tracking, better identification of high cost parts, improved rail track inspection capabilities and deployment of analytics to better manage the business.

When MARTA sought out a more technically advanced, integrated enterprise asset management (EAM) solution, the authority conducted a series of focus group meetings for all of its stakeholders and hired a consultant to facilitate an in-depth request for proposal (RFP) process. MARTA was looking for superior EAM software capabilities coupled with the ability to manage fleet, rail, stationary, and linear assets in the same program. The Technical Evaluation Team, after many vendor demonstration and exhaustive reference checks, determined that AssetWorks' FASuite was the ideal solution. FASuite is a comprehensive, browser based, enterprise asset management system that can track an unlimited number of assets and support an unlimited number of workstations in multiple locations, and is utilized by many leading transit authorities.

MARTA's bus maintenance, rail car maintenance, facilities, maintenance-of-way (MOW), and technology teams now manage all of their assets within the AssetWorks FASuite application. They use FASuite/FleetFocus to manage 1520 vehicles including bus, paratransit, non-revenue, and track work vehicles. MARTA's Rail Car Maintenance has approximately 340 cars managed by FASuite/RailFocus. Facilities and Maintenance-of-Way maintain over 30,000 assets 38 rail stations, 104 miles of mainline track, 3 major yards, and 300 turnouts (switches) within FASuite/LinearFocus.

The system enabled major improvements particularly in the area of linear assets. AssetWorks LinearFocus is the only enterprise asset management application on the market to be specifically written for the needs of maintenance-of-way, with fully integrated mobile PDA software developed for the needs of MOW. AssetWorks made it possible for MARTA's Track & Structure department to better collect track inspection data from day one. With FASuite, 21 Track Inspectors now walk the tracks with mobile handheld devices and either batch process data back into the system or report problems in real-time so that they are dealt with immediately.

“ By utilizing AssetWorks for Track Inspection, we now have visibility and accountability from the time a defect is discovered until it is repaired, and it's all in one system. AssetWorks truly has superior linear capabilities coupled with the ability to manage fleet, rail, stationary, and component equipment units in the same program. While the story is one of improvement throughout Bus, Rail rolling stock, and Facilities, I think the gains made in managing our linear assets to be exceptional. ”

*Tim Elsberry
Assistant Director of
Track & Structures
MARTA*

"As a member of the Technical Evaluation Team, I can only offer my point of view. AssetWorks was chosen for its functionality and its versatility," said Tim Elsberry, Assistant Director of Track & Structures for MARTA. "Our former CMMS, like many applications on the market, was originally developed for a manufacturing operation and though we did an excellent job customizing it and being creative, AssetWorks had a rail transit solution that fit our various types of equipment right out of the box."

By choosing the AssetWorks fully integrated EAM solution, FASuite, MARTA was able to integrate bus, rail, track, and MOW management within one flexible and scalable database that also integrated with MARTA's (Oracle) ERP system. Additionally, MARTA adopted handheld wireless technology with mobile PDA units to increase efficiency across the organization. This was made easier due to AssetWorks' extensive, proven success working on large-scale transit implementations over a 25-year product history. MARTA employees were quickly trained to use the software and have consistently reported that it is easy to learn and simple to use.

"While Track & Structures did a good job of this with the former CMMS, I have much more confidence in the data that we are receiving from AssetWorks FASuite," said Elsberry. "The costs are now associated at the job task level instead of at the work order level, as we had in the former CMMS. This helps us measure productivity by task and make important decisions considering cost and time. We have automated reports through AssetWorks that are emailed to management staff daily at 1800 hrs informing us of every defect that was reported, as well as labor and maintenance operations information."

Mobile employees utilize wireless handheld units and folks in the shops use kiosks; labor became easy to track in real-time and efficiency gains could be made across the organization as needed. MARTA can now account for 98% of the labor it pays out. Identifying high cost parts has become more accurate as well. MARTA's 21 Track Walkers (Track Inspectors) walk in pairs and cover 8 miles each day, with trains running unrestricted at 70MPH. It is important for their focus to be on safety. FASuite allows both inspectors to be "jobbed-on" to a work order utilizing the same hand-held device to capture labor costs. Once the inspectors are jobbed on, one inspector's sole function is to serve as a lookout while the other records the inspection findings. Prior and during MARTA's implementation, the AssetWorks Management Team met with MARTA and asked what changes would improve productivity. MARTA offered several suggestions including multiple user log-in. The feature was added in one month, ready for go-live.

MARTA's efficiency was also improved by the interface between AssetWorks and MARTA's graphical track maintenance tool, purchased in conjunction with FASuite. Automated track geometry data is captured via a computer and sensors on a revenue-service vehicle. It is loaded into the graphical track maintenance tool which automatically interfaces with AssetWorks for defect and work order creation. "I estimate this has already saved 70% of the time it took to perform this task prior to the AssetWorks implementation," stated Elsberry.

MARTA has undergone three audits since implementing AssetWorks FASuite, with the regulatory agencies giving it high marks.

"By utilizing AssetWorks for Track Inspection, we now have visibility and accountability from the time a defect is discovered until it is repaired, and it's all in one system," said Elsberry. "AssetWorks truly has superior linear capabilities coupled with the ability to manage fleet, rail, stationary, and component equipment units in the same program. Other systems had some of these capabilities, but AssetWorks satisfied all our requirements. While the story is one of improvement throughout Bus, Rail rolling stock, and Facilities, I think the gains made in managing our linear assets to be exceptional," said Elsberry. "I would recommend that any other transit embarking on this effort take the time and make the investment in putting subject-matter experts on their selection and implementation teams. This is how we came to choose and to utilize the AssetWorks solution and I believe this to be critical to our success."

Overview

Customer
**Metropolitan Atlanta Rapid
Transit Authority**

Industry
Public Transit

Fleet Size and Makeup
**1,520 transit vehicles
(including bus, paratransit,
non-revenue and
track work vehicles.)**

Facilities and
Maintenance-of-Way
**30,000 assets
38 rail stations
104 miles of mainline track
3 major yards
300 turnouts (switches)**

Products
**FleetFocus™
FuelFocus™
LinearFocus™
RailFocus™
EquipmentFocus™**

To learn more about
Metropolitan Atlanta
Rapid Transit Authority
please visit
www.itsmarta.com

To learn more about how
AssetWorks' applications can
help your business, contact
an AssetWorks representative
today at 610.687.9202
or visit us online at
www.assetworks.com

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Change Order Initiation

Task Title	Task Request #:
Date Submitted:	Date Required by:
Submitted by:	Contact Phone:

Description:
Attachment(s):

Budget/Project Impact Evaluation

Project Manager:	Date:
Change of Scope?	Description:

Technical Consultant:	Date:
Summary of Work Effort Change:	

Acceptance

As of the date below, [CUSTOMER] acknowledges the work on this change to be necessary and approves the work effort defined below. Any further effort requested will be evaluated and managed as a separate task order.

List of New or Changed Tasks – Actual

Task ID	New ?	Description	Budget Hours	Est. Hours	Total Chg	Cost Change

Totals

Customer Authorized Representative: Signature:	Date:
AssetWorks Authorized Representative: Signature:	Date:

